Comparative Philosophy Volume 15, No. 1 (2024): 67-96
Open Access / ISSN 2151-6014 / www.comparativephilosophy.org
https://doi.org/10.31979/2151-6014(2024).150108

A MADHYAMAKA CRITIQUE OF JAEGWON KIM'S SUPERVENIENCE ARGUMENT

TYLER J. JUNGBAUER

ABSTRACT: *Jaegwon Kim's supervenience argument objects to the possibility of emergent causation (both downward and same-level) based on both (1) the causal overdetermination of both (a) higher-level emergent events and (b) lower-level basal events, and (2) the causal closure principle of the physical domain. Kim argues that emergent causation entails epiphenomenalism. Madhyamaka Buddhist philosophy skeptically critiques the primary (ultimate) existence of causal phenomena and instead suggests that all such phenomena may only be secondarily (conventionally) existent. Mādhyamikas acknowledge that, conventionally, emergent phenomena appear to cause both basal phenomena and other emergent phenomena. However, contra Kim, Mādhyamikas doubt that causal relations ultimately exist between, or among, emergent phenomena and basal phenomena because they doubt that anything ultimately exists. As such, the Madhyamaka critique of causality may provide a skeptical response to Kim because Kim assumes that both emergent and basal phenomena are primarily existent. Altogether, I argue that if we draw upon and accept the Madhyamaka critique of causality, then we may resolve Kim's problem of epiphenomenalism by reconceptualizing causality as a relation obtaining conventionally between phenomena, while remaining silent on the status of causation at the ultimate level of truth. By arguing this point, I do not mean to suggest that the Madhyamaka critique of causality, while plausible, is in fact correct. Rather, I intend only to show that plausible responses to Kim's argument may be found by considering less commonly taught philosophical traditions in relation to Kim's metaphysical assumptions.*

Keywords: *epiphenomenalism*, *Madhyamaka, metaphysical anti-realism, Nāgārjuna, non-reductive physicalism, supervenience*

1. INTRODUCTION

Jaegwon Kim's supervenience argument against non-reductive physicalism objects to the possibility of both emergent downward and same-level causation based on both (1) the causal overdetermination of both (a) higher-level emergent events supervening on lower-level basal events and (b) lower-level subvening basal events, and (2) the causal

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JUNGBAUER, TYLER J.: University of Colorado at Colorado Springs, USA. Email: tjungbau@uccs.edu

closure principle of the physical domain. If Kim's argument succeeds, then emergent mental phenomena are epiphenomenal, and preserving the causal efficacy of mental phenomena requires reducing them to physical phenomena.

Various responses to Kim's argument have been proposed. Many are rooted in the metaphysical assumptions of the Western philosophical tradition. To transcend these assumptions, I draw on Madhyamaka Buddhist philosophy, primarily Nāgārjuna's work (c. 150? CE). I argue that the Madhyamaka distinction between primary and secondary existence can elucidate Kim's implicit metaphysical assumptions. Specifically, I argue that if we accept the Madhyamaka distinction between primary and secondary existence, then we have reason to doubt the soundness of Kim's argument because it assumes that both emergent and basal phenomena are ultimately existent (rather than being conventionally existent). A Madhyamaka critique of Kim's argument may resolve the problem of epiphenomenalism by reconceptualizing causality as a relation obtaining conventionally between phenomena, while remaining silent on the status or nature of causation at the ultimate level of truth. However, by arguing this point, I do not mean to suggest that the Madhyamaka critique of causality, while plausible, is in fact correct. Rather, I intend only to show that plausible responses to Kim's argument may extend beyond Western philosophy to include less commonly taught traditions of world philosophy, such as Madhyamaka Buddhist philosophy.

I begin by outlining Kim's supervenience argument. Then I discuss the Madhyamaka concepts of emptiness, *svabhava*, and the distinction between conventional and ultimate truth. Subsequently, I adduce Madhyamaka arguments against Kim's implicit assumptions, which include substantialism, the causal closure principle, and the causal exclusion principle. To conclude, I briefly outline a Madhyamaka account of causation to show how epiphenomenalism may be avoided. Ultimately, I hope to show that plausible philosophical responses to Kim's argument may be found in other philosophical traditions extending outside of Western philosophy.

2. JAEGWON KIM'S SUPERVENIENCE ARGUMENT

Jaegwon Kim's supervenience argument shows that non-reductive physicalism entails epiphenomenalism (Kim 2011, 11–14). Physicalism is the metaphysical doctrine that all and only those entities recognized by physics to exist constitute concrete particulars. Two major varieties of physicalism exist: reductive physicalism, which holds that all mental types are identical with some physical type, and non-reductive physicalism, which holds that all mental states or events are physical states or events, but *not* all mental types are identical with some physical type (Kim 2011, 11–14). Non-reductive physicalists accept that some mental properties are irreducible to physical properties. They adduce emergentism to explain the consistency of mental causation with the irreducibility of mental properties (Macdonald and Macdonald 2019, 195–196). Emergentism[1] provides a multi-layered view of reality as comprised of distinct,

[1] Various kinds of emergentism exist. See, for example, Gillett 2016, Varela et. al. 1991, and Wilson

irreducible levels, such that emergent levels nomologically supervene on basal levels (Emmeche, Køppe, and Stjernfelt 2000, 14–15; Gillett 2016, 175–177; Orilia and Paoletti 2017b, 25; Wilson 2021, 11–12). Kim targets the emergentist claim that emergent events can cause changes in both basal events and other emergent events (Robb 2019, 187–188).

Kim's argument has two parts.[2] He assumes two metaphysical principles:

> *The causal closure principle of the physical domain (CCP)*: If some physical event *p* has a cause at time *t*, then *p* has a sufficient physical cause at *t.*
>
> *The causal exclusion principle (CEP)*: No event has two or more simultaneous sufficient causes[3] unless the event is genuinely overdetermined.

The first part concerns mental-to-physical downward causation and the CCP (Kim 2011, 214; Orilia and Paoletti 2017b, 30). For Kim, an *event* has three constituents: (1) a property or relation, (2) concrete particulars or objects, and (3) a time. An event [x_1, P_1, t_1] = event [x_2, P_2, t_2] iff $x_1 = x_2$, $P_1 = P_2$, and $t_1 = t_2$ (Kim 1973, 223; Kim 1976, 311; Macdonald and Macdonald 2019, 197; Orilia and Paoletti 2017b, 26–27). Also, an event [x, P, t] is F iff P is of kind F. Therefore, a physical event consists of a concrete particular instantiating a constitutive physical property at a specified time. Non-reductive physicalists accept that some mental properties M are not identical with any physical property P. Thus, the events [x_1, M, t_1] and [x_2, P, t_2] are numerically distinct because $M \neq P$, even if $x_1 = x_2$ or $t_1 = t_2$ (Orilia and Paoletti 2017b, 26–27).

Suppose that some emergent mental event m causes some basal physical event p at t. The causal closure principle (CCP) implies that some sufficient physical cause p^* exists simultaneously with m. This presents a dilemma: Either $m = p^*$, or p has two causes. To accept that $m = p^*$ is to accept reductive physicalism: Mental events are nothing but physical events. *Ex hypothesi*, reductive physicalism is false. But accepting that p has two causes conflicts with the causal exclusion principle (CEP). Kim denies that this is a genuine case of overdetermination in favor of $m = p^*$: If we try to maintain m as a sufficient cause of p, then we have either an infinite regress or circular reasoning. Consequently, we must reject m as a cause of p. This generalizes to all cases of putative mental-to-physical causation. Ergo, mental-to-physical causation is incoherent (Kim 2011, 214–217; Kim 2021, 140–141).

The second part of Kim's argument concerns same-level mental causation. Suppose that some mental event instantiating mental property M at time t supervenes[4] on some physical event instantiating physical property P, and that M causes some other mental

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2021.

[2] Different versions of Kim's argument exist. See Kim 1999, 2011 and 2021.

[3] I assume Kim's conception of sufficient cause: "If C is sufficient for a later event E, then no other event occurring at the same time as C and wholly distinct from it is necessary for E" (Marras 2007, 325, 25n).

[4] The mental domain supervenes on the physical domain iff, if anything x has a mental property M, then there is some physical property P such that x has P, and necessarily any other object y that has P has M. See Kim 2011, 8–11, for variations on mind-body supervenience.

property M^* to instantiate at t_1. Since mental properties supervene on physical properties, M^*'s supervenience base, P^*, must be instantiated at t_1. Which causes M^* to instantiate at t_1—M or P^*? Kim claims that to avoid overdetermination, M or P^* alone must cause M^*. According to Kim, P^* is nomologically sufficient for M^* to instantiate because M^* supervenes on P^*: If P^* occurs, M^* *must* occur.[5]

Unless mental-to-mental causation fails, somehow M must be causally related to M^*. Kim claims that only one way exists to reconcile (1) P^* is causally sufficient for M^* with (2) M causes M^*: M causes M^*'s supervenience base P^* to instantiate. Hence, mental-to-mental causation requires mental-to-physical causation. But mental-to-physical causation is incoherent. Hence, the impossibility of mental-to-physical causation precludes the possibility of mental-to-mental causation. Thus, we have epiphenomenalism—mental events are causally inert.

