Ontic Indeterminacy: Chinese Madhyamaka in the Contemporary Context

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ABSTRACT

A number of analytical philosophers have recently endorsed the view that the world itself is indeterminate in some respect. Intriguingly, ideas similar to the view are expressed by thinkers from Chinese Madhyamaka Buddhism, which may shed light on the current discussion of worldly indeterminacy. Using as a basis Chinese Madhyamaka thought together with Jessica Wilson's account of indeterminacy, I develop an ontological conception of indeterminacy, termed *ontic indeterminacy* (OI), which centres on two complementary ideas, conclusive indeterminability and provisional determinability. I show that OI is well-equipped to tackle several issues of worldly indeterminacy. My overarching aim is to present a viable and sustainable perspective on the subject of indeterminacy to enrich analytical philosophers' insights into the intricate nature of reality.

KEYWORDS worldly indeterminacy; metaphysical indeterminacy; ontic indeterminacy; Chinese Madhyamaka

1. Prologue

Especially in recent years, a number of analytical philosophers have endorsed the view that the world itself is indeterminate or vague in some respect. This indeterminacy is held to be a feature of the world and not (merely) a matter of semantic indecision or epistemic limitations.[1] It would be intriguing to know whether ideas similar to this view are expressed

[1]See, for example, Hawley [2002], Morreau [2002], Rosen and Smith [2004], Akiba [2004], Williams [2008], Barnes and Williams [2011], and Wilson [2013]. Analytic-philosophical discussion of the nature of indeterminacy generally distinguishes between three kinds of indeterminacy: worldly (or metaphysical),

by thinkers from other philosophical traditions and whether such ideas could shed valuable light on the subject of worldly indeterminacy.

In this paper, I intend to develop an ontological conception of indeterminacy, termed *ontic indeterminacy* (OI), which involves the thesis, call it the thesis of OI (TOI), that all things in the world are indeterminate with respect to the ways they are, such as their existence, nature, property, and form. OI is originally based on the works of Sengzhao (374?−414 CE) and Jizang (549−623 CE), two leading Buddhist thinkers of Chinese Madhyamaka.[2] It bears some resemblance to the analytic-philosophical notion of metaphysical indeterminacy (MI), the advocates of which uphold the aforementioned view.[3] The discussion of MI includes such issues as the constitution of physical objects, their spatio-temporal boundaries, indeterminate existence and identity, vague objects and properties, and the open future.[4] For example, its advocates generally consider it an objective fact that mountains have indeterminate spatial boundaries; if Harry is borderline bald, many of them would concur that it is metaphysically indeterminate whether Harry is bald.

My task is both to develop OI from Chinese Madhyamaka thought and to explore how OI can cope with the two issues of indeterminate existence and identity, as well as a third issue pertaining to a problem of change. For these purposes, I employ certain concepts and accounts in analytical philosophy, and I place Chinese Madhyamaka in this contemporary

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semantic, and epistemic. In the last century, the dominant view sees indeterminacy as semantic in nature. In the past twenty years, the trend has somewhat shifted towards seeing indeterminacy as worldly. Given the arguments by the above authors, I shall not argue for the possibility or existence of worldly indeterminacy.

[2]By 'Chinese Madhyamaka' I mean the Three-Treatise (Sanlun) tradition represented by Sengzhao and Jizang.

[3]Some advocates of MI also use the term 'ontic indeterminacy'. To avoid confusion, I restrict my use of the term to Madhyamaka-based OI. I speak of OI as ontological rather than metaphysical mainly to indicate cross-cultural differences between Chinese Buddhist and analytical philosophy. Still, both ontological and metaphysical indeterminacy are included under the heading of 'worldly indeterminacy'.

[4]In analytical philosophy, vagueness is often considered to be the species of indeterminacy that is sorites-susceptible; otherwise, 'indeterminate' and 'vague' tend to be used interchangeably. To stay true to the letter of Chinese Madhyamaka, I prefer 'indeterminacy' to 'vagueness'.

context. I shall not argue that OI provides substantial advantages over other available accounts of worldly indeterminacy. Rather, my aim is to present an original and sustainable perspective on the subject of worldly indeterminacy, with the hope of engaging with philosophers in the analytical tradition to obtain greater insights into the very fabric of reality.

In section 2, I explain some Chinese Madhyamaka ideas that contribute to the formation of OI. In section 3, I sketch two contrasting accounts of MI and incorporate Wilson's account to develop OI. Then, in section 4, the crux of this paper, I show how OI can cope well with the three aforementioned issues of worldly indeterminacy.

