**Causation and Ontic Indeterminacy**

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Please Note: This is not the final version of this paper. The final version, published in *Res Philosophica* (2021), can be found at <https://doi.org/10.11612/resphil.1992>.

Abstract: In this paper, I first introduce an Indian Madhyamaka Buddhist critique of causality and discuss critically a contemporary Humean interpretation of the critique. After presenting a Chinese Madhyamaka interpretation, I resort to an ontological conception of indeterminacy, termed *ontic indeterminacy* (OI), which draws on Chinese Madhyamaka thought together with Jessica Wilson’s account of metaphysical indeterminacy, to show that the conception is well equipped to unravel two puzzling issues that arise from the critique. The paper suggests that a world that consists of things that are indeterminate with respect to certain ways they are is sufficient for it to embody causal phenomena.

Keywords: causation; Nāgārjuna; ontic indeterminacy; metaphysical indeterminacy; Chinese Madhyamaka; critique of causality

**1. Introduction**

At least since written records began, the concept of causation has, along with space and time, occupied a foundational place in philosophical accounts of the world. In the West, Aristotle influentially identified four kinds of causes: material, formal, efficient, and final. Among them, efficient causation (which assumed the principal focus of attention after the Middle Ages) holds primarily between two things or substances, with the cause being the producer of, or the active initiator of a change in, the effect. In modern times, Western philosophers began to take causation to be a relation between particular events: one event, the cause, brings about a distinct event, the effect. This practice continues to the present day, although facts, states of affairs, etc., are also held by some to be the relata.

Indian philosophy displays both similarities to and differences from Western conceptions of causation. Here we encounter numerous causal notions, which include those of efficient cause and material cause. In their philosophical debates, traditional Indian thinkers generally took causation to hold among particular things: one thing (or several things) as the cause gives rise to another thing as the effect; when the effect arises, the cause mostly either perishes or becomes subordinate to the effect. These accounts also differ from (many) Western ones in that there is no appeal to the laws of nature. Still, certain cross-cultural divergences in approach need not be seen as indicating incommensurability, but rather as providing conditions for mutual enrichment of understanding.

Nāgārjuna (c. 150−250 CE) was the reputed Indian founder of Madhyamaka, a prominent philosophical school of Buddhism. On the ground that all things arise, abide, and perish in dependence on various causal and noncausal factors, he contended that things have no independent and invariable nature―that is, no intrinsic nature (Skt. *svabhāva*). This lack of intrinsic nature is encapsulated neatly in the Madhyamaka catchphrase ‘All things are empty’.[[1]](#footnote-1) Here, the relationship of dependence includes not only sequential causal relations and simultaneous reciprocal relations of dependence, but also relations of dependence on human conceptualization. As things thus depend on conceptualization for their existence, the denial of intrinsic nature in them implies a denial of the metaphysical realist view that things exist independently from our conceptual contributions.

Significantly, Nāgārjuna criticized what he seemingly regarded as an exhaustive compendium of the possible ways of construing causation and concluded that things do not really arise.[[2]](#footnote-2) A few puzzling issues emerge from this critique of causality. Indeed, Nāgārjuna’s core idea of causality is that all participants in a causal nexus are *empty* in the aforementioned sense. It is because all causal factors in the nexus are empty, and susceptible to change, that they can interact or fuse with each other to generate the effect, which, being dependent and impermanent, cannot but be empty as well (*MMK* 24.14 [chapter 24, verse 14], 16−7). However, this idea alone is not sufficient to permit a resolution of the issues that arise from the critique in an illuminating and significant way.

Nāgārjuna’s doctrine of emptiness was later inherited and developed in China by, among others, the two leading thinkers of the *Sanlun* tradition of Chinese Madhyamaka, Sengzhao (374?−414 CE) and Jizang (549−623 CE). Due to translational and possibly cultural factors, the two Chinese Mādhyamikas, especially Jizang, tend to understand the above catchphrase as meaning that all things are devoid of determinate nature and form: that is, all things are indeterminate with respect to their nature and form. Although we may determine a given thing as invariably, exclusively, and finally such-and-such, this determination reflects our conceptual perspective or cognitive mechanism and does not truly reveal the way the thing is.[[3]](#footnote-3) Drawing on their works as well as a recent account in the analytic-philosophical discussion of metaphysical indeterminacy (MI), I have elsewhere developed an ontological conception of indeterminacy, termed *ontic indeterminacy* (OI), which centers on two complementary ideas: conclusive indeterminability and provisional determinability.[[4]](#footnote-4) On my view, OI offers an effective tactic for tackling a few issues that arise from Nāgārjuna’s critique of causality, which is the main concern of this paper.

There are several important things to note. My principal objective is to show that OI can be deployed to address the issues satisfactorily, with the hope of enriching contemporary philosophers’ insights into the intricate nature of causation. A significant portion of this paper is then intended to be a theoretical contribution that is intriguing and worthwhile in its own right. Consequently, although I challenge an influential contemporary interpretation of the critique, I make *no* claim that my resolution of the issues discloses Nāgārjuna’s own ideas. In addition, while OI and its application here draw originally on Chinese Madhyamaka thought, it is not claimed that the application would have been acceptable to the Chinese thinkers. Finally, given the orientation of the paper, I shall keep Buddhist terms to a minimum and refrain from textual analysis when interpreting Madhyamaka thoughts.

Section 2 elucidates Nāgārjuna’s critique of causality. Section 3 discusses critically a contemporary Humean interpretation of the critique. Section 4 explicates the rationale that Jizang provides for the alleged Madhyamaka denial of causality. Section 5, the crux of this paper, first sketches the basic ideas of OI and then applies OI to resolve two issues that arise from the critique.