A dilemma obtains. Either (1) we accept non-reductive physicalism, deny that mental properties are physical properties, and allow that epiphenomenal mental properties supervene on causally efficacious physical properties; or (2) we accept reductive physicalism, affirm that mental properties just are physical properties, and conclude that mental properties *qua* physical properties are causally efficacious. Since he takes epiphenomenalism to be unappealing, Kim prefers reductive physicalism (Kim 1998, 31–33; 2011, 217–220; 2021, 141–145).

Kim suggests that his argument does not depend on any particular account of causality (Kim 2011, 203–213; 2021, 143). *Contra* Kim, I argue that if we consider the Madhyamaka critique of causality (outlined below), then his argument can be shown to depend on a substantialist view of causality (defined below). By showing that Kim's argument depends on substantialism, I thereby demonstrate how Mādhyamikas may critique Kim's view. However, in doing this, I do not argue that these criticisms, while being intuitively plausible, are necessarily successful. Doing so is beyond the scope of this paper. Rather, I introduce these criticisms to show that if we consider Kim's metaphysical assumptions in light of insights offered by philosophers of less commonly taught philosophical traditions like Madhyamaka Buddhism, then philosophical responses to Kim's argument may be identified in addition to those offered by philosophers of the Western tradition of philosophy.

3. MADHYAMAKA: THE MIDDLE WAY

Madhyamaka Buddhist philosophy is committed to skepticism (Dreyfus and Garfield 2021). Three major concepts concern Mādhyamikas: (1) emptiness, (2) *svabhava*, and (3) the distinction between conventional and ultimate truth. In Buddhist philosophy, '*svabhava*' means intrinsic nature, or self-nature, while 'emptiness' means the lack of *svabhava* (Siderits 2007, 181). Some philosophers interpret *svabhava* in terms of essence (Garfield 1994; Perrett 2015). Others interpret *svabhava* multidimensionally

[5] Supervenience denotes nomological co-variation, not a causal relation. Hence, Kim is wrong to think that *M*'s* supervenience base *P* ipso facto* constitutes a sufficient cause for *M**. However, I ignore this issue because it has been discussed sufficiently elsewhere. See Welshon 2002, (n.d.).

(Westerhoff 2009; Bliss 2015). I prefer Westerhoff's multidimensional view of *svabhava*, on which *svabhava* has both an ontological and a cognitive sense. By '*svabhava*', I mean (*a la* Westerhoff) substance-*svabhava*, which is an ontological notion that distinguishes *primary* existents from *secondary* existents.

Primary existents possess *svabhava* as the irreducible constituents of reality. Secondary existents lack *svabhava* and are linguistic-conceptual constructions (Westerhoff 2009, 23–24). A primary existent has its nature in virtue of itself and is ultimately real. As such, primary existents are akin to Wittgenstein's metaphysical atoms or Leibnizian monads (Priest 2015, 116). A secondary existent has its nature relationally in virtue of other secondary existents, all of which are only conventionally real because each of them exists in dependence on the conceptual frameworks we use to make sense of our experience (Siderits 2007, 180–183). Entities that disappear under analysis are constructed or conventionally real. Ultimately real phenomena as the irreducible constituents of reality survive logical analysis,[6] so they are unconstructed and exist independently of other existents (Siderits 2007, 112; Westerhoff 2009, 25–26). Therefore, primary existents are ontologically fundamental (Siderits 2004, 395; Tillemans 2003, 95).

Mādhyamikas doubt that anything falls under the category of primary existence—or, equivalently, that anything can ultimately survive analysis—because all phenomena appear to be empty of intrinsic nature.[7] Nonetheless, Mādhyamikas do not thereby accept ontological nihilism, because they wish to eliminate metaphysical theorizing entirely (Siderits 2007, 191; Westerhoff 2009, 219). Mādhyamikas accept that conventional, everyday objects *appear* to exist. Various perceptual, conceptual, and linguistic processes constitute these conventional phenomena, which arise dependently, or conditionally, on these processes (Dreyfus and Garfield 2021, 15; Li 2019, 55). Hence, a world perceptually appears to us, but these appearances fail to provide us with the resources to construct an ontology of primary existents (McClintock 2003; Collins 1972). We mistakenly hypostatize secondary existents' conventional nature into primary existents' ultimate nature (Dreyfus and Garfield 2021, 12). Nevertheless, Mādhyamikas do not necessarily *deny* that primary existents exist; rather, they only

[6] By "logical analysis," I mean a "division and analysis" test whereby we may determine whether a given entity may survive division into its proper parts, or those parts of an entity not including the entity itself (on "proper parts," see van Inwagen 1987, 25). If we cannot plausibly divide an entity into its proper parts, then it is ultimately real because it cannot be reduced to its parts. However, if an entity fails to survive division, then it is only conventionally real because it can be reduced to its proper parts. See Siderits 2021, 47–71, for more on this "division and analysis" test.

[7] We must be careful when ascribing claims to Mādhyamikas because Mādhyamikas, like Pyrrhonian skeptics, do not positively acknowledge any particular metaphysical view. See Dreyfus and Garfield 2021. Also, Mādhyamikas are sometimes subcategorized into sub-schools—the *Prāsangikas* and the *Svātantrikas*—based on differences in methodology and epistemological/"metaphysical" commitments. These sub-schools disagree on what it means for things to be "established" or "accepted" in a conventional sense. Part of this disagreement concerns whether we can say that secondary existents exist "from their own side". See Eckel 2003 and Tillemans 2003 on this intra-Madhyamaka distinction.

doubt that everyday objects that appear are ultimately real.[8] Finally, Mādhyamikas doubt that causation obtains between primary existents, but they do not deny causation *per se.* Causality grounds the conventional conceptual frameworks whereby we cognize the everyday world that appears (Dreyfus and Garfield 2021, 22–24).

Mādhyamikas distinguish ultimate and conventional truth. Ultimately true propositions correspond to how the world is independently of our conceptual fictions or interests (Siderits 2007, 202). Conventionally true propositions are linguistically constructed *vis-a-vis* commonly accepted practices, conventions, and conceptual frameworks and describe the world as it is according to these conventions and conceptual frameworks (Siderits 2007, 56; Westerhoff 2009, 220). These two types of truth are intensionally distinct but extensionally identical because all phenomena appear to be ultimately empty of intrinsic nature (Dreyfus and Garfield 2021, 14). Since Mādhyamikas express skepticism toward the existence of primary existents, they thereby express skepticism toward the claim that we can describe the world as it is in itself, independent of our conceptual fictions or interests. Consequently, Mādhyamikas suggest, but do not necessarily affirm, that the ultimate truth is that there *is* no ultimate truth—equivalently, emptiness itself is empty (Nāgārjuna *MMK*, XIII.7–8, XXIV.18, XXVII.30; Siderits 2007, 200–204; Westerhoff 2009, 219–224).[9]

This distinction between conventional and ultimate truth tracks the distinction between metaphysical *realism* and *anti-realism*. Realists hold that the world exists independently of our interests and that for each of our propositions about the world, a fact exists that either affirms or disconfirms that proposition (see Dummett 1959, 1978; Putnam 1981; Wright 1992). Putnam describes metaphysical realism thus (1981, 49):

> On this [view], the world consists of some fixed totality of mind-independent objects. There is exactly one true and complete description of 'the way the world is.' Truth involves some sort of correspondence relation between words or thought-signs and external things and sets of things.

Similarly, an ultimately true explanatory account of the world is a *uniquely true* description of the "totality of mind-independent objects". Such an account of the world contains some conceptual scheme whose constitutive concepts map one-to-one to those irreducible constituents of the world-in-itself. In contrast, a conventionally true explanatory account is a conceptual scheme for which such one-to-one correspondence relations do not exist (Siderits 2021, 171–173). Thus, an ultimately true conceptual scheme is necessarily constrained by how things are in the mind-independent world,

[8] To be clear, although it is true that Mādhyamikas express skepticism toward the existence of both primary existents and the causal relations obtaining between them, this does *not* entail that Mādhyamikas therefore *deny* that either primary existents, or causal relations between primary existents, exist. Clearly, that I am skeptical about a proposition *p* does not entail that I deny that *p*. Furthermore, since Mādhyamikas are thought to have no thesis of their own, it would be inconsistent to attribute the *denial* of some claim to the Mādhyamikas, insofar as the denial of a claim constitutes a thesis. See fn. 7.

[9] For discussion on the emptiness of emptiness, see, for example, Deguchi, Garfield, and Priest 2008, 2013a, and 2013b; Garfield 1994; Garfield and Priest 2003; Kardaš 2016; Guhe 2017; Siderits 2007, 200–204; Priest 2009.

while a conventionally true conceptual scheme is constrained instead by our cultural, psychological, and biological interests.

