Does causation entail emptiness? On a point of dispute between Abhidharma and Madhyamaka.

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Abstract

The aim of this paper is to assess the relation between causation and the notion of emptiness described in Buddhist philosophy. While the Madhyamaka school argues that some entity's being caused implies its being empty, some contemporary authors have argued that there is a 'Humean' regularity account of causation that can both be understood as a plausible model of the earlier Buddhist Abhidharma account of causation, and also blocks the Madhyamaka inference from causation to emptiness. After describing the Abhidharma account of causation, the 'Humean' regularity account and the Madhyamaka argument from causation to emptiness we assess some ways in which this argument may be developed, with particular focus on the 'ladder of causation' and on the Madhyamaka account of time. The debate about the relation between causation and emptiness, it appears, is a facet of a more comprehensive metaphysical debate between a (moderate) foundationalism and a thoroughgoing anti-foundationalism.

This paper is concerned with the relation between two concepts that play a central role in Indian Buddhist philosophy: the notion of causation, and the notion of emptiness (*śūnyatā*). Our focus is specifically on the notion of emptiness as it is understood in the Madhyamaka school, that is, as emptiness of intrinsic nature (*svabhāva*)[1] in all things. In Buddhist philosophy there is no agreement on the relationship between the two notions. In the Abhidharma school[2] it is considered to be perfectly consistent to say that some entity exists with intrinsic nature, yet is caused, while Madhyamaka argues that the fact that some entity is caused constitutes an argument that entity must also be empty, and hence fails to have intrinsic nature. In the contemporary literature this conflict has manifested in the suggestion that a 'Humean' regularity theory of causation might be what is defended by Abhidharma, and that such a theory might not only be plausible for systematic reasons, but would also block the Mādhyamaka's inferential move from causation to emptiness.[3]

My aim in the following discussion is to explain and assess the conflict between Abhidharma and Madhyamaka about the relation between

[1] For some discussion of the concept of *svabhāva* see Westerhoff 2007.

[2] In the context of our discussion our references to Abhidharma will generally refer to Sautrāntika Abhidharma. For a concise introduction to the philosophical views of the main schools of Abhidharma see Siderits 2021, chapters 2 and 5, Westerhoff 2018, chapter 1.

[3] See in particular Siderits 2014, 2022a: 181-182, 2022b.

causation and emptiness. I will first introduce the the Abhidharma's conception of intrinsic nature (section 1), before discussing the 'Humean' conception of causation sometimes attributed to Abhidharma (section 2). We can then turn to the Madhyamaka argument from causation to emptiness (section 3) in order to see how this argument is blocked by Abhidharma's view of causation as an objective, mind-independent reality. In the final parts of the paper we will discuss ways in which the Madhyamaka argument can be developed by considering the causal hierarchy (section 4) and the Madhyamaka account of time (section 5).

The following discussion has a historical and a systematic component. The former concerns the question of the relation between Abhidharma and Madhyamaka and, more specifically, the question whether Madhyamaka is able to show that causal dependence and intrinsic nature are incompatible. The latter concerns the question whether a limited foundationalism can still be defended in a world in which everything depends on some other things.

1. Intrinsic nature in Abhidharma

In the Abhidharma texts we find different criteria an object has to fulfill in order to be deemed as existing by intrinsic nature. Two particularly important ones are resilience against material or conceptual decomposition;[4] criteria that are sometimes mentioned as glosses on these forms of resilience include the ability to exist in a lonely state,[5] and not borrowing its nature from other objects.[6]

Each of these exclude that an entity's nature is somehow spread across other things. If an entity has parts, and can therefore be taken apart, either in actuality or in thought, there are things not identical with it, the parts, that make it have the nature it has. Similarly, an entity that can only be what it is when there is another entity around, and one that relies on another for its nature like a debtor relies on a guarantor is not what it is intrinsically, on its own, but inevitably draws in other entities simply by being what it is.

What this means is that an entity cannot exist with intrinsic nature if it stands in specific kinds of dependence relations. Note that this does not mean that it must not stand in *any* kind of dependence relation. It is therefore sensible to differentiate clearly between the notion of *intrinsic nature* just introduced, and the more general notion of *intrinsic existence*, that is, not occupying the first place in some kind of 'depends on' relation.[7]

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[4] Vasubhandu's *Abhidharmakośa* 6:4, La Vallé Poussin and Pruden 1988–90: 3. 910–11. On the latter see also Walser 2005: 242: "[I]f, when one mentally removes a factor from a given concept, that concept is no longer possible, then the concept is not an ultimately existent *dharma*".

[5] Siderits 2022a: 53, note 7.

[6] Siderits 2021: 249.

[7] See Siderits 2014: 443.

The dependence relation that Abhidharma considers to be most obviously in conflict with existence with intrinsic nature is mereological dependence. Intrinsic natures are meant to be termination points of ontological analysis; they are entities that turn up in our ultimate theory of the world and are not in turn spelt out by means of other, more basic entities. Once we have identified the intrinsic natures we have reached the rock bottom of philosophical inquiry. There is no further necessity to go beyond these in order to find out what the rock bottom is based on.