**2. Nāgārjuna’s Critique of Causality**

Nāgārjuna considered and repudiated various views on (sequential) causation between things. As a case study, consider the arising of a sprout from a seed. We say that an apple seed gives rise to an apple sprout, that the sprout arises dependent on the seed, and that the sprout arises just as the seed perishes. It would seem that the seed causes the sprout, pure and simple. Nevertheless, close scrutiny reveals that this putative causal process is fraught with conceptual difficulties. Here I discuss two key issues.

The first issue concerns whether the sprout, the effect, preexists―at least substantively―in the seed, the cause. (A related issue is whether the cause and the effect are the same or distinct.) Nāgārjuna considered three possibilities, which would seem to be exhaustive: the sprout preexists in the seed, the sprout does not preexist in the seed, and the sprout both does and does not preexist in the seed.

Suppose that the sprout preexists in the seed. Then it, being already existent, would not need to be brought into existence by the seed. Further, this view is contrary to experience, because we do not perceive any sprout in the seed. It may be said in response that the cause and the effect are the same in essence, despite their different appearances. However, if that were so, the process at issue would be one of self-causation, and this self-causing process would continue endlessly no matter what happens, which is absurd (*MMK* 20.3, 9, 16, 19−21).

Now suppose that the sprout does not preexist in the seed. Then, how can it, being nonexistent, arise, while depending on the seed and other causal factors? It is not possible for a nonexistent to depend on an existent because a relation of dependence between two things requires that both of them exist. In addition, if the sprout is nonexistent in, and so distinct from, the seed, it would then seem to arise out of nothing. If an apple sprout is distinct from an apple seed and yet arises from it, there would seem to be nothing to exclude the possibility that we could plant an apple seed and eventually harvest a pineapple fruit (*MMK* 1.11−12, 20.16, 19−21; cf. *MMK* 22.6).

Now suppose that the sprout both does and does not preexist in the seed. Yet a thing cannot both exist and not exist, *qua* that thing, at the same time. Moreover, this option would face the difficulties of the above two possibilities. For my own purposes, I may add a further difficulty: it does not help to hold that a specifiable portion, *E*1, of the sprout preexists in the seed whereas another portion, *E*2, does not, because that could mean that when the sprout arises, *E*1 does not truly arise while *E*2 arises *ex nihilo*.

Meanwhile, specifying the causal process further does not make these problems any easier to resolve. One may assert that the seed and various causal conditions, such as water, warmth and oxygen, assemble together to yield the causal activity of producing the sprout as the effect. Yet the problem then arises as to whether the activity, or the effect, preexists in the causal assembly concerned (cf. *MMK* 1.4, 20.1−4).

To say that the sprout preexists in the seed entails that it arises from itself, while to say that it does not preexist in the seed entails that it arises from something other than itself. Yet the sprout arises neither from itself, nor from something other, nor from both itself and another. To claim that the sprout arises but is simply uncaused is likewise unacceptable, for nothing can arise without a cause.

The second issue is whether the seed perishes before, after, or at the same time as, the sprout arises. If the seed perishes before the sprout arises, then, since there is no longer any seed, how can we say it causes the sprout? On the other hand, if the seed perishes after the sprout arises, it remains present through the arising of the sprout, so we could hardly regard it as causing the sprout. The arising of the sprout must have had some other cause (cf. *MMK* 20.6−8, 10, 15).

It may seem promising to embrace the remaining possibility that the seed perishes at the same time as the sprout arises. For example, the seed, while perishing, transfers its causal character to the arising sprout such that there is no causal vacuum between them. However, there would then be two forms of cause, the perished and the transferred; the cause would problematically possess a double nature. Moreover, since the seed and the sprout form a continuous spatio-temporal series, there would have to be a time when one and the same thing is both the seed and the sprout, both arises and perishes, which is preposterous (cf. *MMK* 20.5, 21.19−20).

Besides these two perplexing issues, Nāgārjuna also criticized the commonsense view that before the arising of the sprout, we can refer to the seed as its cause. Not only does the sprout depend on the seed for arising, but the seed also depends on the sprout for being a cause. He could then contend that there is no cause without effect (*MMK* 4.3, 20.22). However, I shall not dwell upon this issue as its treatment does not hinge on OI. Briefly, Nāgārjuna’s contention probably results from his affirming the dependence of things―including causal relata―on conceptualization. It may also reflect the idea that, as numerous possible inhibiting factors might stand in the way, only when the effect arises may we rest assured that it was brought forth by a number of causal factors that include the cause.

According to Nāgārjuna, it is not the case that an effect preexists in, and then arises from, its putative causal factors. Just as an effect cannot arise out of a non-cause, neither can it arise from the causal factors in which it is absent. Consequently, an effect does not really arise and is said to be nonreal. Given the aforesaid codependence of cause and effect, there is no real cause either (*MMK* 1.11−4). This might seem to be tantamount to the Western causal eliminativist view that there are no causal relations or processes in the world.

**3. A Humean Interpretation of the Critique**

As noted above, according to Nāgārjuna, all participants in a causal nexus are empty of intrinsic nature. Various views on causation are refuted because they tend to posit intrinsic nature in the nexus. It will be of interest to many to derive further implications of this critique of causality. One also wonders how to interpret the critique in terms of modern Western philosophical notions of causation. This section examines an influential contemporary interpretation to shed further light on Nāgārjuna’s conception of causation.