2. Chinese Madhyamaka Thought

In this section, I introduce and reconstruct some aspects of Chinese Madhyamaka thought so as to prefigure OI and reveal a key rationale behind TOI. My introduction will be succinct, keeping Buddhist terms to a minimum, and refraining from textual analysis.

Chinese Madhyamaka developed from Indian Madhyamaka, a prominent philosophical school of Buddhism reputed to be founded by Nāgārjuna (c. 150−250 CE). On the ground that all things arise, abide, and perish depending on various causal and noncausal factors, Nāgārjuna contended that things have no independent and invariable nature or existence—that is, no intrinsic nature (Skt. *svabhāva*). This lack of intrinsic nature is captured by saying that all things are *empty*.[5] 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 depend on conceptualization for their existence, the denial of intrinsic nature in them amounts to a denial of the metaphysical realist view that things exist independently of what we think about them.

Sengzhao and Jizang basically follow Indian Madhyamaka in taking all things to be empty.

[5]For an introduction to Nāgārjuna's Madhyamaka, see Westerhoff [2009].

However, they often have different emphases and interpretations from their Indian predecessors. Notably, in a number of Chinese translations of Madhyamaka-related scriptures and treatises, the Sanskrit term for 'intrinsic nature' is occasionally translated as 'determinate nature' (Chin. *dingxing*), even as 'determinate form' (*dingxiang*). This has led the Chinese Mādhyamikas to think that for things to be *empty* (in the Madhyamaka sense) is for them to be devoid of determinate nature and form. The Madhyamaka catchphrase 'All things are empty' can then be rephrased as 'All things are indeterminate with respect to their nature and form'.

For exegetical and philosophical reasons,[6] this lack of determinate nature and form may best be explicated in terms of conceptual and linguistic indeterminability. Using this idea as a basis, we can characterize the indeterminacy of things as follows:

> *Madhyamaka-based OI*: For a thing *X* to be ontically indeterminate at time *t* with respect to the way that 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 that it is.[7]

For example, if the word 'daffodil' represents definitively the way that *X* is, then *X* is finally, non-relatively, and exclusively a daffodil, not any other kind of plant or object. Yet OI entails that an ontically indeterminate *X* cannot be so represented. Whereas we can (provisionally)

[6]In his *A Commentary on the Twelve Gate Treatise*, in *Taishō Shinshū Daizōkyō* (abbreviated as *T*) 42: 204c26−9 (volume 42, page 204, column c, lines 26−9), Jizang appears to construe 'determinate nature' in terms of one's determining or understanding things as definitively existent, non-existent, etc.; in his *The Treatise of Sengzhao*, *T* 45: 152c24−6, Sengzhao implies that those who take things to be determined definitively by their names fail to recognize their emptiness.

[7]To represent a way that *X* is means to make known in *X* a certain *feature*, which also means to determine *X* as possessing that feature. The word 'feature' is used broadly to signify the particular ways that a thing can be (a particular nature, property, or form, etc.).

determine *X* as such-and-such, any determination that we may impose on it is never to the exclusion of other determinations and no determination is definitive. Thus, *X* is not definitively or conclusively determinable: that is, it is not capable of being determined as definitively such-and-such or as definitively possessing this or that feature.

The above characterization of the indeterminacy of things is expressed mainly in semantic terms, which may suggest that the indeterminacy is really semantic rather than worldly. For, it may be said, the indeterminacy lies in our representations of things, concerning especially the representational deficiency of words and concepts. However, on my view, worldly and semantic indeterminacy are both present.[8] An advocate of semantic indeterminacy who wants to exclude worldly indeterminacy here may claim that the semantic rules for certain words simply do not provide adequate service for certain kinds of determinate things. Yet OI entails that there just are no such things. It is a matter of how things are in the world, not solely of semantic deficiency, that what we are disposed to call a daffodil is not definitively representable as a daffodil (see below for the reason). Then, the indeterminacy has one of its sources in the non-representational world. Furthermore, the Chinese Mādhyamikas locate the lack of determinate nature and form in what we commonsensically take to be things. They would not think of the world as a determinate array of determinate things or facts. Thus, it makes good sense to speak of the indeterminacy exposed in the characterization as worldly.

As mentioned previously, OI involves TOI that takes all things to be indeterminate with

[8]As the idea of linguistic indeterminability borders on that of ineffability, consider this analogy. A theist may claim the ineffability of God by citing two reasons: (1) God transcends the created world, of which language is a part; (2) language, fit for describing the world, is deficient in describing that which transcends it. These two reasons concern, respectively, the nature of God and the nature of language but together explain the alleged ineffability of God. We can likewise understand the co-presence of worldly and semantic indeterminacy. Note that OI negates only the *definitive* representability (or sayability) of things, not their representability *per se*. So, if TOI is asserted provisionally (see section 3.3), not definitively, there is no predicament to the effect that things are both sayable and not sayable. The fact is that indeterminate things are provisionally, but not definitively, sayable.

respect to the ways that they are.[9] This means that the world itself is indeterminate in *all* respects. TOI is traceable to Chinese Madhyamaka and its nonrealist framework. Yet here I can only briefly note a key rationale for TOI and leave a detailed treatment of this topic to future work.