The Ābhidharmikas are mereological reductionists,[8] that is, they deny the existence of mereological sums, though they accept that it is frequently useful to speak as if there were such sums, even though such talk is *senso strictu* without referent. But if mereological sums, and therefore partite things do not exist they also cannot be part of our ultimate theory of the world. Hence, once we have shown that some entity consists of parts we have shown that it cannot exist with intrinsic nature. It is a purel conceptual and linguistic construct based on agreements and shared practices in a community of speakers.[9] Why, then, is it still useful to refer to partite entities lacking intrinsic nature? After all, there is a practical point in referring to the fact that a specific lego structure weighs 100 grams, and such a fact can play a role in explanations. The reason for this is that the lego structure borrows its weight, and extrinsic property, from entities further down the chain of mereological dependence, some of which have their properties intrinsically. It is only because there are such entities that it makes sense to use this vocabulary of ontological debits and credits.

The mereological reductionism considered here not only covers spatially extended partite objects, but also complexes of properties. The property of being a green square is as much a composite as the lego structure, and depends as much for its existence on simpler properties as the lego structure depends on simpler parts.

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[8] The reason why Abhidharma defends mereological reductionism is based on considerations of identity and difference. Not unreasonably the Ābhidharmika holds that entities we consider to be fully real should stand in determinate relations of identity and difference with one another. This, however, presents a difficulty if we consider a whole and its parts. The two cannot be identical, since a whole is one, and the part are many, and one entity cannot have two contradictory properties. If they are distinct, on the other hand, we should be able to find the whole independent of its part. Yet this is never the case; we do not encounter a bicycle at a location separate from its parts. If instead whole and part are distinct and spatially coincide, the whole is spread out in space, and so contains parts, which are distinct from the parts of the bicycle they spatially coincide with. In addition to this curious duplication we might then wonder whether there is also a second-order whole consisting of all the parts of the whole (parts which are distinct from the bicycle parts), which spatially coincides with the whole, and so on, all the way up an infinite regress.

The way to solve this problem, the Ābhidharmika argues, is to give up the assumption that wholes and parts stand in determinate relations of identity and difference. They do not do so because wholes are not fully real, but merely conceptual-linguistic projections onto a set of objects that are fully real, namely the parts.

[9] It seems to be difficult to make sense of the notion of a functional unity that is a whole in a purely mind-independent way, without referring in some way to human interests and concerns.

It is for this reason that the Abhidharma's ultimate ontology consists solely of particularized properties or tropes,[10] the *dharma*s. By means of the conceptualizing mind and shared practices co-occuring clusters of such tropes are given a role to play in our world. This is the role of the medium-sized dry goods of our everyday acquaintance. Under the gaze of Abhidharma analysis, however, these goods disappear without a trace, all that is left at the ultimate level is a continuous stream of *dharma*s.

These *dharma*s are distinguished into different kinds, each kind bearing a unique intrinsic nature. The theory of *dharma*s formulated against the background of the theory of momentariness. Each *dharma* lasts no longer than a moment, a temporal atom, so to speak, and is hence devoid of any temporal thickness. Immediately after its production is either simply passes out of existence or it does so while also causing the production of another *dharma* of the same kind in the following moment. The Abhidharma account we consider in the context of this discussion also endorses presentism.[11] The only temporal moment that exists is the present moment, the past and the future are completely non-existent. In this picture every present *dharma* obviously depends causally on its predecessor, yet the Abhidharma does not consider this causal dependence, unlike mereological dependence, to be incompatible with the possession of intrinsic nature. A causally produced, present *dharma* certainly satisfies the three criteria for possessing intrinsic nature mentioned above. Since *dharma*s are tropes they have neither spatial nor conceptual parts (a given *dharma* cannot be decomposed into other, simpler tropes) and hence cannot be materially or conceptually decomposed. A present *dharma* does not require other presently existent *dharma*s to be around for it to be what it is. It can exist in a lonely state. Finally, each *dharma* is self-standing and does not draw on other entities for its nature, as the bicycle draws on its part. It does not derive its nature from other entities.

2. The 'Humean' account to causation

Amongst contemporary authors Mark Siderits has argued on a number of occasions that the Abhidharma view of causation just described is a type of 'Humean' regularity account.[12] I am not greatly concerned with the exegetical question of whether the 'Humean' account was actually defended by Hume, but use it as a merely convenient label for a specific kind of regularity theory of causation. This being understood I will, for

[10] Spelling out the Abhidharma *dharma* theory in terms of an ontology of property particulars or tropes is defended, amongst others, by Goodman 2004 and Siderits 2014: 439. See also Ganeri 2001: 99.
[11] This distinguishes the Sautrāntika Abhidharma's view of time from that of the Sarvāstivāda Abhidharma, which holds something more akin to a block-universe theory of time, arguing that past, present, and future all exist. See Westerhoff 2018: 60-66.
[12] Siderits 2014, 2022a: 88-90, 2022b.

reasons of typographical aesthetics, drop the quotation marks around the term ‘Humean’.
How is this Humean account of causation to be understood? Siderits explains it by noting that

> while there is no necessary connection to be found between what are thought to be a cause and its effect, there still is such a thing as causation, which consists in no more than universal concomitance of two distinct event-types in relations of spatio-temporal contiguity and strict succession.[13]

Siderits not only assumes that the Humean account subsumes the Abhidharma but also entertains “the possibility that a ‘Humean’ account of causation might be correct”.[14] As such, causal talk needs to spelt out in terms of a fundamental theory of a mind-independent, objective set of relations between property-particulars or tropes: “[u]ltimately, causation is just a matter of constant conjunction: it always happens that events of this type are succeeded by events of that type”,[15] a position, Siderits claims, that is also endorsed by Vasubandhu in his *Abhidharmakośabhāṣya*.[16] Part of the reason for why the Humean account might be correct appears to be the fact that it, suitably interpreted, could coincide with a complete physics:

> “Indeed today one might go the further step of identifying the ultimately real physical *dharma*s not with the tropes we take the senses to detect, but rather with whatever turn out to be the values of the variables of the logically regimented laws of final physics.”[17]

It might be helpful to illustrate this idea of Humean causality as a “universal concomitance of event-types”[18] by means of a example. Consider a two-dimensional cellular automaton, a large, potentially infinite grid or chess-board like structure of cells, each of which is filled in by one of a range of colours. In this cellular automaton cells change their colour over time according to a fixed set of rules (for example in dependence on the colours of the directly neighbouring cells, though the details do not matter for our present discussion). Each moment in time effectively produces a new board with a new distribution of colours, and we can imagine a sequence of such boards, or even stacking various of these boards on top of one another into a three-dimensional block, such that the boards directly above or below a given board represent the immediately preceding and the immediately succeeding moment in time of the evolution of the cellular automaton relative to the given board.[19]

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[13] Siderits 2016: 113.
[14] Siderits 2016: 113
[15] Siderits 2014: 442-443.
[16] Siderits 2014: 442.
[17] Siderits 2022: 142.
[18] Siderits 2014: 447.
[19] The picture of the succession of boards would correspond the view of the Sautrāntika Abhidharma, which is our present focus, according to which on only the present board is

We thus end up with a 'Humean mosaic'[20] and can trace patterns across the sequence of boards, such as 'if cell *x* at *t* is red, *x* at *t-1* and *t+1* are also red', 'cell *x* alternates between being red and being green after every two moments', 'cell *x* being red at *t* is always followed by cell *y* being blue at *t+27* and so on.[21] The existence of such patterns can be objectively defined[22] in terms of compression (to say that no two adjacent cells have the same colour is shorter than giving a description of the colour distribution of the entire board) and can be detected by a machine.
To get from the toy model to the real world, we simply need to turn the succession of two-dimensional boards into a succession of three-dimensional blocks (following the Sautrāntika model), or the three-dimensional block into a four-dimensional one with three spatial and one temporal dimension (for the Sarvāstivāda model) and replace the colourings of the cells with the instantiation of particularised properties as specific space-time locations.

In this Humean world, Siderits maintains, there are causally produced entities that bear intrinsic natures (illustrated here by the appearance of a specific colour in a specific square). As there are good reasons to believe that this world is in fact the actual world, the Madhyamaka argument that being causally produced contradicts bearing intrinsic nature must fail. Before we assess the Madhyamaka argument from causation to emptiness we need consider another aspect of this debate, namely question of the ascription of the Humean picture to Madhyamaka.

2a. Humean Madhyamaka?

In the contemporary literature on Buddhist philosophy we do not only find scholars who see deep affinities between Hume's treatment of causation and the Abhidharma account of the conditioned arising of *dharma*s, but also those who see significant links between the Humean account and Nāgārjuna's discussion of causation in the *Mūlamadhyamakakārikā*. The way Hume's account and Madhyamaka are linked might appear puzzling. While some authors argue that the "affinities of Hume's account of causation to some Buddhist account are striking",[23] others note that "the regularity account of causation is incompatible with the Madhyamaka doctrine of emptiness."[24] The solution to this puzzle of radically different assessment of the Hume-Madhyamaka connection is to be found, I

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ever real. The idea of the three-dimensional block of boards would correspond to the Sarvāstivāda Abhidharma's theory according to which past, present, and future all exist.

[20] For a view of the Humean mosaic where the supervenience base does not consist of "pointlike particulars characterized by intrinsic categorial properties and standing in external relations" but of "momentary sense data characterized by intrinsic categorical properties and standing in external relations" see Kodaj 2021.

[21] More accurately we should speak cell-types at a specific time being correlated with cell-types at other times with specific probabilities. However, we can ignore this complication for present purposes.

[22] On 'real patterns' see Dennett 1991. See also Ladyman and Ross 2007: 178.

[23] Garfield 2019: 143: note 11. The context suggests that the "Buddhist account" referred to is Madhyamaka. See also Garfield 2001.

[24] Bliss 2015: 93.

believe, in differences about how far the similarity between Hume and Madhyamaka is to be pushed. Both accounts of causation certainly agree on their rejection of necessary connections between events that provide the ontological basis of causal relations. The two might part company, however, when it comes to the positive account of the 'regularities' that are supposed to do the heavy lifting in Hume's account of causality. When Garfield introduces such regularities into the Madhyamaka picture,[25] doing so might appear to leave open the door to taking such regularities and the "vast network of interdependent and continuous processes"[26] these constitute ontologically seriously, in a way that is incompatible with the Mādhyamaka's reluctance to endorse the ultimate existence of any entity.