A tempting way for contemporary scholars to read the critique is as a dismissal of any view that posits a necessary connection between cause and effect. Some may believe that *A*-type things cause *B*-type things just when, if a particular *A* occurs, a particular *B* follows necessarily. Some others may think that if one thus takes causation to involve a necessary connection between a cause and its effect such that the cause necessitates the effect, one may suppose that the cause is endowed with a certain intrinsic nature in a way that grounds the necessitation.[[5]](#footnote-5) Herein, causation tends to be conceived as a relation that links things independent of other things (such as inhibitors) as well as human conceptualization.

Since, according to Nāgārjuna, all things are empty of intrinsic nature, he would likely reject the view that causation involves a necessary connection between cause and effect. If contemporary scholars focus on this as the target of Nāgārjuna’s critique, it may be tempting for them to draw parallels with Hume’s critique of causality and to see Nāgārjuna as endorsing his conclusions. Briefly, in Hume’s (1978: 73−94, 155−72) view, our ideas of causation and necessary connection have no basis in any objectively existing causes or necessary connections. Rather, the ideas come from our customary observation of a transition from one associated object or event to another. After observation of constant conjunction between one kind of object and another, we call the first the cause and the second the effect, and expect the effect to always follow from the cause, then form the concept that the effect follows *necessarily* from the cause. Yet this way of speaking is nothing more than our custom. We are unable to observe in the causal chain any causal powers that would ground any kind of objective causal necessity; all we have is the observation of regularities. We should then conclude that what we are disposed to call causation is nothing more than constant conjunction, rather than necessary connection or the real production of one object from another.

An exemplar of the adoption of this Humean approach to Nāgārjuna is Jay Garfield. Using as a basis the belief that Nāgārjuna’s primary target is the view that causation involves a necessary connection between cause and effect, and likely influenced by Hume’s claim that those who posit causal powers when explicating causation are committed to positing necessary connections, Garfield avers that, for Nāgārjuna, the emptiness of causation entails the unreality of any causal relationship that embodies causal power or activity. Thus, for a thing to be empty of intrinsic nature is for it to have no causal power, and for a thing to have causal power is for it to have intrinsic nature and so to be nonempty. Instead of treating causation as involving causal powers that ground necessary connections in nature, Nāgārjuna’s analysis, similar to Hume’s, redescribes causation as a matter of explanatorily useful regularities, which are themselves explained, not by occult causal powers inhering in genuine causes, but by larger, more articulated patterns of interdependence.[[6]](#footnote-6)

There are difficulties in this largely Humean account that takes Madhyamaka to reduce causation to regularity of sequence. For Nāgārjuna, causal activity is ontologically on a par with cause and effect, indeed, with all things in the world: everything that we take to exist does so only conventionally, but not intrinsically or ultimately (see below). Thus, in an attempt to repudiate a nihilistic reading of his doctrine of emptiness, Nāgārjuna contended that if the opponent looks upon things as intrinsically real and so nonempty, things being independent and not susceptible to changes, it is he, not the Mādhyamika, who would end up nihilistically denying cause, effect, causal activity, and their arising and perishing (*MMK* 24.16−7). It is implausible that Nāgārjuna would ascribe conventional reality to fire and smoke, but not to fire’s causal activity of generating smoke.

It is not as clear whether Nāgārjuna would ascribe conventional reality to causal powers. He did not refer to them explicitly. Even so, going beyond Nāgārjuna’s explicit view now, to posit causal powers is *not* necessarily to posit intrinsic natures. The idea that causal powers can be *empty* in the Madhyamaka sense is not *a priori* incoherent. After all, they can arise and perish dependently, just like the things that possess them. Then, contrary to what Garfield implies, it is possible for a Mādhyamika to acknowledge causal powers at the conventional level, so long as the notion of causal power does not entail that the cause or its power necessitates the effect.

The coherence of such a view has recently received inadvertent support from Mumford and Anjum (2010: 156−57, 2011: 174), who point out that Hume was mistaken and misleading in claiming that those who posit causal powers when explicating causation are committed to positing necessary connections. (We saw above that the claim likely led Garfield to think that causal powers are tied to intrinsic natures.) On the contrary, one can reasonably take a cause to possess causal powers or dispositions but also contend that it disposes toward its effect in such a way that their connection is short of necessity, yet more than merely contingent. Arguing for a dispositional theory of causation, they maintain that dispositionality is a primitive modality that resists reductive analysis and rests somewhere between pure contingency and necessity.

Mumford and Anjum’s account is conducive to illuminating Nāgārjuna’s conception of causation. However, Nāgārjuna’s is not a dispositional theory but a theory of *dependent origination*. *Prima facie*, the theory states that an effect originates in dependence upon a cause or causes and various auxiliary conditions. For example, grape wine arises in dependence upon grapes as causes and such auxiliary conditions as yeast, sugar, and water. The theory underlines dependence on human conceptualization. It also differs from the dispositional theory in that it takes causation to involve a number of known and possibly hitherto unknown causal factors, many of which are perceptually confirmable, whereas the latter theory highlights the presence of causal powers that, most philosophers would have us believe, are imperceptible.

These differences notwithstanding, Nāgārjuna would concur with Mumford and Anjum’s view that causation is short of necessity but more than merely contingent or accidental. Let us consider the notion of dependent origination, to see why the view makes good sense. The notion can reasonably be taken to imply that if the effect *B* depends on the cause *A* for its existence, *A* can actually contribute in some way to the origination of *B*, yet that *B* would not originate if some, known or hitherto unknown, auxiliary conditions are absent. Given that *B* depends on *A*’s actively contributing, causation is not simply a matter of *B* following *A* accidentally. Given that *B* would not originate if some conditions are missing, neither *A* nor a pre-arranged set of causal factors can definitely necessitate *B*. This gives us a preliminary understanding of the above view.