Given that viable responses to Kim already exist,[10] why is the Madhyamaka critique of causality, which arises from its approach to metaphysical questions, relevant here? Most solutions within the contemporary literature are predominantly based in the Western philosophical tradition and share similar metaphysical assumptions. I argue that we can appeal to less commonly taught philosophical traditions to identify alternative, yet plausible responses to Kim's argument. To this end, I suggest that Madhyamaka Buddhist philosophy offers a plausible response to Kim's argument, one that is not rooted in the metaphysical assumptions of contemporary Western philosophy. More specifically, Kim's argument implicitly endorses substantialism because it concerns physicalism and emergentism (Kim 2011, 13). Mādhyamikas critique substantialism, so presenting the Madhyamaka critique of causality constitutes a *prima facie* response to Kim. By appealing to Madhyamaka Buddhism, I hope to show the relevance of less commonly taught philosophical traditions to contemporary philosophical problems. However, I do not mean to argue that Mādhyamikas are necessarily correct in their views on causality (although I take it that their critique of causality is *prima facie* plausible). This question is important to consider, but considering it is beyond the scope of this paper.

4. MADHYAMAKA CRITIQUE OF CAUSALITY

Kim's supervenience argument is valid. If it is sound, then all premises and implicit assumptions must be true, including the causal closure principle (CCP), the causal exclusion principle (CEP), and Kim's substantialism.[11] Here, I adduce Madhyamaka arguments to illustrate how one might critique Kim's premises by drawing on a less commonly taught philosophical tradition. I therefore demonstrate, *eo ipso,* that we have reason to doubt the soundness of Kim's argument, provided that we accept the Madhyamaka critique of causality. I begin with Kim's substantialism before considering the CCP and the CEP.

Against Substantialism

Substantialism is the thesis that at least one instance of *svabhava*, or at least one primary existent, exists (Westerhoff 2009, 23–32). Physicalism is a common form of substantialism: All concrete particulars are entities identified by physics to exist in spacetime (Kim, 2011, 11, 13; Kistler, 2017, 54). A sufficient condition for *x* to have *svabhava* is for *x* to survive logical analysis (Siderits 2007, 111–113). The entities identified by physics to exist in spacetime are the irreducible constituents of reality, so

[10] See, for example, Anjum and Mumford 2017; Ganeri 2012; Heil 2017; Kallestrup 2006; Kistler 2017; Marmodoro 2017; Marras 2007; Mayr 2017; Moore 2012; Shoemaker 2007; Thompson 2007; Welshon 2002, (n.d.); Wilson 2021.

[11] Kim also assumes a causal inheritance principle. I ignore this because it has been sufficiently discussed elsewhere. See Shapiro 2010 and Welshon 2002.

they do not disappear under analysis (Kim 2011, 33). Therefore, physicalism implies that at least one primary existent exists. Since Kim's argument presupposes physicalism, his argument *ipso facto* presupposes substantialism.

For Kim's argument to get off the ground, both mental and physical properties must possess *svabhava*. Wilson's reconstruction of Kim's argument includes two premises that are jointly sufficient to establish that mental and physical properties do not disappear under analysis ("special-science features" refer to mental properties and "base features" refer to physical properties) (2021, 41):

Reality. Both special-science features[12] and their base features are real.

Distinctness. Special-science features are distinct from their base features.

Likewise, Lim (2015) reconstructs Kim's argument using an irreducibility premise that is also sufficient to show that mental and physical properties are primary existents.

The following arguments purport to undermine substantialism. Provided that they undermine substantialism—as Mādhyamikas suggest they appear to do—these arguments also undermine Kim's argument. Therefore, if these arguments successfully undermine substantialism, then they constitute a *prima facie* response to Kim.

The first argument Mādhyamikas adduce against substantialism concerns the relation that obtains between first-order properties and their instantiating existents (Nāgārjuna *MMK*, V). Consider some primary existent *m*. *m* has some defining characteristic *M* in virtue of which it is the existent that it is. Whenever *m* exists, so does *M*, such that *m* cannot exist without instantiating *M.* If *m* could exist without instantiating *M*, then *m* could exist *as such* without instantiating *M*. However, no possible world W* exists such that *m* exists in W* without instantiating *M.* Anything that exists has properties in virtue of which it is what it is: Characteristic-less substances or bare particulars, which do not instantiate properties, do not exist (Siderits 2007, 189–190; Siderits 2021, 174; Westerhoff 2009, 33). Even the most basic physical concrete particular is physical in virtue of instantiating physical properties. Hence, anything that exists is a *characterized* particular—a concrete or abstract particular instantiating at least one property. According to Mādhyamikas, this result creates a problem for primary existents.

Suppose that *m* has some defining characteristic *M* in virtue of which it is a primary existent. *m* instantiates *M* either as a bare particular or as a characterized particular. The former option fails because bare particulars do not exist. If *m* exists, then as a primary existent *m* instantiates *M* in virtue of being *m.* The latter option also fails: Suppose that *m* is a characterized particular without instantiating *M.* Instead, *m* instantiates *M*.* Then *m* could exist without instantiating *M*, contradicting our assumption that *M* is a defining characteristic of *m*. Ergo, *m* instantiates *M* neither as a bare particular nor as a

[12] Special-science features are those taxonomic types posited by sciences other than fundamental physics, which posits its own base features, or basic taxonomic types (Wilson 2021, 3–4). See Fodor 1974/2021 for an explication of the nature of the special sciences.

characterized particular. However, if *m* exists, then *m* must instantiate *M* either as a bare particular or as a characterized particular. Therefore, no primary existent *m* exists, *contra* substantialism (see Nāgārjuna *MMK,* V.1–8; Priest 2009, 470; Siderits 2007, 188–189; Westerhoff 2009, 32–36).

One might respond by denying that properties need instantiation bases. Perhaps properties are *tropes*, or property-particulars, which are not themselves instantiated by any concrete or abstract particular (see Daly 1994; Ganeri 2012; Schaffer 2001; Siderits 2007, 115). If primary existents are tropes, rather than concrete particulars that instantiate properties, then this argument fails to show that primary existents do not exist.

However, Nāgārjuna gives a stronger set of arguments against substantialism which can be meaningfully interpreted as undermining the existence of primary existents *qua* tropes or concrete particulars (*MMK*, I, VII, XX). He argues that if causality denotes a relation between events involving primary existents, then it appears to follow that no causal relation can obtain between these primary existents. To preserve the causal description of phenomena, we must turn to secondary existents while remaining silent on the existence of primary existents. Hence, we have no reason to uphold substantialism as true. Let me explain.

The causal relation between primary existents may obtain in four ways: (1) self-causation, (2) other-causation, (3) both self- and other-causation, and (4) no causation (Nāgārjuna *MMK*, I.1).[13] All four possibilities appear to fail, according to Nāgārjuna. Causation for Nāgārjuna (and Kim) is efficient causation, in which the relata are events (see Siderits 2021, 82–83; Orilia and Paoletti 2017a, 11). Suppose a primary existent *m* exists at *t* and a primary existent *k* exists at $t + n$. Call the first case "event *e*" and the second case "event *d*". Suppose some causal relation R_C obtains between *e* and *d* in virtue of R_C obtaining between properties *M* of *m* and *K* of *k*. (I outline these arguments in terms of primary existents *qua* concrete particulars, but this assumption is not crucial. We may reinterpret these arguments such that primary existents are tropes.)

First, suppose $m = k$ so $e = d$ and $n = 0$. Nāgārjuna rejects this possibility because it cannot get off the ground: *d* requires *e* to cause it, but $d = e$, so either *e* already exists, or *e* does not exist, at $t + n$. If *e* already exists at $t + n$, then *e* has always existed, since *e* cannot bring itself into existence without already existing. If *e* does not exist at $t + n$, then *e* has never, and will never, exist because *e* cannot bring itself into existence. So, we must reject (1) (Nāgārjuna *MMK* I.3, I.6, I.7, I.13; VII.13, VII.17).[14]

[13] In ancient Buddhist logic, a proposition could be mapped to one of four (sets of) truth values: (1) true, (2) false, (3) both true and false, and (4) neither true nor false. This logical structure is called the *catuṣkoṭi*. See Priest 2011, 2015.

[14] An alternative way to construe (1) is to say that the effect is somehow contained within the cause. This view of (1) is more accurate with regards to what Nāgārjuna means by self-causation, but it is not as relevant with regards to how Kim understands causation to involve distinct events. This is why I have chosen to interpret (1) as stating an identity. Nonetheless, Nāgārjuna attempts to refute this alternative interpretation of (1). See Nāgārjuna *MMK*, XX.3; Siderits 2007, 194–195; and Westerhoff 2009, 102–104.

Now consider (2). *m* and *k* are distinct primary existents, so *e* and *d* are distinct events and $n > 0$. Nāgārjuna gives two arguments against (2).

First, if *e* and *d* are distinct events, then an infinite regress results: If *e* causes *d*, then some event *c* at $t - p$ causes *e*, in which case some event *b* causes *c*, and so on. Unless we accept that time goes infinitely backwards, we must reject this possibility (Nāgārjuna *MMK*, VII.19). Also, if a distinct existent constitutes each event *e, d, c*, and *b,* then infinitely many existents must exist for *e* to cause *d* (Westerhoff 2009, 105).