Moreover, the Humean account's rejection of necessary connections between cause and effect is based on his conception of these as distinct existents, arguing that there cannot be necessary connections between distinct existents.[27] Madhyamaka, on the other hand, conceives of cause and effect as mutually interdependent, arguing for an understanding of causal relata that is inconsistent with the way their ontological status is understood by Hume. [28]

The conflict between Humean regularity accounts of causation and the Madhyamaka view of causation hence begins to manifest once we move beyond the understanding what causation is not (necessary relations between events grounded in the nature of these events) towards a positive characterization of what causation is. If we see the basis of our causal notions as resting on an objective, mind-independent network of correlations between distinct entities which characterizes the world at the most fundamental level we have arrived at a theory quite quite inconsistent with Madhyamaka.[29] For the Mādhyamaka, "[r]egularity is always regularity-under-a-description, and descriptions are, as Nagarjuna puts it, "verbal designations." Explanatory utility is always relative to human purposes and theoretical frameworks."[30] In addition, conceiving of cause and effect ignores the dependence relations that bind them together, not simply the dependence of the effect on the cause for bringing it about, but also the dependence of the cause on the effect for delineating the multitude of distinct phenomena that collectively constitute the cause.[31]

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[25] "What is it, then, about some sets of event pairs, but not others, that make them dependently related, if not some causal link present in some cases but not in others? Nagarjuna replies (1: 5) that it is the regularities that count. Flickings give rise to illuminations." Garfield 1994: 224.

[26] Garfield 1994: 223.

[27] For further discussion of 'Hume's dictum' to this effect see Bliss 2015: 80.

[28] Garfield 2015: 26: "Hume regards events as "independent existences," for Buddhists, dependent origination guarantees that *nothing* is an independent existent."

[29] Let us stress once more we are not concerned with the question whether Hume himself would have endorsed this view.

[30] Garfield 1994: 234. Incidentally, this point implies that even if we accept the existence of 'real patterns' in the world, we could not equate them description-independent causal regularities.

[31] For further discussion of this see Westerhoff 2009: 94-99.

If there is any plausibility in attributing a Humean notion of causality to Madhyamaka at all, it has to be one that is considerably weaker than the one we have discussed above. There may be ways of reading Hume on causation that bring his position closer to that of Madhyamaka,[32] but these will be accounts quite far removed from the Humean regularity account discussed here so far.

3. The Madhyamaka argument from causation to emptiness

Madhyamaka presents no master argument for its claim of universal emptiness, that is, for the claim that all things, without exception, lack intrinsic nature (*svabhāva*). Nevertheless, the argument from causation clearly occupies a central role amongst the different arguments for emptiness we find in Madhyamaka literature. Put very simply the argument runs as follows:

> Premiss 1: To possess intrinsic nature means to exist outside of the network of dependence relations.
>
> Premiss 2: If something is an effect, it existentially depends on its cause.
>
> Conclusion: Nothing that is caused can possess intrinsic nature.

It is obvious why this argument should occupy such a central place. The majority of things we interact with on a day-to-day basis are caused. If we are able to establish that all of these things are empty, we have advanced a big step towards showing that all objects are empty.[33]

As we have seen from our discussion above Mādhyamika's Abhidharma opponents will not find themselves ready to accept premiss 1, for they hold that standing in *some* dependence relations is perfectly compatible with possessing intrinsic nature. While some entity's possessing an intrinsic nature is undermined by mereological dependence, that is, by its having parts, it is not undermined by causal dependence, that is, by being the effect of some cause.

We could not simply adapt the mereological argument against intrinsic nature presented above in order to argue that anything that occupies the second place in the '*x* causally produces *y*' relation fails to have intrinsic nature, simply because it is dependent. In the case of a given *dharma* of type *p* at one moment causing its successor at the next moment, the successor obviously depends on its predecessor for its existence, and yet this fact does not appear to give rise to the kind of mind-dependence that

[32] See for example the 'projectivist' interpretation discussed by Bliss 2015: 78.

[33] The argument obviously will not cover entities taken to be uncaused (such as space or *nirvāṇa* in the case of the Abhidharma) or abstract objects (in the case of contemporary philosophy). While Madhyamaka has something to say about these kinds of things as well we will ignore them for present purposes.

we have observed in the case of entities with parts. This is because Abidharma assumes that we are dealing with a wholly mind-independent sequence of *dharma*s of type *p* at *t* causing *dharma*s of type *p* at *t'*. Wholes, on the other hand, are not mind-independent for the mereological reductionist, but exist only as a mental projection superimposed on some entities. Hence, as long as we can conceive of causation as a mind-independent relation the argument from 'being caused' to 'being empty' presented above does not get off the ground.

For the argument to work, Mādhyamikas also have to establish an idealist conception of causation, that is, they have to assume that

> [Causal Idealism] *c* is a cause of *e* if and only if at least one observer mentally projects a causal relation between *c* and *e*.[34]

Once we have determined that any instance of causation involves a mental component, each essentially caused entity will be partly mind-dependent, thereby ruling out the possibility that the entity exists by intrinsic nature.

What is the argument for Causal Idealism? The Mādhyamika relies on two main premises, the *rejection of simultaneous causation*, and *presentism*. If simultaneous causation is rejected, then cause and effect must take place at distinct temporal moments, and since the effect cannot exist before its cause, the effect must temporally succeed its cause. However, if only the present moment is real, and, as the principle of momentariness implies the present moment has no temporal thickness, the two members of a cause-effect sequence can never both be present. When the cause exists, the effect has not yet arisen, and once it has arisen, the cause has already passed out of existence. This then has the unwelcome consequence that the causal relation would always relate an existent object to a non-existent object. Assuming that one of the relata of a relation can fail to exist raises a variety of problems and is therefore something we should rather avoid. (For one, the causal relation relates rice-seeds to rice-sprouts but not to barley-sprouts. Yet when the rice-seed exists, neither a future rice-sprout nor a future barley-sprout exist. To maintain that the causal relation relates rice-seeds to rice-sprouts but not to barley-sprouts we would then require an ontology that allows us to distinguish one non-existent object from another.)
One way of resolving this problem is to assume that when the cause is present, the anticiptation of the effect is present as well, and when the effect is present, the memory of the cause is present too. Instances of