The concurrence can be inferred plausibly from the fact that Nāgārjuna rejected both the claim that the effect exists in the assembly of its causes and conditions (C1) and the claim that the effect does not exist in the assembly (C2).[[7]](#footnote-7) Let us examine this issue.

One interpretation of C1 is that the assembly is a sufficient condition for the effect such that if there is the former, there has to be the latter (namely, the assembly necessitates the effect). Since Nāgārjuna rejected C1, he would not regard the assembly as causally sufficient for the effect. The contention that there is no cause without effect might suggest that no pre-arranged set of causal factors can necessitate the effect. Moreover, as stated above, the necessity view borders on the positing of intrinsic natures. Thus, Nāgārjuna would not take causation to involve necessary connection. Correlatively, he would not take anything to be completely explainable by reference to its causes and conditions.

On the other hand, C2 implies that there is no deep-lying or interweaving relation between a causal assembly and its effect. This can mean that the causal factors do not contribute to the origination of the effect. Causation is reduced to a matter of contingent regularity: when the assembly occurs, the effect follows, and nothing more. The connection between cause and effect is external and accidental. Since Nāgārjuna rejected C2, he would be ready to reject this contingency view. Moreover, he dismissed explicitly the neighboring view that a thing arises without a cause. It does not hurt to note that Hume took cause and effect to be distinct object/events, whereas Nāgārjuna would consider this position a close ally of C2. In Hume’s picture of the world, all things are loose and separate, related merely externally and contingently. One would then think of causal relata as independent and self-existent, and yet, as argued by Bliss (2015) and recognized by Garfield (2015: 25−26), this thinking contravenes the doctrine of emptiness.

The above discussion challenges a Humean interpretation of Nāgārjuna’s critique of causality and helps to place Nāgārjuna’s thought on causation in the contemporary context. A few words are now in order concerning why this thought does not amount to causal eliminativism, the view that there are no causal relations in the world.

Nāgārjuna famously upheld a theory of twofold truth/reality that distinguishes between ultimate and conventional truth or reality. On a reasonable construal (cf. Siderits 2007: 180−207, Arnold 2010, and Garfield 2015: 56−68), for a thing to be empty in the Madhyamaka sense is for it to be ultimately nonreal and conventionally real. To say that things are ultimately nonreal is to say they are intrinsic-naturally nonreal: only things endowed with intrinsic natures are ultimately real. Yet there are no intrinsic natures, so there is no ultimate reality. Alternatively, as things depend on conceptualization for their existence, they cannot be ultimately real. Conventional reality is the only thing we can experience. Meanwhile, according to Nāgārjuna, conventionally real things are involved with causation and cannot arise uncaused (*MMK* 24.16−40). Then, Nāgārjuna did not mean to eliminate the notion of causation and for him there are real causal relations at the conventional level.

Finally, there may seem to be a tension between Nāgārjuna’s putative rejection of the aforementioned realist view and my explication of how causation works for him. Some might hold that Nāgārjuna’s critique aims to show the absurdity of various rival views on causation, and nothing more. Given the rejection, he would not offer any account of how causation works when understood as a relation that holds only between conventionally real things. It suffices to say it is useful for the purposes of ordinary life to posit causal relations. In response, I think that while Nāgārjuna recognized the dependence of things on conceptualization, he might agree that things are not merely conceptual constructs but also depend on objective conditions of the world. For instance, to make grape wine we look for grapes, not other fruits. There are objective features in what we conventionally call grapes that help produce what we conventionally call grape wine. Our choosing grapes over other fruits may not be simply a matter of practical utility. If we highlight the objective side, it makes sense to expose Nāgārjuna’s possible positive views on causation.[[8]](#footnote-8) In any event, this remains an open issue for further debate and investigation.

**4. Jizang’s Interpretation of the Critique**

The above two sections elucidated Nāgārjuna’s critique of causality and placed his thought on causation in the contemporary context. The primary concern of this paper is to employ the ontological conception of OI to unravel two puzzling issues that arise from the critique, namely whether the effect preexists in the cause, and whether the cause perishes before, after, or at the same time as, the effect arises. Since OI draws originally on Chinese Madhyamaka thought, before I apply it to cope with the two issues, it is advisable to take a brief look at a key interpretation of the critique by Jizang, who, unlike Sengzhao, wrote commentaries on the Chinese translations of several early Indian Madhyamaka treatises, including *MMK*.

In one of his works, Jizang is asked whether the Madhyamaka critique of causality amounts to denying all forms of causation. He responds that Buddhist scriptures and treatises propose the negation of causality in view of three points, which are as follows.[[9]](#footnote-9)

Firstly, the negation of causality represents the rejection of various views of causation held by heretics and non-Madhyamaka Buddhists. All these views posit erroneously determinate and (ultimately) real natures in the causal nexus. Significantly, Jizang distinguishes causation of codependence from causation of real nature. Causation of real nature supposes that determinate natures are involved in causal processes. Jizang dismisses this type of causation, which is for him the causation denied by Indian Madhyamaka. The second point for negating causality is with a view to revealing causation of codependence. This is the causation in which all items involved are deemed to be codependent and empty of real and determinate nature. Jizang affirms this type of causation explicitly (at the conventional level).