One might object that it is possible that either the world consists of infinitely many existents or that causation itself may extend infinitely backwards. Indeed, supposing infinitely many *explanantia* is logically consistent with our conception of causal explanation in general (Westerhoff 2009, 105–106).

Adequately responding to this objection is beyond the scope of this paper. However, suppose that we define infinitely many events

$$\ldots, b, e, d, f, g, h, j, \ldots,$$

constituted by primary existents. A causal relation R_C obtains for each pair of consecutive events because R_C obtains between the events constituting each pair. If we string all these events into an infinitely long explanatory sentence S_E, then we have an account of reality in terms of the irreducible events constituting the world. Presumably, such an account is ultimately true, so S_E must be uniquely true (Putnam 1981, 49; Siderits 2007, 202). Any other explanatory sentence S_E' disagreeing in at least one conjunct must be false.

Causality is transitive. From '*e* causes *d*' and '*d* causes *f,*' we can derive '*e* causes *f.*' Thus, we can transform S_E into a new description S_E' on which events are related via some transitive causal relation R_T:

$$\ldots, e, f, h, \ldots.$$

We can apply the same logic to derive a distinct description S_E'' from S_E:

$$\ldots, b, d, g, j, \ldots.$$

Since S_E is infinitely long, and causality is transitive, we can in fact derive infinitely many descriptions $S_E', S_E'', S_E''', \ldots$, from S_E.

The truth conditions for $S_E', S_E'', S_E''', \ldots$, are subsets of those for S_E: if S_E is true, then $S_E', S_E'', S_E''', \ldots$, must be true, too. Thus, we can construct explanatory sentences $S_E', S_E'', S_E''', \ldots$, that disagree with S_E in at least one conjunct but which are nevertheless true. Hence, S_E is not ultimately true because it is not uniquely true. This conclusion follows on the assumption that *e* and *d* are distinct events. Hence, provided that this response succeeds, (2) fails for the substantialist, even allowing infinitely many existents.

Alternatively, perhaps distinct events *c, d*, and *e* concern the same existent *m*, which endures during $t - p$, t, and $t + n$. These events must be individuated based on changes

in *m*'s *properties*. *m* persists during *e* at *t* and *d* at *t* + *n*, so properties *P* and *Q* are instantiated at *e* and *d*, respectively. Since *m* instantiates *P* at *t* and *Q* at *t* + *n*, we must be able to identify that the same primary existent instantiates both *P* and *Q* by identifying the defining characteristic *M* of *m* at both *t* and *t* + *n*. However, the relation between *M* and *m* is vexed. Thus, Nāgārjuna suggests, this case seems to fail.

Consider Nāgārjuna's second argument against (2). *e* and *d* are causally related and occur at different times: *e* exists at *t* prior to *d*, while *d* exists at *t* + *n* following *e's* cessation. R_C holds between *e* and *d*. But *e* and *d* do not co-exist, so R_C must hold between an existent and a non-existent.

Two problems arise here. First, a necessary condition for the existence of R_C at *t* might be the existence of all R_C's relata at *t*, including *e* and *d*. If so, then a diachronic causal relation is impossible because this type of relation only holds between an existent and a non-existent. Nevertheless, diachronic relations by definition hold across time, so they must have some defining characteristic *P* if they can exist when not all their relata exist. But we have seen that the existence of defining characteristics is vexed. Hence, it is unclear that any property *P* exists in virtue of which a diachronic relation may exist when not all their relata exist. But it is also unclear why a diachronic relation would exist when not all its relata do.

Second, suppose *arguendo* that R_C may hold between *e* and *d* although *e* and *d* never co-exist. If *e* exists at *t* but *d* does not, then at *t* why does R_C hold between the existent *e* and the non-existent *d* and not between *e* and some other non-existent *d'*? We cannot appeal to R_C to explain why R_C holds between *e* and *d* without begging the question. Two possibilities suggest themselves. First, R_C holds between an existent *e* and a non-existent *d* because *d* has some relevant property *D* in virtue of which R_C holds between *e* and *d*. But this is problematic because the existence of defining characteristics is vexed. Hence, this possibility seems to fail.

Perhaps, R_C holds at *t* between *e* and *d* because some other relation *R** holds between R_C and *d* at *t*. Notice, though, that R_C exists at *t* but *d* does not, so *R** holds between an existent and a non-existent at *t*. By parity of reason, then, some other relation *R*** must hold at *t* between *R** and *d* to explain how an existent and a non-existent may be diachronically related. But *R*** exists at *t* while *d* does not, so we need some additional relation *R****, and so on. We have an infinite regress. Hence, this option also seems to fail. So, R_C cannot hold between *e* and *d* because *e* and *d* do not co-exist. Altogether, (2) appears to fail (Nāgārjuna *MMK*, XX).

One might object that this argument incorrectly assumes that cause and effect cannot co-occur. Suppose that *e* causes *d* but *e* does not immediately cease once *d* arises at *t.* Rather, *e* continues to exist for some time Δt. If *e* ceases when *d* arises, then *e* ceases non-arbitrarily. However, if *e* continues to exist after *d* arises, then it becomes unclear when or how *e* will cease. No immediate reason exists explaining why *e* should cease at any particular moment *t'* so long as $t' \in \Delta t$. If t_1', t_2', $t_3' \in \Delta t$, all things considered, we have no reason to think that *e* will cease at t_1' rather than at t_2' or t_3'. The ceasing of *e* admits of multiple potentially vague descriptions because we do not know whether *e* will cease at t_1', t_2', or t_3', and even if *e* ceases at, say, t_1', it is unclear *why e* ceases then rather than at t_2' or t_3'. We also cannot appeal to some cause *b* to

explain why *e* ceases at t_1' because the same questions would arise for *b*, thereby only pushing the explanation back. But exactly one of these descriptions of *e's* ceasing must be ultimately true. It is unclear, though, how we could decide which description is ultimately true when *e's* ceasing occurs gradually following *d's* arising (Siderits 2004, 407; Westerhoff 2009, 202).

One might respond that even if we cannot identify which description is ultimately true, it does not follow that such a description does not exist. Perhaps our epistemological capacities prevent us from identifying this description, which is nevertheless ultimately true. However, if such an ultimately true description exists, then on this description *e's* cessation, and *d's* arising, would be gradual. Causes and effects could then undergo "temporally thick" processes of gradual emergence or cessation. As primary existents, though, causes and effects are temporally atomic: they either exist or do not at any point in time. Gradual processes of emergence or cessation are inconsistent with primary existents' being temporally atomic. Hence, according to the Mādhyamika, we should doubt (but not necessarily deny) that any such ultimately true description exists (Westerhoff 2009, 202).

In sum, according to Nāgārjuna, (1) and (2) seem to fail. *Ipso facto,* (3) seemingly fails. Nāgārjuna rejects (4) because as a conventional relation, causality grounds the empirical conventions whereby we understand the world (Dreyfus and Garfield 2021, 23–24). Mādhyamikas do not contest causation *per se*: They contest that we have good reason to think that causal relations obtain between primary existents, but they do not doubt that conventionally existent causal relations obtain between secondary existents (Siderits 2007, 198–199).

The arguments above constitute objections to substantialism. Provided that they succeed, these arguments present objections to the soundness of Kim's argument, insofar as his argument assumes substantialism.

Against the Causal Closure Principle (CCP)

Different versions of the causal closure principle (CCP) exist.[15] Consider a weak form of the principle: If *p* is a physical event, then *p* has a sufficient physical cause *p**. This implies that no physical event can be *solely* caused by some *sui generis* non-physical cause (Gibb 2019, 112; Kim 2011, 140–141). Mādhyamikas may be construed as doubting that the CCP holds by doubting the possibility of a diachronic causal relation obtaining between primary existents.

The critique of substantialism applies here. The CCP makes a claim about the nature of causal relata as physical events, so what was said above regarding the four possible ways in which causation may occur also applies here. Therefore, if the critique of substantialism above succeeds, then we cannot say that a physical event causes itself; that some (physically or non-physically) distinct cause causes the physical event; that

[15] See, for example, Anjum and Mumford 2017, 105–107; Gibb 2017, 266; Gibb 2019, 111–120; Hendry 2017, 160–161; Kim 2011, 214; Kim 2021, 140–141; Kistler 2017, 55; Mayr 2017, 80–81; Orilia and Paoletti 2017b, 29–30; Shoemaker 2007, 16–17; Wilson 2021, 41.

both the physical event causes itself and some (physically or non-physically) distinct event also causes it; nor that there is no cause of the physical event whatsoever.

Consider how some physical event *p* arises from its cause *p**. What grounds this arising? How are two existents causally related diachronically? Suppose that *p** exists at *t* and *p* at *t* + *n*. As primary existents, *p* and *p** exist independently, so *p*'s arising from *p** must depend on an external causal relation *R* obtaining between them (Anjum and Mumford 2017, 99; Kim 1999, 29; Nāgārjuna *MMK*, XX.15). *p* and *p** cannot exist cotemporally because causes must precede their effects (Kim 1999, 28–31; Nāgārjuna *MMK*, XX.12–14).[16] Thus, *R* must obtain between an existent and a non-existent. Since one of *R's* relata is always non-existent, we must explain how these relata are uniquely related. Ergo, we must introduce further relations R_1* and R_2* explaining why *p* and *p**, respectively, are related to *R*.