[34] Adapted from Bernstein 2017: 218. Ābhidharmikas are 'mereological idealists', that is, they hold that some parts are part of a whole if and only if at least one observer mentally superimposes a mereological composition on the parts. They do not accept the existence of an objectively real mereological composition operations such that some group of objects forms a whole whether or not anyone has ever conceived of them as a whole. The mereological argument for emptiness would not go through if they were objectivists about parthood. If some entities formed a whole no matter what the Ābhidharmika could not say that only the parts, but not the whole exists.

causation therefore always involve at least one relatum that is wholly mental in nature. As such there cannot be examples of causation that take place in a wholly mind-independent manner.[35]

If being some object involves essential reference to causation,[36] then that object must involve reference to conceptual construction and hence be empty. By "essential reference" we mean there that the object could not be the kind of thing it is without being caused: a human not causally produced would not be a human, a teacup not causally produced would not be a teacup. Hence, once we know that some entity is causally produced, and that it would not be what it is if it was not causally produced we can infer that this entity must be empty.

One can, it appears, challenge the Mādhyamika's case for Causal Idealism by arguing against the rejection of simultaneous causation, and by arguing against presentism. We will not do so here, since both principles are indeed endorsed by Sautrāntika Abhidharma, which defends them against the Sarvāstivāda acceptance of some cases of simultaneous causation, and against the Sarvāstivāda belief that all three times, past, present, and future exist.[37] If there can be an Abhidharma position that accepts both principles while retaining belief in an objective, mind-independent causal relation even granting both to Madhyamaka will not help it in its quest to establish Causal Idealism.

As such one might argue that the Madhyamaka argument for Causal Idealism presented to far is question-begging against the Ābhidharmika.[38] If we subscribe to Sautrāntika Abhidharma we can perfectly well maintain that there is an objective, mind-independent succession of *dharma*s, none of which has any temporal thickness (momentariness), that even though they succeed each other, only the set of present *dharma*s is real (presentism), and that no *dharma* ever coexists with any of its causes (rejection of simultaneous causation). Accepting all the conceptual

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[35] For a more detailed presentation of this argument see Siderits 2004: 407-408, 411-413.
[36] See Siderits 2004: 411-413.
[37] For a concise account of the debate between these two schools concerning simultaneity of causation and presentism see Westerhoff 2023: 60-70.
[38] Siderits locates the charge of question-begging at a different point, namely connected with "Principle **P**" ("If a relational tie is conceptually constructed, then any property of one of its relata that involves essential reference to that tie must likewise be conceptually constructed." (Siderits 2004: 411)), which allows us to move from the claim that causation is conceptually constructed to the claim that any caused entity is likewise constructed and hence empty, instead of applying it to the Madhyamaka claim that the causal relation is conceptually constructed: "As for the Principle **P** that I invoked in order to turn an argument for the emptiness of causation into an argument for the emptiness of anything that is caused, I now think it would be rejected by the causal realist opponent as involving a question-begging essentialism." (Siderits 2016: 114). Yet the Ābhidharmika would presumably not have a problem appealing to Principle **P** when the "relational tie" is the 'part of' relation, in order to argue that any entity that involves essential reference to parthood is conceptually constructed. The worry seems to be that on the basis of the assumptions the Mādhyamaka has introduced in his argument for Causal Idealism the Ābhidharmika sees no reason to see the causal "relational tie" as conceptually constructed in the first place.

building blocks of the Madhyamaka argument for Causal Idealism appears to be consistent with an objective understanding of causation as a form of Humean regularity, and hence the Mādhyamaka's claim for the conceptually constructed nature of the causal relation is a mere assertion, not backed up by argument.

Siderits suspects that Madhyamaka has never been able to successfully respond to the possibility of a Humean account of causation being correct.[39] It appears to me that even though the Madhyamaka argument for Causal Idealism presented so far is incomplete (otherwise the principles he has introduced would not be compatible a Humean regularity account as described above), the Madhyamaka case can be developed both by consideration of contemporary work on causation, as well as by reference to arguments we find in the Madhyamaka sources themselves. I will consider each of these points in turn.

4. The Causal Hierarchy

One reason that may make us question whether the Humean regularity account described above is correct is that all it provides us with are correlations between *dharma*s. It can tell us that the occurrence of *dharma x* at *t1* is correlated with probability *p* with the occurrence of *dharma y* at *t17*, but not whether this correlation is coincidental, or whether it is causal. We would not be able to construct a machine that is given information about all the correlations between *dharma*s and can produce from these transition probabilities between states as an output information about causal relations.
More specifically, the information present in the Humean mosaic will correspond to the lowest, associational level of the Pearl Causal Hierarchy.[40] Without additional background assumptions this information will not allow us to draw distinctions between the claim that *x* and *y* are correlated, and the claim that *x* causes *y*, allowing us to answer questions like "what happens to *y* if I remove *x*?" or "what would have happened to *y* had I removed *x?*". The information in the Humean mosaic underdetermines causal information, making it impossible to infer information about the higher levels concerned with interventions[41] and counterfactuals from the level of correlations. This is the fundamental message of the Causal Hierarchy Theorem that governs the Pearl Causal hierarchy: [42] "one cannot make inferences at one layer given knowledge at lower layers (e.g., using observational data to make interventional claims), some additional assumptions are logically necessary if one wants in general to do *causal inference*."[43]

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[39] Siderits 2014: 448: "I am thus not certain that a successful Madhyamaka argument against the 'Humean' option is to be found in the Madhyamaka literature."
[40] Also referred to as the "ladder of causation"; see Pearl/Mackenzie 2018, ch. 1.
[41] Gold 2015: 112 ascribes an interventionist understanding of causation to Vasubandhu.
[42] Bareinboim et al 2022: 528-529.
[43] Barenboim et al 2022: 533.