The third point pertains to the Madhyamaka use of negation. Let us introduce the two terms, ‘implicative negation’ and ‘nonimplicative negation’. If we treat the sentence S, ‘*X* is not-P’, as involving an implicative negation, then, while denying P of *X*, S also implies the affirmation of some other property (say, non-P) of *X*. An assertion of S commits one to acceptance of that property in *X*. In contrast, if we treat S as involving a nonimplicative negation, it simply negates any substantial relation between *X* and P without predicating any property of *X*. According to Jizang, Madhyamaka highlights nonimplicative negation. If a Mādhyamika speaks approvingly of *X* as not-permanent, the intent is to show that *X* is *not* permanent (negating any substantial relation between *X* and the property of permanence), but not that it *is* impermanent (predicating of *X* the property of impermanence).[[10]](#footnote-10)

The third point for negating causality is then to repudiate one of a pair of opposite views on causation without affirming the other. For example, for a Mādhyamika to negate the claim that an effect preexists in its cause does not commit them to affirming that the effect is nonexistent therein, and likewise vice versa. One can then reject without contradiction both C1 and C2 or―given that ‘necessity’ and ‘contingency’ form a pair of opposites―both the necessity and the contingency views.

Jizang’s explications are instructive in offering a Madhyamaka reading of Nāgārjuna’s critique of causality. We learned above that a core idea behind the critique is that all participants in a causal nexus are empty of intrinsic nature. Now we see Jizang’s idea that all participants in the nexus are empty of determinate nature. Further, the critique does not amount to denying all forms of causation. However, Jizang’s comments tend to be exegetical and provide few hints on how to tackle the two issues in question.[[11]](#footnote-11)

It may be tempting and reasonable for scholars to take Nāgārjuna’s critique as indicating that causation is simply a conceptual imputation and thereby disregard the resolution of the issues. However, if we focus on the view that things in a causal nexus are not merely conceptual constructs, we might need to cope with the issues head on. For instance, we need a clear explication of the effect’s preexistent status in the cause if all the three possibilities concerned fail. As Jizang reiterates that causal phenomena are indeterminate, OI should be helpful in this regard.

**5. Application of OI to the Critique**

The Chinese Madhyamaka idea that things are indeterminate with respect to their nature and form is reminiscent of the analytic-philosophical notion of MI (metaphysical indeterminacy). In recent years, advocates of MI have offered varying accounts to cope with such issues as the constitution of physical objects, their spatio-temporal boundaries, indeterminate existence and identity, and the open future.[[12]](#footnote-12) The two aforementioned issues that arise from Nāgārjuna’s critique may require similar treatment.

Using as a basis Chinese Madhyamaka thought on indeterminacy along with Wilson’s (2013, 2017) account of MI, I have developed OI to tackle several issues of indeterminacy. In this section, I first present a sketch of OI, focusing on those elements that are pertinent to the discussions that follow. Then I use OI to resolve the issues with which we have been concerned. Going far beyond Madhyamaka texts, the interest and significance of my discussions rest on their own merits, regardless of whether they would be accepted by Madhyamaka thinkers.

***5.1 Basic Ideas of OI***

For exegetical and philosophical reasons, the Chinese Madhyamaka concept of indeterminacy may best be explicated in terms of conceptual and linguistic indeterminability. For my purposes, I characterize the ontic (ontological) indeterminateness of things as follows:

*Madhyamaka-based OI*: For a thing *X* to be ontically indeterminate at time *t* with respect to the way it is (its existence, nature, property, or form, etc.) is for *X* to be such that no concept or expression can be conclusively applied to *X* at *t* in the sense of representing definitively the way it is.

To represent a way *X* is means to determine *X* as containing a certain feature and to make known in *X* that feature, and the term ‘feature’ broadly signifies the particular ways the thing can be.

For example, if the word ‘apple’ represents definitively the way *X* is, *X* is finally, non-relatively, and exclusively an apple (possessing the feature of being an apple), but not any other kind of thing. Yet OI implies that an ontically indeterminate *X* cannot be so represented. Likewise, no determination we may impose on *X* is definitive. Thus, *X* is not conclusively determinable—that is, it is not capable of being determined as definitively such-and-such or as definitively possessing this or that feature.

Meanwhile, *X* is subject to multiple relativized determinations, to use a phrase coined by Wilson (2013: 367). We can determine *X* as such-and-such where the determinations are relativized to different conceptual perspectives and far from conclusive. These determinations are *provisional* in the sense that they are not definitive and do not predicate of *X* any determinate—viz., definitively representable—feature in such a way as to make it conclusively determinable.

Overall, OI centers on two complementary ideas, namely, conclusive indeterminability and provisional determinability: *X* is conclusively indeterminable (more precisely, *not* conclusively determinable), yet provisionally determinable, with respect to the way it is. ‘Conclusive indeterminability’ negates the conclusiveness of any of *X*’s determinations and characterizes *X* as failing to contain any determinate feature. ‘Provisional determinability’, in contrast, affirms the feasibility of relativized determinations of *X*, accommodating our pretheoretical intuitions about the positive determinability of things in the world.

Furthermore, OI accepts the principle of bivalence: that for any meaningful statement S, either S is true or S is false. However, given conclusive indeterminability, no statement about an ontically indeterminate *X* is *determinately* true in the sense of properly representing a state of affairs that is determinate and actual. A state of affairs is determinate if the thing (or things) which it involves constitutively is determinable conclusively with respect to the relevant way the thing is. Since *X* is not so determinable, there is no determinate state of affairs that involves it and so no determinately true statement concerned. Meanwhile, given provisional determinability, we can provisionally determine the way *X* is as such-and-such and the resultant statement can be said to be true or false.

***5.2 Tackling the First Issue***

The first issue arising from Nāgārjuna’s critique of causality pertains to whether the effect preexists in the cause. Following the discussion in the preceding sections, the causal relation with which I am concerned is that between composite physical things such as seed and sprout, milk and curds, grapes and grape wine, even carbon-14 and nitrogen-14 atoms. Again, I use seed and sprout as the example for cause and effect.