Suppose that R_1* relates *p** to some intermediate event *r*—which occurs at *t** where *t* > *t** > *t* + *n*—and R_2* relates *r* to *p*. *p** causes *r*, which causes *p*, so *p** transitively causes *p*. (To be consistent with the CCP, assume that *r* is some physical event.) However, the difficulties discussed at the end of the section above also attach to the relations R_1* and R_2*. We must posit some other relation *R*** explaining why R_1* obtains between *p** and *r*, and likewise we must posit some relation *R**'* explaining why R_2* obtains between *r* and *p*. An infinite regress results (Nāgārjuna *MMK*, VII.19).

To avoid this, we might deny the need to ground the arising of *p* from *p*: p* arises from *p** but no further fact grounds this arising. According to the Mādhyamika, this option also appears to fail. To see this, suppose that *p's* arising from *p** has no ground, although *p** grounds *p*. Why do we need to ground *p* but not the arising of *p* from *p**? We cannot say that *p's* arising from *p** needs no ground because *p* arises from *p**. That begs the question (Nāgārjuna *MMK*, VII.19).

Presumably, *p's* arising does not require a ground, while *p* does, because *p* arises and ceases while *p's* arising, as a brute fact, does not itself arise. But if *p's* arising from *p** does not arise, then either *p's* arising has always existed or has never existed. The latter possibility apparently fails because then *p* could never arise. But if *p's* arising has always existed, then *p* will never cease, contrary to fact (Nāgārjuna *MMK*, VII.7, 17). Yet, if *p's* arising from *p** arises, then *p's* arising, like *p*, requires grounding. Hence, Nāgārjuna argues, this recourse appears to fail.

A similar concern attaches to *p**: *p** precedes *p*, so *p** must cease prior to *p's* occurrence. We must explain how *p** ceases, as *p** endures for some time Δt. At time t_C, *p** ceases to exist. Suppose *p** ceases due to some cause *k*. Then the same problems evinced in the paragraph above attach to *k* regarding the arising and ceasing of *k*. Hence, appealing to *k* to explain *p**'s cessation begs the question (Nāgārjuna *MMK*, VII.32).

[16] Of course, this assumes that causation is diachronic, so an event *qua* cause cannot synchronically cause an event *qua* effect. On a Humean interpretation of causation, causes are thought to necessarily precede their effects, but this claim can be contested. (See, for example, Anjum and Mumford 2017.) I do not have the space here to consider whether synchronic causation is possible. Regardless, Kim himself rejects synchronic causation, so this issue is beside the point. See Kim 1999, 28–31, for his rejection of synchronic emergent downward causation.

Suppose we explain *p**'s cessation by appealing to some property *P* of *p**. This also seems to fail: If *p** ceases due to instantiating *P*, then we must explain why *p** is not always ceasing. Perhaps *p** instantiates *P* conditionally. These conditions must also arise and cease because if not, then *p** must always be ceasing. But appealing to conditions that arise and cease to explain how *p** ceases also begs the question (Nāgārjuna *MMK*, VII.32).

Consider an alternative: In Ābhidharma metaphysics, an effect arises from the combination of its cause and its supporting conditions (Garfield 1994, 222; Salvini 2014; Siderits 2004, 402; Siderits 2021, 75). *p** causes *p* to arise only if the set of supporting conditions $c_1, c_2, c_3, \ldots, c_n$ obtains. Suppose *p* is already contained within the combination of its causes and conditions, the set $S = \{p^*, c_1, c_2, c_3, \ldots, c_n\}$. However, if $p \in S$, then *S* cannot be the cause of *p* because *p* already exists. However, if *p* is not contained within *S*, then *S's* being the cause of *p* is arbitrary (Nāgārjuna *MMK*, V).

To see this, suppose that *S* causes *p*. Since *S* precedes *p*, all causes and conditions within *S* must cease prior to *p*.[17] *p* is not a member of *S*, so *S itself* is not sufficient to explain *p*. Some relation *R* must explain why *S* causes *p*. Since *S* does not contain *p*, we could presumably construct a similar relation *R'* that obtains between *p* and any distinct set *S'*. Thus, if *R* explains why *S* is the cause of *p*, then some property *Q* of *R*[18] exists in virtue of which *R* explains why *S* non-arbitrarily causes *p*. The difficulty in relating defining characteristics to their bearers precludes affirming any such property *Q* of *R*.

Another difficulty obtains: Since *S* causes *p*, *S* ceases before *p* arises. Between *S*'s cessation and *p's* arising, neither exists at time *t**. *t** always follows *t* when *S* exists, and *t** necessarily precedes $t + n$ when *p* exists. At *t** the set of existents $S_{t^*} = \emptyset$, so *p* arises out of nothing, contradicting the metaphysical principle *ex nihilo nihil fit.* This analysis generalizes. All effects arising from the combination of their causes and conditions appear to necessarily arise from nothing (Nāgārjuna *MMK*, VII.17, XX.6). Seemingly, we must reject either this account of causality or the principle *ex nihilo nihil fit*.

In sum, these arguments, if sound, suggest that we cannot coherently causally relate the primary existents, *p* and *p**, across time. The CCP assumes that we can do this. Ergo, if these Madhyamaka arguments succeed, then the CCP *prima facie* fails. If so, then the Mādhyamika can argue thus to undermine the soundness of Kim's argument.

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[17] Suppose that at least one member *s* of *S* does not cease when *p* comes into existence but continues to exist. Then there must be some property *P** in virtue of which *s* continues to exist while the other members of *S* cease. Either *P** does not arise or *P** arises. If *P** does not arise, then *s* must instantiate *P** under all circumstances. But then *s* must never cease to exist but always continue to exist. It is not clear that something that perpetually exists could enter into causal relations with other things: Presumably, a cause must be "exhausted" in the production of an effect (Nāgārjuna 1995, XX.10). Furthermore, if *s* could enter into causal relations despite perpetually continuing to exist, then presumably *s* would constantly be producing effects since, as a perpetual cause, *s* would never cease to have causal power. Clearly, though, this result is empirically false. On the other hand, if *P** arises, then the same difficulties described in the preceding paragraphs above attach to *P**. Altogether, then, no member of *S* continues to exist when *p* comes into existence.

[18] The property *Q* attaches to *R* because *S per se* is insufficient to explain *p.*

Against the Causal Exclusion Principle (CEP)

Kim assumes the causal exclusion principle (CEP). Like the CCP, we can explicate the CEP in various ways.[19] Simply, the CEP states that no event has two or more simultaneous sufficient causes, unless the event is genuinely overdetermined.

If the CEP is true, then we can individuate causes. Mādhyamikas argue against the individuation of primary existents by arguing against substantialism. If substantialism is false, then no primary existents exist, and *ipso facto* we cannot individuate primary existents *qua* causes (Nāgārjuna *MMK*, XV.3–4; Siderits 2007, 200–201). Since the causal relata on Kim's argument are primary existents, the arguments against substantialism, if successful, undermine the CEP.

Against the CEP, Mādhyamikas would suggest that another difficulty arises. Two entities, *m* and *n*, are intrinsically distinct iff we can individuate *m* and *n* in the manner in which *m* and *n* are distinct independent of our conceptualization of them (Westerhoff 2009, 35). I construe intrinsic distinctness thus:

> For any *x* and *y*, *x* is *intrinsically distinct* from *y* iff both either some properties of *x* are not properties of *y*, or some properties of *y* are not properties of *x*, and *x* and *y* instantiate their properties independently of our conceptualization of *x, y,* or their properties.

As the irreducible properties of primary existents, these properties must themselves be both primary existents and intrinsically distinct. If not, then we cannot individuate primary existents because we cannot individuate their properties. Furthermore, it follows that two entities are intrinsically distinct iff they are primary existents.[20]

Consider *m* and *n*. As primary existents, *m* and *n* are intrinsically distinct. Mādhyamikas suggest that if *m* and *n* are intrinsically distinct in virtue of instantiating distinct properties *M* and *N*, then we end up indefinitely proliferating the number of properties required to distinguish *m* and *n*. Since *m* and *n* are intrinsically distinct, they differ with respect to some property *P* that either *m* or *n*, but not both, instantiates. $P \neq$

[19] See, for example, De Caro and Grasso 2017, 322; Gibb 2017, 265–267; Gibb 2019, 111–112; Kim 2011, 216; Kim 2021, 143–144; Macdonald and Macdonald 2019, 196, 200–202; Mayr 2017, 84; Orilia and Paoletti 2017a, 8; Orilia and Paoletti 2017b, 27; Robb 2019, 192–193; Shoemaker 2007, 4–5; Wilson 2021, 41.