In order to determine what happens beyond mere association or correlation, we need to make additional assumptions[44] in order to produce a structural causal model, a model that makes assumptions about which correlations are actually more than correlations.

One might object that these are purely epistemological points, while the point the proponent of Humean regularity sets out to make is ontological. The Humean mosaic is all there is at the ground level of reality, it is a brute fact,[45] and conclusions about what we can or cannot infer from information about this ground level tells us about us and our epistemic preferences and limitations, but nothing about what exists in the most fundamental sense.

However, the fact remains that if causal notions (including associational, interventional, and counterfactual information) form an essential part of our thinking about the world, if these notions require additional human superimpositions on top of what goes on at the correlational level, and if being caused constitutes an essential feature of specific objects, the fact that a specific given object is caused still allows us to infer that human conceptualization is constitutively involved with it, and that it is therefore empty.
If the facts about correlation determined by the Humean mosaic are not sufficient to settle crucial aspects of what the causal relation amounts to, such as causation's interventional and counterfactual dimensions, these aspects must be a result of the mind's handiwork. Siderits argues that despite the fact that the full-fat version of causation requires conceptual construction, there is still a diet substitute (Humean regularity) that obtains in a conceptualisation-independent manner.[46] The difficulty I see with this is that if the substitute is insufficient to account for significant aspects of what we take the causation to be (such as interventions and counterfactuals) it is hard to see we could still regard the substitute as a version of *causation*.
Yet if our notion of causation is not an accurate reflection of properties present at the most fundamental level, but essentially involves conceptualization, and if such constitutive involvement of human interest and concerns in some object is sufficient for the object's emptiness, the Mādhyamika's move from 'being caused' to 'being empty' and the causal idealism this brings with it still appears to be validated.

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[44] See Cartwright 1989: 39: "'How can we infer causes from theory?' […] [W]e can do so only when we have a rich background of causal knowledge to begin with. There is no going from pure theory to causes, no matter how powerful the theory."
[45] Siderits 2022b: "[P]erhaps it is a mistake to think of causation as any more than just invariable succession of one sort of event by an event of another sort. If that is the right way to think about causation, then the fact that we cannot explain why a given sort of *dharma* always arises after the occurrence of a certain aggregate of events and conditions should not distress us. It might just be that this is the way that the world happens to work, and nothing more needs to be said about the matter."
[46] "Since our ordinary idea of causation involves the further component of necessary connection, one can say, with Hume and Nāgārjuna, that that idea involves conceptual construction. But this does not show that causal relations could not obtain between ultimately real entities." (Siderits 2016: 113-114).

5. **Madhyamaka and time**

Let us assume, for the sake of argument, that we put worries about the causal hierarchy raised by the Humean mosaic to one side. A problem that remains is that it is hard to see how we can make sense of a Humean account of causation without an understanding of time as objective, mind-independent, and ultimately real. If this account describes causal relations in terms of "universal concomitance of two distinct event-types in relations of spatio-temporal contiguity and strict succession", 'being located at a specific spatial point' and 'being located at a specific time' are not themselves event-types or types of particularised properties, but an underlying framework according to which the event-types can be arranged.[47]

Such a view of time does not cohere well with the Buddhist philosophical outlook as a whole;[48] more specifically, Madhyamaka thinkers present explicit arguments against such an understanding of time.[49] From Nāgārjuna onwards, Madhyamaka authors have been explicit in their rejection of time as a feature that characterizes the world at the level of ultimate truth,[50] a characterization that seems to be essential for the Humean regularity account as described above.

The 19th chapter of Nāgārjuna's *Mūlamadhyamakakārikā* contains two main arguments against objectively existent time.[51] The first is concerned with the dependence-structure of different parts of time on one another. In *Mūlamadhyamakakārikā* 19:1-3 Nāgārjuna considers the question whether one part of time, the present, exists in dependence on other parts, such as past or future, of if it exists independent of them. If the present depends on the past in anything more than a mere notional sense (such a sense would be merely to say that we cannot use the concept 'present' without also using the concepts 'past' and 'future'), past and

[47] We might conceive of space and time as sets of particularised properties as well, so that the 'concomitance' of two particularised properties, for example, would be accounted for as the co-occurrence of the two properties and a specific temporal property in a bundle. This would leave as with a picture according to which reality ultimately consisted of bundles of property particulars, bundles which have no spatial or temporal location in themselves. Rather space and time, as well as all the other properties of the phenomenal world would emerge from this abstract list of property bundles. Apart from the fact that it is far from clear how to spell this out in detail it is evident that we would no longer be dealing with a Humean conception of causation, but rather with an ontology according to which there are no spatial, temporal, or causal relations at the most fundamental level of reality.

[48] "No Buddhist school accepts the notion of time as an independent eternal receptacle within which temporal phenomena unfold in a natural sequence." Compendium Compilation Committee 2017: 241.