Suppose that the seed existing at time *t1* gives rise in the next moment to the sprout at time *t2*. In light of Jizang’s above-noted comment on this issue, we can, from the OI-perspective, state the situation as follows:

P1: *The sprout is ontically indeterminate at t1 with respect to its existence in the seed.*

Here, OI entails the sprout’s being ontically indeterminate with respect to its preexistence in the seed such that the way it is at *t1*, existent or otherwise, is not represented definitively by such expressions as ‘existent’, ‘nonexistent’, and ‘existent and nonexistent’. We can say it is indeterminate whether the sprout exists in the seed at *t1*, which means that the sprout cannot be determined as definitively existent or nonexistent in the seed at *t1*.

Since OI centers on two complementary ideas, it is advisable here to employ a negative tetralemma to embody the idea of conclusive indeterminability associated with P1.[[13]](#footnote-13) Under OI, we acknowledge these statements of the tetralemma as true: (*C* for the seed, *E* for the sprout, the italic ‘*not*’ representing nonimplicative negation)

S1: *E* is *not* definitively existent in *C* at *t1*.

S2: *E* is *not* definitively nonexistent in *C* at *t1*.

S3: *E* is *not* definitively existent and nonexistent in *C* at *t1*.

S4: *E* is *not* definitively not-existent and not-nonexistent in *C* at *t1*.

If S3 does not simply negate a contradiction, it can mean thatat *t1*, *E* is *not* partly existent and partly nonexistent in *C*, where ‘partly’ signifies a specifiable portion of *E*. If the nonitalic ‘not’ in S4 indicates implicative negation, S4 basically means the same as S3. However, it is preferable to take S4 to negate the ascription to *E* of the determinate feature of being neither existent nor nonexistent in *C*.

Meanwhile, we can subject the sprout to multiple relativized determination. Insofar as it is false that the sprout definitively does not preexist in the seed, and the sprout can be said to have an unspecifiable embryonic form therein, it seems reasonable to provisionally determine the sprout as existent in the seed. Insofar as it is false that the sprout preexists definitively in the seed, and the preexisting form is only rudimentary, it seems reasonable to provisionally determine the sprout as nonexistent in the seed. Further, given that the form represents an early stage of the sprout’s development, it makes sense to provisionally determine the sprout as partially existent and partially nonexistent in the seed, where ‘partially’ connotes the sprout’s unspecifiable embryonic form. Finally, in light of S1 and S2, we can also determine provisionally the sprout as neither existent nor nonexistent in the seed.

All these determinations are relativized to different conceptual perspectives and far from conclusive. Yet as these perspectives should preferably involve good reasons, the determinations are not arbitrary or purely relativistic. Hence, the following statements to embody the idea of provisional determinability associated with P1: (S7 involves *partial* existence and nonexistence)

S5: *E* is provisionally existent in *C* at *t1*.

S6: *E* is provisionally nonexistent in *C* at *t1*.

S7: *E* is provisionally existent and nonexistent in *C* at *t1*.

S8: *E* is provisionally *not*-existent and *not*-nonexistent in *C* at *t1*.

Given the relativization and provisionality of the underlying determinations, which do not predicate of the sprout determinate and mutually exclusive features, we can without contradiction affirm as true all these statements expressing them. On the other hand, OI accommodates the possibility that some may consider the reasons weak, the determinations implausible, and so decline to acknowledge the statements as true.[[14]](#footnote-14)

Overall, S1 to S4 indicate the sprout’s conclusive indeterminability, whereas S5 to S8 evince its provisional determinability, both with respect to the way the sprout preexists, or fails to preexist, in the seed. Thus, we are able to evade difficulties that arise from positing determinate features in reality while giving some weight to our intuitions about the positive determinability of things. The idea of an unspecifiable embryonic form is helpful too. The form bears no clear resemblance to the sprout or any of its specifiable portions, so the sprout can be said to be freshly arising. Since the form is after all embryonic of the sprout, the latter does not arise *ex nihilo*.

Likewise, concerning C1 and C2, we can, from the OI-perspective, state the situation as follows:

P1\*: *The sprout is ontically indeterminate at t1 with respect to its existence in the causal assembly.*

It thus makes good sense to reject both C1 and C2, assuming that they ascribe to the effect determinate existence and determinate nonexistence, respectively. Analogously, we can agree with Mumford and Anjum that causation is short of necessity but more than merely contingent.

***5.3 Tackling the Second Issue***

The second issue—whether the seed perishes before, after, or at the same time as, the sprout arises—is reminiscent of some difficulties faced by the view of causation in Western philosophy that takes causation to be an asymmetrical (effects follow causes), sequential relation between distinct events. The difficulties surround the question of whether the causing event expires before the onset of the effected event. If the answer is ‘yes’, one wonders how an event that has run its course does anything. If the answer is ‘no’ and the two events overlap temporally, then, given that by definition they are not completely temporally coextensive, some portion of the effect, occurring after the entire cause expires, would not be caused by any portion of the cause.

Heil (2012: 118−23) has noted these difficulties and claims that they would not arise if we think, as he recommends, of causation in terms of causings, that is, as mutual manifestings of reciprocal powers. One stirs a spoonful of salt into a glass of water, and the salt dissolves to produce salt water. Here certain chemical features of the salt interact continuously with certain chemical features of the water, and the process can be understood as mutual manifestings of the salt’s and the water’s powers that finally yield a new kind of manifestation, or something with new powers, the salt water. Heil then suggests that we understand causation as involving a symmetrical, continuous, and interactive process.