[20] Suppose that *m* instantiates *P** but *n* does not, where *m*, *n*, and *P** exist independently of our conceptualization of them. Assuming that *m* and *n* are the only existents, *P** establishes *m* as *m* because *P** establishes *m* as *not-n*. Hence, *P** is a defining characteristic of *m*. Defining characteristics inhere in primary existents (Nāgārjuna *MMK*, V; Siderits 2007, 188–191). Therefore, *m* and *n* are distinct primary existents. If *m* and *n* are distinct primary existents, then they instantiate different sets of properties. These properties as the irreducible characteristics of the primary existents *m* and *n* are primary existents themselves. Thus, we can individuate *m* and *n* independently of our conceptualization of them because we can individuate *m* and *n* by identifying the distinguishing set of primarily existent properties that is uniquely instantiated by each primary existent. Ergo, *m* and *n* are intrinsically distinct. Altogether, *m* and *n* are primary existents iff *m* and *n* are intrinsically distinct.

n and $P \neq m$ because properties and property bearers are distinct. *P* and *n* are distinct because either *P* or *n*, but not both, instantiates *Q*, and *P* and *m* are distinct because either *P* or *m*, but not both, instantiates *R*. Then $P \neq Q$ and $n \neq Q$, and $P \neq R$ and $m \neq R$. For each non-identity relation, we must posit additional properties, with no end in sight. Consequently, too many properties result (Nāgārjuna *MMK*, XIV.5). The problem is that every time we individuate two entities, we need some additional property to do so. Hence, individuating entities requires positing even *more* entities. The number of entities required for individuation quickly gets out of control.

One might object that properties and property bearers are not distinct. Instead, property *M* is in fact internal to *m* because *M* is a proper part[21] of *m*. *M* constitutes *m*, so the relation between *M* and *m* is an internal relation. Hence, *M* and *m* are not distinct.

This objection is plausible but inconsistent with the premise that *M* is a primary existent. Primary existents are the irreducible components of reality and, as such, are impartite. (This is because Mādhyamikas' understanding of primary existents is due to their predecessors, the Ābhidharmika, who were mereological nihilists[22] (Siderits 2007, 105; Westerhoff 2009, 36).) Primary existents are those existents that survive the "division and analysis" test, which is discussed above (see fn. 6; Siderits 2021, 47–71). If *M* is a proper part of *m*, then this implies that *m* does not survive logical analysis because *m* can be further reduced to its proper parts, including *M*. If *m* does not survive logical analysis, then *m* is not a primary existent. However, *ex hypothesi*, *m* is a primary existent. Therefore, positing *M* as being a proper part of *m* is inconsistent with the primary existence of *m*.

Additionally, one might object that the Mādhyamikas make a category error by considering the property *M* to be a primary existent. That is, one might think that a property is not a primary existent because a primary existent is an *entity*, while a property is not an entity *per se*, but rather what is *instantiated* by an entity or existent. However, if properties exist independently of our conceptualization of them, then such properties are irreducible constituents of reality (Siderits 2007, 180–181). (Otherwise, all properties would only conventionally exist in dependence on our conceptualization of them or their instantiation bases.) As such, the properties of primary existents are themselves primarily existent.

Consequently, this objection seems to wrongly assume that primary existence as a category only applies to the instantiation bases of properties, but not also to the properties themselves. This assumption seems rather strange: Why would a primary existent have only conventionally existent properties? Indeed, by definition, primary existents have the property of being the irreducible constituents of reality. If primary existence as a category only applies to existents or entities, then the property "being an irreducible constituent of reality" is itself merely conventionally existent. But then primary existents would be identifiable and defined by what is only conventionally

[21] In mereology, *x* is a *proper part* of *A* iff there exist *zs* such that *x* and the *zs* compose *A* (van Inwagen 1987, 25). A proper part of a thing is any part that is not the object itself.

[22] Mereological nihilism is the metaphysical thesis that no objects with proper parts exist; only impartite simples exist. See Merricks 2000 and 2001; Siderits 2007, 105–137; Siderits 2021, 47–56; and van Inwagen 1990.

existent. While this may not be a genuine contradiction, this result is very strange and unlikely to be countenanced by the substantialist.

Mādhyamikas conclude that the relation of identity is intelligible only if the relation of non-identity is itself intelligible (Nāgārjuna *MMK*, XIV.7, XV.3; Siderits 2007, 201). Two reasons support this claim. First, the relation '$x = x$' establishes identity by distinguishing x from all other primary existents. Identity draws lines *around* each primary existent by drawing lines *between* primary existents. Second, '$x = x$' is a binary relation. Although it obtains between an existent and itself, it requires two relata. We must differentiate, if only conceptually, between two tokens of the same existent. Hence, the relation of identity implicitly involves the relation of non-identity. Mādhyamikas urge that since the latter seems to fail regarding primary existents, the former does, too.

Therefore, Mādhyamikas doubt that mental and physical properties *qua* primary existents are either identical or non-identical because they doubt that anything falls under the category of "primary existence." Nevertheless, Mādhyamikas accept that mental and physical properties *qua* secondary existents are conventionally either identical or non-identical. These types of properties exist in dependence on linguistic-conceptual frameworks. Distinctions between these types of properties, including their defining characteristics, are distinctions between secondary existents (Westerhoff 2009, 24, 59). Concepts denoting mental and physical properties are intensionally non-identical because these concepts have different meanings in language. Since mental and physical properties as secondary existents are empty of *svabhava*, concepts specifying mental and physical properties fail to refer to primary existents. Ergo, these concepts have empty extensions (at least empty of primary existents), so they are extensionally identical (Dreyfus and Garfield 2021, 14). (Nevertheless, by doubting that these concepts refer to primary existents, Mādhyamikas do not necessarily deny that primary existents exist; rather, they suspend their judgment on this point.)

Altogether, Mādhyamikas give reasons to think that we cannot individuate entities in the manner required for the CEP to hold. If successful, these reasons show that the CEP *prima facie* fails, in which case we have reason to doubt the soundness of Kim's argument.

5. A MADHYAMAKA SOLUTION

Before considering how Mādhyamikas would positively respond to Kim's argument, note two implications that follow from the Madhyamaka critique above. First, recall that emergentism provides a multilayered view of reality on which nomologically co-varying levels instantiate different types of irreducible properties.[23] A necessary condition for distinguishing these levels, or types of irreducible properties, is our ability to individuate these levels, or types of properties, with respect to each other. However,

[23] See, for example, Bickhard and Campbell 2000; Bickhard and Campbell 2011; Campbell 2015; De Carro and Grasso 2017, 315–317; Emmeche, Køppe, and Stjernfelt 2000; Kim 1999; McLaughlin 2019; Shoemaker 2007, 71–79; Welshon 2002; Wilson 2021, 24–30.

provided that these levels or types of properties are construed as consisting of primary existents, Mādhyamikas problematize our ability to individuate these levels or types of properties in this way. Therefore, if their critique is successful, then Mādhyamikas undermine both emergentism and reductive physicalism: Both views purport to be ultimate theories of reality, so both metaphysical theories presuppose substantialism. Nonetheless, Mādhyamikas may prefer non-reductive physicalism over reductive physicalism for other reasons, such as the greater explanatory utility that emergentism and non-reductive physicalism might offer over reductive physicalism. Even if Mādhyamikas doubt the possibility of ultimate truth, they do not doubt or deny the utility of empirically investigating the world.

Second, Mādhyamikas provide reasons that, if they hold up, undermine mind-body supervenience. The mind-body supervenience thesis requires that mental properties nomologically covary with physical properties (Kim 2011, 218; Kim 2021, 141; Welshon n.d., 3; Wilson 2021, 41). A mental property *M* supervenes on a physical property *P* iff, for all *x,* if *x* instantiates *M*, then there exists some *P* such that *x* instantiates *P* and necessarily, for all *y*, if *y* instantiates *P*, then *y* instantiates *M*. Both *x's* and *M's* existence are necessary conditions for *x's* instantiation of *M*. If "existence" here means *primary* existence, then Mādhyamikas provide *prima facie* reasons against both *x's* and *M's* existence. Thus, if these reasons succeed, the antecedent of the consequent of the biconditional is false for all *x*, in which case it follows that *M* supervenes on *P*, but only in a vacuous sense.

However, if "existence" means secondary, or conventional, existence, then supervenience may be preserved more meaningfully on the Madhyamaka view. Suppose that *M* exists *conventionally* iff the assertability conditions (whatever they might be) for the proposition "*M* exists" obtain (Westerhoff 2009, 220). These assertability conditions preserve supervenience at a conventional level of truth: *S* supervenes on *B* iff, for all linguistic contexts *x*, if the assertability conditions for *S* obtain in *x*, then there exists some *B* such that the assertability conditions for *B* obtain in *x* and necessarily, for all linguistic contexts *y*, if the assertability conditions for *B* obtain in *y*, then the assertability conditions for *S* obtain in *y*. Hence, Mādhyamikas can preserve supervenience meaningfully at a conventional level of description.