[49] A detailed account of the Madhyamaka theory of time is unfortunately still lacking in contemporary literature. Interested readers might begin by consulting chapter 19 of Nāgārjuna's *Mūlamadhyamakakārikā* and chapter 11 of Āryadeva's *Catuḥśataka*.

[50] The thoroughgoing constructivism we find in Madhyamaka leads to problems when added to an objective understanding of time. If time exists over and above human conceptual actitivity the past (the 'ancestral world') will exist in a similar manner, locating a large part of reality outside of the realm of the constructed. See James 2018, Bitbol 2019 for further discussion.

[51] Siderits/Katsura 2013: 207-211.

present would have to co-exist, since for a dependence relation to obtain, both of its relata must exist.[52] It is, however, obvious, that the past does not presently exist. On the other hand, conceiving of the present as existing independently of past and future does not seem to be satisfactory either. How could the present not be something that essentially involves the future and the past, as when an entity is first future, then becomes present, and then becomes past?[53] If we take any of these three out of this set and consider them independently, we lose all our bearings in trying to understand how such an entity is to be understood. The notion of a future, for example, that exists independent of present and past would never change into present or past, and would therefore be always frozen as future: a static section of 'time' that bears little relation to the dynamic, flowing entity we understand time to be.

The second of Nāgārjuna's arguments concerns the question whether time, conceived of as an entity, is dynamic or static. If it is dynamic, this raises the question of what medium the movement of time takes place in. A second-order time? As exactly the same question arises for this second-order time we seem to be on our way to an infinite regress. But taking time to be static does not seem to be preferable: if there is any feature that appears to be essential to time it is the fact that is moves.[54]

Assuming these arguments goes through, and we cannot conceive of any of past, present, or future as either dependent on or independent of the other two, and we cannot consider time to be either dynamic or static, where does this leave us? It means that time cannot be conceived of time as an entity in any way, be it a dependent entity,[55] an independent entity, a dynamic or a static entity. Instead, we should account for time by focusing on the fact that human beings engage, as part of their day-to-day interactions, in numerous instances of time-talk and thinking about events considered to be past, present, or future. Such talk or thought is then mistakenly ontologized, assuming that there are objects or entities like time, past, present, and future standing behind time-talk and time-thought, serving as its referent. Nāgārjuna's analysis, in contrast, sets out to show that such reification is to be resisted, since the supposed entities, once properly analysed, turn out to be such that no coherent account of them can be presented.

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[52] As Candrakīrti points out in his *Prasannapadā*, commenting on *Mūlamadhyamakakārikā* 19:1: "one thing cannot depend on another thing which does not exist, as in the case of the son of a barren woman, a garland in the sky and the flowers it contains, or sand and sesame oil" (*yasmāt yasya hi yatra asattvam tat tena nāpekṣyate| tadyathā vandhyā srī svatanayena gaganamālatīlatā svakusumena sikatā svatailena*, Poussin 1913: 382: 13-15).

[53] Tsong kha pa stresses another aspect of this point, the dependence of the past and the future on the present when commenting on *Mūlamadhyamakakārikā* 19:1: "[T]he past has to be posited as that which is past with respect to the present, and the future is that which has not yet come in the present." (Ngawang Samten/Garfield 2006: 395), *da ltar ba las 'das pas 'das pa dang der ma 'ongs pas ma 'ongs par 'jog dgos* (Tsong kha pa 1992: 337).

[54] *Mūlamadhyamakakārikā* 19:5, (Siderits/Katsura 2013: 210-211).

[55] *Mūlamadhyamakakārikā* 19:6, (Siderits/Katsura 2013: 211).

If we cannot rely on the presence of an ultimately real, objective time in our background ontology, even the notion of succession within the Humean mosaic becomes difficult to establish. As Nāgārjuna notes,[56] cyclic existence, that is, the continuity of the arising and cessation of *dharma*s is without beginning or end. Not only does that entail that there is no mid-point to this continuity,[57] but also that we cannot determine whether some *dharma* is earlier or later than another by ascertaining whether it is closer to the beginning of cyclic existence or closer to the end, for this distance will always be the same, namely infinitely long. If we also cannot determine this by looking at the date-stamps imprinted on the *dharma* by objective time, what does it even mean to say that, ultimately speaking, one *dharma* precedes another? We would better not refer to causal notions, saying that the first *dharma* brings about the second, but not the other way around, since the notion of causality appeal to is supposed to be nothing more than the succession *dharma*s in their Humean sequence. What we appear to be left with is a set of *dharma*s, together with some ordering relation on this set. But there will be many ordering relations on this set (the inverse of the ordering relation will be another ordering relation), and we appear to have no further criterion at our disposal to identify any one as the *temporal* ordering relation.