Of the three options regarding the present issue, the seed should not perish before the sprout arises. It is also problematic that the seed perishes after the sprout arises. Then it seems advisable to hold that the seed perishes at the same time as the sprout arises.

The difficulty of a double nature is easily solved if we do not view the cause as a genuinely unitary object or possessing an intrinsic nature of unity. However, how are we to address the problem that one and the same thing is both the seed and the sprout, and hence that it both arises and perishes? Using Heil’s language, we can say that the occurrence of the sprout is a new kind of manifestation that arises from the interaction of features of the seed with features of other causal factors. Yet in the causal process of change from a seed to a sprout, there would be a time when the same thing both arises and perishes, or is both having new powers and not having new powers. This problem remains unresolved.

Indeed, there is in the causal process a modicum of time (say, time *t*) when it is uncertain whether to classify the thing (call it *X*) as a seed or a sprout. It is evident that at *t*, *X* is neither definitively a seed nor definitively a sprout. It is not definitively both a seed and a sprout either. From the OI-perspective, we have this proposition:

P2: *X* *is ontically indeterminate at t with respect to its ontic status.*

Here, OI entails *X*’s being ontically indeterminate at *t* with respect to its ontic status such that the way it is then is not represented definitively by such expressions as ‘seed’, ‘sprout’, and ‘seed and sprout’. *X* is not conclusively determinable as a seed, a sprout, both a seed and a sprout, or neither a seed nor a sprout.

Meanwhile, it is indeterminate whether at *t*, *X* is arising or perishing. *X* fails to have any determinate feature of arising or perishing. Hence, we have:

P2\*: *X* *is ontically indeterminate at t with respect to its feature of arising/perishing.*

Again, *X* is subject to multiple relativized determinations. From different conceptual perspectives, we can provisionally determine *X* to have these results: (1) *X* is provisionally a perishing seed; (2) *X* is provisionally an arising sprout; (3) *X* is provisionally both a perishing seed and an arising sprout; (4) *X* is provisionally neither a perishing seed nor an arising sprout. Here the determinations are relativized and provisional such that no determinate and mutually exclusive features are predicated of *X*. If (1) to (4) have reasonable support, we can affirm them all. In any event, the perishing of the seed and the arising of the sprout can somehow occur simultaneously.

This discussion indicates *X*’s conclusive indeterminability and provisional determinability with respect to its ontic status and feature of arising/perishing. The above problem concerns a paradoxical situation in which *X* *seems* to be both a seed and not a seed, both arise and not arise. Now, the idea of conclusive indeterminability precludes the convergence of determinate and incompatible features and thereby avoids any possible contradiction. The idea of provisional determinability accommodates the convergence of seemingly, but *not* actually, incompatible features and can thereby account for the paradoxicality concerned.[[15]](#footnote-15) This entire discussion is coherent and pierces to the core of the problem.

Can one solve the above problem linguistically? Suppose that one coins the word ‘seed-sprout’ to designate the intermediate thing (*X*) between the seed and the sprout. Then, questions arise: how does the seed give rise to the seed-sprout, how can something be both a seed and a seed-sprout, both arising and perishing? This strategy may generate an infinite regress. The same may result if one coins no word and simply speaks of the intermediate thing as *that thing*. To assign a designation to a thing is to attribute to it an identity. This is well and good. However, the attributed identity may be thought to give the thing a determinate nature and boundary. Then, difficulties arise in how to characterize the thing’s causal relations to others.

From the OI-perspective, we may say that the two puzzling issues in Nāgārjuna’s critique of causality arise because people tend to posit determinate features in a causal nexus. Acknowledging the indeterminacy of causal phenomena, I hope to have shown that OI can resolve the issues in a coherent and illuminating way. Other accounts of indeterminacy may also help in this regard, yet it goes beyond the scope of this paper to consider them.

**6. Concluding Remarks**

Contemporary philosophers are largely concerned with causation between events, but we would do well not to ignore causation between things. Common sense thinks of the world as made of particular things that possess properties and capacities, and people, in explaining how a given thing arises, do refer to certain other things as its causes or among its causal factors. We can say that a nitrogen-14 atom is the effect of a carbon-14 atom emitting a beta particle, and a zygote is generated by the fusion of a male and a female gamete as its causes. These two types of causation, *event* causation and *thing* causation, presumably represent two, among possibly other, reasonable ways of causally carving up reality. In this connection, philosophers from different traditions may enrich their understanding of thing causation by considering the causal thought proffered here.

In this paper, I first introduced Nāgārjuna’s critique of causality and discussed critically a contemporary Humean interpretation of the critique. After viewing a Chinese Madhyamaka interpretation, I resorted to an ontological conception of indeterminacy, OI, to show that the conception is well equipped to resolve two puzzling issues that arise from the critique. What must a world be like to embody causal phenomena? Perhaps the world should consist of things that are indeterminate with respect to certain ways they are.