Mādhyamikas suggest that if mental and physical phenomena exist conventionally, then they exist in dependence on causes and conditions, which are themselves empty of *svabhava* (Nāgārjuna *MMK*, I.14, XIII.7, XXIV.18). Thus, Mādhyamikas doubt that some ultimately true description of reality exists which is ontologically grounded in the mind-independent nature of phenomena (Siderits 2007, 191; Siderits 2021, 171–192; Westerhoff 2009, 59). If these doubts hold up, then our search for an ontological, or epistemological,[24] foundation grounded in *svabhava* must fail (Westerhoff 2009, 200). Nonetheless, causality plays a vital role in our experience of the world and our explanations of phenomena (Dreyfus and Garfield 2021, 23–24). Mādhyamikas construe causality as holding on the level of conventional truth (Bliss 2015, 67;

[24] See Tillemans 2003 and McClintock 2003 on how Mādhyamikas have objected to the notion of "the given" in foundationalist epistemology.

Garfield 2001, 512; Siderits 2007, 198–199). We mistake the secondary existents of the conceptual frameworks whereby we cognize the world for veritable primary existents (Westerhoff 2009, 46–52). Thus, Mādhyamikas would respond to Kim's argument by reconceptualizing causality as obtaining between secondary existents.

To this end, Mādhyamikas note that our conceptual frameworks involve causal sortals, which we use to explain and predict worldly phenomena. Consequently, these sortals have empirical value (Garfield 2001, 510–511; Collins 1972, 133). Furthermore, the conceptual frameworks that contain these causal sortals provide assertability conditions for the explanatory propositions comprised of these sortals. Even if we doubt that these explanatory propositions refer to primary existents, we can preserve the conventional truth of these propositions by reconsidering over which domains of discourse these propositions range. Rather than ranging over primary existents, these propositions might range over secondary existents—concepts and relations that have been posited for their explanatory utility (Garfield 2001, 511). Thus, Mādhyamikas do not undermine our empirical efforts to explain the world naturalistically. If their analysis is correct, then Mādhyamikas only show that explanatory propositions about the world range over domains of discourse that are empty of primary existents. Furthermore, Mādhyamikas provide an anti-realist account of truth in terms of assertability conditions (Westerhoff 2009, 220).[25] The truth conditions for explanatory propositions are replaced with these propositions' assertability conditions.

Mādhyamikas hold that, as secondary existents, cause and effect are conventionally interdependent (Bliss 2015, 74). We can explicate this interdependence thus:

> *Conventional interdependence*: Concepts *x* and *y* are conventionally interdependent iff *x's* assertability conditions obtain iff *y's* assertability conditions obtain.

Cause and effect as concepts are conventionally interdependent because they are both existentially and notionally dependent on each other. While Westerhoff explicates existential and notional dependence in terms of existence, we can reinterpret these relations in terms of assertability conditions (2009, 26):

> *Existential dependence:* Concept *a* existentially depends on concepts falling under the property *F* iff necessarily, if *a's* assertability conditions obtain, then the assertability conditions for something falling under *F* obtain.

> *Notional dependence:* Concepts falling under the property *F* are notionally dependent on concepts falling under the property *G* iff necessarily, if the

[25] See Putnam 1981 on anti-realism, 54–55: "[Anti-realism] does not deny that there are experiential *inputs* to knowledge; knowledge is not a story with no constraints except *internal* coherence; but it does deny that there are inputs *which are not themselves to some extent shaped by our concepts*, by the vocabulary we use to report and describe them, or any inputs *which admit of only one description, independent of all conceptual choices*…. The very inputs upon which our knowledge is based are conceptually contaminated; but contaminated inputs are better than none. If contaminated inputs are all we have, still all we have has proved to be quite a bit" (italics original).

> assertability conditions for some concept *x* falling under *F* obtain, then the assertability conditions for some concept *y* falling under *G* obtain.

The concepts "cause" and "effect" are *notionally* dependent on each other because if the assertability conditions for the one concept obtain, then those for the other obtain, and vice versa. These concepts are *existentially* dependent on each other because in the absence of the cause's assertability conditions, the effect's assertability conditions fail to obtain, and vice versa (see Pandeya 1964, 9–10; Westerhoff 2009, 95–96, 113).

By reconceptualizing causation, Mādhyamikas may provide the necessary resources to uphold emergent downward and same-level causation against Kim's threat of epiphenomenalism. Consider emergent downward causation: Suppose *m* causes *p*. If Mādhyamikas are correct in their critique of causality, then substantialism, the CEP, and the CCP each *prima facie* fail, and we have reason to doubt the truth of these theses. If substantialism fails, then *m* and *p* are secondary existents. If the CCP fails, then we need not infer some second cause *p** of *p*. Therefore, if Mādhyamikas successfully criticize substantialism and the CCP, then downward causation is safe, at least from Kim's objections.

Nevertheless, suppose *p* does have two causes, *m* and *p**. Supposing that the Madhyamaka critique of the CEP is successful, then the CEP also *prima facie* fails, in which case we have no reason to accept it as true, and we need not reject either *m* or *p** as causes of *p*. Since *m* and *p** are both causes of *p*, *m* and *p** are conventionally interdependent: Whenever the assertability conditions for *p* obtain, the assertability conditions for both *m* and *p** obtain. That is, regarding *p*, the assertability conditions for *m* obtain iff the assertability conditions for *p** obtain. Hence, explaining *p* requires referring to both mental and physical causes because these causes' assertability conditions are intertwined.

Also, *m* and *p** are distinct causes because *m* is a mental concept and *p** is a physical concept. In our language, mental and physical concepts have different meanings (Garfield 2001, 513; Place 1956, 44–45; Smart 2021, 72). Thus, propositions involving *m* are irreducible to propositions involving *p**, and vice versa, because these concepts are intensionally distinct. Since we refer to both *m* and *p** to explain *p*, we *ipso facto* refer to mutually irreducible propositions to explain *p*.[26] Ergo, explaining *p* requires mutually irreducible mental and physical concepts, so the mental cause *m* is not epiphenomenal with regards to *p* because it is explanatorily efficacious here. In this way, Mādhyamikas may preserve emergent downward causation, maintaining the spirit of emergentism in terms of levels of description, rather than in terms of ontological levels.

Mādhyamikas may argue similarly to maintain emergent same-level causation against Kim's threat. Suppose three things: (1) mental property[27] M_1 causes another mental property M_2 to instantiate, (2) the assertability conditions for M_1 supervene on

[26] See Garfield 2021, 134–141, for an example of such mutually irreducible propositions.

[27] For brevity, I use the term "property" here. By "mental property", I mean the *concept* of a mental property, not a mental property *per se*. I am using "mental property" to refer to a *secondary* existent, not a primary existent.

the assertability conditions for some physical property P_1, and (3) the assertability conditions for M_2 supervene on the assertability conditions for P_2. Again, if the CEP fails because the Madhyamaka critique of this principle is successful, then *ex hypothesi* both M_1 and P_2 are sufficient causes of M_2.[28] M_1 and P_2 are conventionally interdependent: Whenever M_2*'s* assertability conditions obtain, the assertability conditions for both M_1 and P_2 obtain, so M_1*'s* assertability conditions obtain iff P_2*'s* assertability conditions obtain. Hence, if we refer to P_2 to explain M_2, then we must also refer to M_1 to explain M_2 because M_1 and P_2 are conventionally interdependent. M_1 is a mental concept, while P_2 is a physical concept, so these concepts are intensionally distinct. Thus, M_1 and P_2 belong to mutually irreducible levels of description. *A fortiori*, causally explaining M_2*'s* instantiation requires referring to mutually irreducible levels of description, in the spirit of emergentism.

6. OBJECTIONS

Consider five objections to the Madhyamaka response to Kim. First, one might object that Mādhyamikas fail to provide an adequate solution to Kim's argument because their solution holds at the level of conventional truth. What we need is an account of emergent causation that holds at the level of ultimate truth. Anything less represents a cop-out in Kim's favor.

This objection fails for two reasons. First, this objection begs the question against Mādhyamikas because it assumes that a solution to Kim's argument must hold at the level of ultimate truth, since Kim's argument operates at this level. This assumption is not obvious. Nonetheless, suppose *arguendo* that a solution to Kim's argument must hold at the level of ultimate truth and that Kim's argument operates at this level. Mādhyamikas (would) critique Kim's argument. These critiques hold at the same level as his argument. Hence, Kim's argument still fails on the level of ultimate truth. Even if we deny that Mādhyamikas offer a positive solution to Kim's argument at the level of ultimate truth, we cannot deny that nevertheless they offer a critique of Kim's argument at this level.

Furthermore, Mādhyamikas suggest that the ultimate truth is that there *is* no ultimate truth. (Mādhyamikas suggest this point, *not* in the sense that they positively affirm this claim as being true, but in the sense that Mādhyamikas express skepticism toward the existence of primary existents and thereby allow for the possibility that there is no way that the world is independently of our conceptual frameworks.) I cannot analyze this claim here due to lack of space, but a vast interpretive literature already exists.[29] Taking this claim at face value, it follows that only conventional truth exists. Ergo, Kim's argument, and any solution to his argument, must hold at this level because

[28] To make this claim, I set aside the problems that Welshon (2002) identifies regarding Kim's suggestion that supervenience is a causal relation, which it is not. No doubt, in the case that some phenomenon is best explained by two distinct causes, Mādhyamikas could provide some independent basis (such as empirical evidence) for thinking that both M_1 and P_2, not just M_1, are sufficient causes of M_2.