6. Conclusion

We have seen from the preceding discussion that the relation between causation and emptiness, the absence of *svabhāva*, is not understood in a uniform manner throughout the history of Buddhist philosophy. In particular, the Abhidharma thinkers saw no conflict between the idea of an entity possessing *svabhāva* and its being caused, while the Mādhyamika's regarded the argument from an entity's being caused to its being empty as an essential element of the conceptual toolbox they employed in order to establish the theory of emptiness. The crucial difference between both positions is that Abhidharma affirmed, and Madhyamaka denied, the existence of a mind-independent causal relation. If we are convinced that such an objectivist understanding of causation is indeed correct, whether it is spelt out as a Humean regularity account or in some other way, it does indeed seems as if the Madhyamaka argument from causation to emptiness does not get off the ground. Focusing on the Humean regularity account, however, it turned out not only that such an account was too weak to account for many features of causation we might consider to be essential to it, so that the Madhyamaka position that causation essentially involved human conceptualization continued to obtain even if the Humean regularity account was accepted, but also that it presupposed a view of time incompatible with that proposed by Madhyamaka. Looking at Madhyamaka as a whole it becomes evident that the objectivist view of causation entailed by the Humean regularity view is rejected by their

[56] *Mūlamadhyamakakārikā* 11:1, (Siderits/Katsura 2013: 123-124).
[57] *Mūlamadhyamakakārikā* 11:2, (Siderits/Katsura 2013: 123-124).

arguments about the mere relative existence time, and that it therefore cannot stand in the way of an argument from causation to emptiness.

How might the discussion proceed from here? For the defenders of an objective, mind-independent causal relation against causal idealism the question arises how many bullets they are willing to bite in support of their minimalist conception of causation as regularity. These include accepting that what we ordinarily perceive as causation is not causation, and accepting that there is no fundamental difference between causation and correlation. Alternatively, they might want to resort to a more substantial conception of causality than mere Humean regularity. They would aim to defend a form of causation such that our ordinary causal concepts can be regarded as a more or less accurate representation of it, thereby disarming the worry that causation is not something we find in the world, and represent in a homomorphic manner in our conceptual structuring of experience, but something essentially mind-made which the perceiver projects onto the world.

The Mādhyamika, on the other hand could take his criticism of objective causality in two different directions. One more specific one would focus on the opponent's background assumptions concerning the existence of a mind-independent, objective time which orders the correlated entities into earlier and later ones, and the existence of mind-independent, objective chances that ground the claims that correlations take place with specific probabilities. As such they could engage more closely with contemporary scientific and philosophical conceptions of time and probability in order to develop their criticism of these two notions as referring to mind-independent entities. Given that causation essentially involves time, and that the regularity account's view of the correlation of states is probabilistic, an argument for the conceptually constructed nature of time and probability would undermine the objective status of the Humean regularity account the same time.

More generally, the Mādhyamikas could concentrate on the fact that any theory that conceives of causality as objective and mind-dependent will also consider its take on causality as part of an ultimately true theory of how the world functions at the most fundamental level. As Madhyamaka is critical both of the idea of an ultimately true theory and of that of a fundamental level it could then set out to show how its non-foundationalism with regard to reality and truth is incompatible with the kind of theory of causality its opponent wants to defend.

I hope it is evident at this point that the preceding discussion is not simply relevant for those with an interest in the conceptual relation between two schools of thought within Indian Buddhism, but constitutes an interesting example case of the question how far anti-foundationalist ideas can or have to be pushed. The Abhidharma sees itself as spelling out the idea of dependent origination (*pratītyasamutpāda*), which can itself be understood as the antithesis to Humean supervenience, "the doctrine that

all there is to the world is a vast mosaic of local matters of particular fact, just one little thing and then another."[58] Abhidharma presents us with an ontology shot through with a multitude of dependence relations, mereological dependence, causal dependence, and the dependence of entities on the conceptualising mind. The fundamental elements of the Abhidharma ontology, the *dharma*s, depend on one another, not simply in linear succession, where one momentary *dharma* produces its successor, which is of the same kind, but also in more complicated patterns, such as loops of reciprocal conditioning.[59] The key point of disagreement between Abhidharma and Madhyamaka is whether in a world of ontological interdependence, where Humean localism fails there is still room for islands of independence, that is, for entities that partake in the vast network of dependent origination to the extent that other things depend on them, though they themselves do not depend on other things. For the Abhidharma, the intrinsic natures (*svabhāva*) of individual *dharma*s, as well as the causal relations that hold between them constitute examples of such independent entities that constitute the foundations of existence. For Madhyamaka, on the other hand, interdependence has to be taken all the way. Since there is a fundamental problem with intrinsic natures, arguing that the medium-sized dry goods of our everyday acquaintance fail to exist with intrinsic natures, while entities at the rock-bottom of reality do possess them is not a philosophically stable position. In a world characterised by multiple dependence relations, everything depends on something else, and there are no independent foundations.[60] The remarks in this paper set out to support the Madhyamaka case, though it is important to note that the dispute between foundationalism and anti-foundationalism continues unabatedly, both in the Western and in the Indian conceptual sphere.[61] While no single paper is likely to resolve this dispute, I hope the previous discussion has managed to shed some light on the role causation plays in the debate between the supporters of a fundamental level of ontology, and those who conceive of existence as an endless descent (or perhaps as an endless loop) of dependence relations.

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[58] Lewis 1986: ix. See Weatherson 2015.

[59] "The conceptual and material properties of an object require consciousness in order to be experienced. In turn, consciousness depends on name-and-form [that is, matter and mental functions other than consciousness] as that which provides the content of what consciousness is aware of. This reciprocal conditioning of consciousness and name-and-form presents a basic matrix of experience, a continuous interplay between consciousness on the one hand and name-and-form on the other that, according to the early Buddhist analysis, builds up the world of experience." (Bhikkhu Anālayo 2018: 11).

[60] For the Mādhyamika, to use the terminology introduced in section 1, the absence of intrinsic existence excludes the existence of any entities with intrinsic nature.

[61] For recent incarnations of opposing sides in this debate see Chakrabarti 2019, Westerhoff 2020.

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