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1. When I use the word ‘thing’ to refer to Nāgārjuna’s position or that of any other Mādhyamika, it signifies something that is dependently originated and ever-changing, rather than a substance that persists independently and permanently. Still, we can speak conventionally and conveniently of a thing as arising, abiding, etc. [↑](#footnote-ref-1)
2. Nāgārjuna’s criticisms are set forth in several chapters of his *Mūlamadhyamakakārikā* (henceforth *MMK*). In this paper, the verse number of *MMK* is given according to Siderits and Katsura (2013), which contains an English translation and commentary of the text. [↑](#footnote-ref-2)
3. Sengzhao, *A Commentary on the Vimalakīrtinirdeśa Sūtra*, in *Taishō shinshū daizōkyō* (hereafter abbreviated as *T*) 38: 389b21−22 (volume 38, page 389, column b, line 21−22); Jizang, *A Treatise on the Profound Teaching of Vimalakīrti*, *T* 38: 897a14−29 and *A Commentary on the Twelve Gate Treatise*, *T* 42: 204c26−29. One might wonder how lack of *determinate* nature differ from lack of *intrinsic* nature. Roughly these two lacks are similar in involving the sense of variance and dependence, but lack of determinate nature alone conveys a sense of unsettledness and final indeterminability. Note that even Jizang, let alone Sengzhao, occasionally speaks of lack of intrinsic nature. Meanwhile, Matilal (1971: 155−59) construes Nāgārjuna’s ‘emptiness’ to mean the indeterminacy or logical indeterminability of everything. [↑](#footnote-ref-3)
4. See Ho (2020); the brief sketch of OI in section 5.1 draws on this paper. Both ontological and metaphysical indeterminacy may here be included under the heading ‘worldly indeterminacy’, which points to the view that the world itself is indeterminate (or vague) in one or more respects. Whereas in the past twenty years a number of analytical philosophers have come to advocate the notion of worldly indeterminacy, the latter’s coherence or tenability is still a matter of dispute. For instance, Evans’s (1978) argument against vague identity and vague objects has widely been seen as posing a serious threat to worldly indeterminacy. Akiba (2004) and Wilson (2013), I think, have offered plausible strategies for responding to the argument. However, a discussion of this issue lies beyond the scope of this paper. [↑](#footnote-ref-4)
5. Some Western philosophers would take this (causal) necessitation relation to be simply a matter of there being a law of nature that governs the relata. For some others, such a law is explicated in terms of universals inhering in the relata. However, this nuance need not concern us, because Garfield’s (2002) interpretation, the main target of this section, treats the relation as grounded in the intrinsic nature of the cause. [↑](#footnote-ref-5)
6. Garfield (2002: 24−45, 70−73, 81). Garfield (2015: 26) contends that Nāgārjuna, like Hume, rejects necessary causal connections. Moreover, in his latest book on Hume, Garfield (2019: 143) implies in a footnote that Hume’s account of causation bears striking affinities with Nāgārjuna’s. I thank an anonymous referee for directing my attention to the book. [↑](#footnote-ref-6)
7. *MMK* 20.1−4. In his *Vigrahavyāvartanī* (Bhattacharya 1990: 42), Nāgārjuna writes: ‘The sprout does not exist in the seed, its cause, nor in one of the things known as its causal conditions …, nor in the assembly of the cause and conditions, and nor is it distinct from the cause and conditions’. Incidentally, while Madhyamaka thinkers presumably do not possess the contemporary modal notions of necessity and contingency, they may have something similar. So I shall, following Garfield, continue to speak of necessity and contingency. [↑](#footnote-ref-7)
8. See James (2018: 1118−19) for two different ways of construing the Madhyamaka rejection of metaphysical realism. I am indebted to an anonymous referee for pushing me to clarify this point. [↑](#footnote-ref-8)
9. Jizang, *A Commentary on the Hundred Treatise*, *T* 42: 293c3−10. For the following explanation, I also consult Jizang, *A Commentary on the Middle Treatise*, *T* 42: 132a25−29, and *A Commentary on the Twelve Gate Treatise*, *T* 42: 207b6−17, 211a26−b3. [↑](#footnote-ref-9)
10. For Jizang’s explanation of the distinction between the two negations, see his *The Meaning of the Two Truths*, *T* 45: 93b28−c3. Sengzhao applies the distinction in *The Treatise of Sengzhao*, *T* 45: 156b25−28. For relevance to Indian Madhyamaka of the distinction, see Westerhoff (2009: 68−70). What matters here is not the precise verbal expression that is used, but how the expression is construed by its user. Despite its form, for instance, the claim C2 implies affirmation of the nonexistence of the effect in the causal assembly. [↑](#footnote-ref-10)
11. In his *A Commentary on the Twelve Gate Treatise*, *T* 42: 187b18−24, Jizang does indicate that the rejected views in the critique that (1) the sprout preexists in the seed, and (2) it does not so preexist imply that the sprout has determinate existence and determinate nonexistence, respectively, in the seed. This leads to the difficulties noted in section 2. Meanwhile, determinate existence and determinate nonexistence are mutually exclusive, so one cannot claim that the sprout both preexists and does not preexist in the seed. [↑](#footnote-ref-11)
12. For example, Akiba (2004), Barnes and Williams (2011), and Wilson (2013). [↑](#footnote-ref-12)
13. Madhyamaka thinkers occasionally use positive and negative tetralemmas for their purposes. S1 to S4 below represent a form of negative tetralemma, and S5 to S8 (soon to appear) represent a form of positive tetralemma. [↑](#footnote-ref-13)
14. S1 to S4 are to be viewed as true, whereas S5 to S8 may be true or false, depending on how one judges the adequacy of the underlying reasons. There is no need to postulate a third truth-value besides ‘true’ and ‘false’. [↑](#footnote-ref-14)
15. As hinted in these two paragraphs, OI does not adopt the philosophical position known as dialetheism, according to which the law of noncontradiction fails and some contradictions are true. Even if we hold as true both ‘*X* is (provisionally) *P*’ and ‘*X* is (provisionally) not-*P*’, these two statements are relativized to different perspectives such that *X* is *not* both *P* and not-*P* in the same respect. No determinate and mutually exclusive features are predicated of *X*. Consequently, there is no violation of the law to the effect that for any property *P*, nothing can be both *P* and not-*P* all over at the same time, and in the same respect. [↑](#footnote-ref-15)