[29] See, for example, Deguchi et. al. 2008, 2013a and 2013b; Garfield and Priest 2003; Kardaš 2016; Guhe 2017; Priest 2009; Siderits 2007, 200–204; Westerhoff 2009, 212–222.

there *is* no other level of truth (or at least we have no reason to think that there is a level of truth above, or distinct from, that of conventional truth). The first objection, then, fails.

Second, one might object that while Mādhyamikas provide a viable solution to Kim's argument, this solution requires us to reject too much, including substantialism and emergentism. We might resolve epiphenomenalism, but only at great expense.

Adequately responding to this objection is beyond the scope of this paper. However, *prima facie* this objection begs the question against the Mādhyamika for the same reasons that the first objection begs the question. It assumes that we had something initially which we have subsequently lost—namely, substantialism. The Mādhyamika may respond thus: So long as the Madhyamaka critique is *prima facie* plausible, for this objection to succeed, either substantialism must be shown to withstand the Madhyamaka critique, or some feature of this critique must be identified and shown to fail. This places the burden of proof on the opponent to show that the Madhyamaka critique is mistaken in some way.

Additionally, Mādhyamikas can accommodate emergentism on their skeptical view. Distinguish two types of emergentism: ontological and semantic. While Mādhyamikas do not affirm the former, due to their skepticism about primary existents in general, they affirm the latter (Garfield 2001, 511–513). *Prima facie* we can translate all propositions of ontological emergentism into propositions of semantic emergentism. If so, then Mādhyamikas might be able to preserve the explanatory utility of emergentism, which is what matters at the level of conventional truth. Mādhyamikas may contend that if we can successfully translate ontological emergentism into semantic emergentism, then the ontological emergentist has the burden of proof to explain why semantic emergentism is insufficient for our pragmatic, scientific, and explanatory purposes.

Third, one might object that since conventions are unstable and unfixed, conventional truth gives rise to vicious relativism about truth and knowledge. This result threatens our ability to regard certain kinds of knowledge as being more epistemically secure than others.

Conventions vary, so conventional truth and knowledge vary. However, it does not follow that we cannot rank some kinds of conventional knowledge as being more "epistemically secure"[30] than others. We need only establish an intersubjectively accessible and tacit standard to evaluate and rank these types of conventional knowledge. Analogously, sentences are well-formed depending on whether they follow the grammatical rules of a language. These rules are purely conventional, but they determine which sentences are meaningful or well-formed, and which are not. Likewise, we can tacitly agree on conventional standards for epistemic security

[30] No doubt, the term "epistemic security" requires explication for the sake of clarity and precision. For the sake of space, however, I leave this term unanalyzed and rely on the reader's intuitions to supply the sense of this term.

whereby we may determine which types of conventional knowledge are more "epistemically well-formed,"[31] and hence more epistemically secure, than others.[32]

Fourth, one might object that since Mādhyamikas doubt that causal relations exist between primary existents, they therefore cannot provide any sort of positive claim about causality at all, even if the claim is offered at the conventional level of truth.

This objection is simply mistaken. It is precisely because Mādhyamikas distinguish ultimate and conventional levels of truth that they can consistently doubt that causal relations exist between any primary existents while simultaneously granting that we can develop causal accounts of phenomena at the conventional level of truth. Furthermore, we have no reason to think that the conventional and ultimate levels of truth are so related such that causal relations constructed on the conventional level of truth necessarily reflect causal relations on the ultimate level of truth. Consequently, Mādhyamikas can provide conventionally true causal accounts of phenomena without thereby committing themselves to, or undermining their doubts in, claims at the ultimate level of truth.

Finally, one might object that the conventional interdependence of concepts leads to the absurd conclusion that all concepts are interdependent, in which case we have only one concept. The argument might run like this: Suppose that concepts c_1 and c_2 are conventionally interdependent. A subset of the assertability conditions for c_1 might be equivalent to, or exhaust, the assertability conditions for some third concept c_3, and the assertability conditions for c_2 might include those for concept c_4. The same logic likely applies to c_3 and c_4. Using this logic, we can proliferate the number of concepts indefinitely. However, all these concepts must be conventionally interdependent because their assertability conditions overlap severally. Hence, we have only one concept after all.

This objection is analogous to an incorrect interpretation of emptiness or *sunyata*: Since all phenomena are empty of *svabhava*, all phenomena must *ultimately* depend on all other phenomena for their existence, so all phenomena are *ultimately* interdependent (Siderits 2007, 200–201). This interpretation fails because it assumes that phenomena, even if interdependent, are not merely conceptual constructions, but mind-independent entities.

However, unlike this misinterpretation, this objection *does* recognize that we are talking about secondary existents. But it is unclear that this objection presents a challenge to the Mādhyamika. Even if we grant this objection's premises, all that follows is that all concepts are in some sense conventionally interdependent. It simply does not follow that one overarching concept encompassing all concepts exists. Rather, Mādhyamikas can agree that generally all our concepts are conventionally interdependent, so they form a vast conceptual network. But it is not clear why this result should count as an objection to the Madhyamaka view. Hence, this objection fails, too.

[31] See fn. 30. The same comments hold, *mutatis mutandis*, for "epistemically well-formed."

[32] For further responses to this objection from relativism, see Dreyfus and Garfield 2021, 20–24; Siderits 2007, 202–203; and Westerhoff 2009, 222–224.

7. CONCLUSION

The purpose of this essay has been to show that *if* we accept the Madhyamaka critique of causality, then we have reasons to doubt the soundness of Kim's supervenience argument. If the Madhyamaka critique is successful, then Jaegwon Kim's three major assumptions—the causal closure principle, the causal exclusion principle, and substantialism—are *prima facie* false. According to the Madhyamaka critique, these assumptions appear to fail because, while causation may be understood as a relation obtaining between secondary existents, we have reasons to doubt that causal relations obtaining between primary existents exist. If sound, the Mādhyamikas' reconceptualization of causation constitutes a solution to Kim's argument insofar as it shows how we can defend both emergent downward and same-level mental causation against the threat of epiphenomenalism. This solution sidesteps Kim's epiphenomenalism by construing emergent causation in terms of irreducible levels of description, rather than ontological levels of mind-independent reality.

I take it that the Madhyamaka critique of causality is at least intuitively plausible; indeed, I suspect that the plausibility (but not necessarily the soundness) of this critique stands on its own two feet. In general, Mādhyamikas argue by beginning with premises couched in terms of substantialism (as well as premises couched in terms of the CCP and the CEP, if we want to allow for the possibility that these principles can be divorced from substantialism *per se*). Intuitively, substantialism seems plausible: We tend to think that causes, effects, and the causal relations between them are mind-independent. From these premises, Mādhyamikas appear to validly infer conclusions that are problematic in some way or other for the substantialist. Insofar as these conclusions are intuitively plausible (as I suspect they are), the Madhyamaka critique of causality presents at least a *prima facie* objection to Kim's supervenience argument since Kim's argument assumes substantialism (as well as the CEP and the CCP). Furthermore, since the distinction between primary and secondary existents seemingly holds up, I take it that a conventional account of causality in terms of secondary existents is itself *prima facie* plausible. Of course, whether the Madhyamaka critique of causality—or the conventional account of causality developed on the basis of this critique—is in fact sound, is an important question to consider for another time. Until the Madhyamaka critique can be shown either sound or unsound, we must consider this critique to be at most a plausible initial response to Kim, but not an altogether demonstrative proof that Kim's argument fails for the reasons that the Mādhyamikas identify.

Ultimately, the goal of this paper has been to show that alternative responses to Kim's argument may be found by considering less commonly taught philosophical traditions outside of Western philosophy. I take it that we should look outside the mainstream canon of Western philosophy for responses to Kim's argument, as well as to other contemporary philosophical arguments, to demonstrate the continued relevance and importance of these less commonly taught philosophical traditions. Doing so will inevitably expand both the content of philosophy as a discipline and our perspectives as philosophers on contemporary philosophical problems. Furthermore,

appealing to traditions outside the mainstream will aid in efforts to decolonize and to combat chauvinism within the contemporary philosophical canon. Finally, by considering less commonly taught philosophical traditions, we may realize that some of our dearest philosophical assumptions, such as substantialism, may not be as obviously true as we initially take them to be. It goes without saying that global philosophical traditions differ in their metaphysical, epistemological, ethical, and other philosophical commitments. Consequently, we should consider all global philosophical traditions when we evaluate our own philosophical assumptions. Altogether, if I have successfully shown the relevance (but not necessarily the soundness) of Madhyamaka Buddhist thought to contemporary questions concerning the possibility of emergent downward and same-level mental causation, then I have accomplished what I set out to do.

ACKNOWLEDGEMENTS

I must thank Rex Welshon, Jennifer Kling, and Colin J. Lewis for their insightful comments and feedback on earlier drafts of this essay. I also must thank the anonymous reviewers whose critical feedback helped improve this essay substantially.

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