Sengzhao and Jizang can be said to support the nonrealist view that things and their properties do not exist independently of our conceptual contributions. Basically, for them, relative to different conceptual perspectives, there can be a plurality of distinct, irreducible, yet plausible determinations of the way that a thing is. We have difficulty in picking out one perspective, among others, as the privileged perspective that truly represents the actual state of affairs.[10] For instance, what a villager takes to be a daffodil may be food for slugs and snails, a stick ablaze for some meditating yogis, or a mass of wave-particles of indeterminate nature for a reductionist quantum physicist.[11] We cannot determine the thing as definitively this-or-that. Even if we bypass cases of nonhumans, there can still be different but equally plausible determinations. This observation applies to all things in the world, and all ways that they are. Consequently, all things can be indeterminate with respect to the ways that they are.

Nevertheless, I shall not overemphasize TOI. While my development of OI in section 3 connotes TOI, the latter will be set aside thereafter. In section 4, I explore how OI can tackle a few issues of worldly indeterminacy, regardless of TOI and its underlying nonrealist framework.

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[9]By 'all things' I mean all concrete things, sentient and insentient, that common sense takes to constitute the world, but exclude abstract objects (such as numbers) and imaginary objects (such as unicorns).

[10]This thinking somewhat resembles Putnam's version of metaphysical antirealism (what he called 'internal realism'), which implies that how many and what kinds of objects there are in the world is relative to a conceptual scheme. Putnam [1983: 301] writes: 'Since I don't think that *any* objects are totally mind-independent (or theory-independent), . . . on my view, *objects* and *properties* are, in general, vague too'. This already verges on TOI.

[11]For Jizang's own, more exotic examples, see *A Treatise on the Profound Teaching of Vimalakīrti*, *T* 38: 897a17–29.

3. Development of OI

Given the background presented above, this section aims to rationally develop OI. Let us begin by taking brief looks at two recent accounts of MI. One of the accounts, by Barnes and Williams, contrasts markedly with OI, while the other, by Wilson, will be instrumental in the development. These two accounts are noteworthy because, instead of merely tackling particular puzzles of worldly indeterminacy, they seek to present a systematic perspective on the subject.

3.1 Barnes and Williams' Account of MI

On this account, MI consists in a fundamental kind of unsettledness in the world in that '[w]hen *p* is metaphysically indeterminate, there are two possible (exhaustive, exclusive) states of affairs—the state of affairs that *p* and the state of affairs that not-*p*—and it is simply unsettled which in fact obtains' [Barnes and Williams 2011: 113−4]. Here the proposition *p* is either true or false, but it is unsettled which truth-value it has. Correlatively, the two possible states of affairs are themselves determinate and precise, yet the world does not settle which of them obtains. For example, suppose for argument's sake that it is metaphysically indeterminate whether Harry is bald. On Barnes and Williams's view, there would be two determinate states of affairs, the state of affairs of Harry's being bald and the state of affairs of Harry's not being bald; yet the world fails to settle which of them obtains. Likewise, in the case of the open future, it is determinately either true or false that there will be a sea-battle tomorrow. It is just unsettled which is in fact the case. This account has its merits and problems. Let us note two problems.

First, Barnes and Williams would deem it true that it is indeterminate whether Harry is bald. They consider it plausible that the state of affairs that *p* obtains if and only if *p*. Then,

they would have to posit the state of affairs that it is indeterminate whether Harry is bald.[12] This is none other than the state of affairs of *Harry's being bald* being indeterminate. Thus, in addition to the two possible states of affairs posited by Barnes and Williams, *p* and not-*p*, we are compelled to posit a third—the *actual* state of affairs of *p* being indeterminate. It is then incorrect for them to hold that there are no indeterminate states of affairs such as the state of affairs of *p* being indeterminate.

Second, Barnes and Williams's account does not capture our pretheoretical intuitions about physical objects with fuzzy spatial boundaries. The common-sense view that mountains and clouds have fuzzy boundaries should naturally be read as characterizing such objects as failing to have precise boundaries, not as being such that it is indeterminate which precise boundary they have [Wilson 2017: 115].[13] Even the view that it is indeterminate whether Harry is bald may better be read as characterizing him as failing to be determinately bald or determinately not bald than as indicating that the world is unsettled about which of the two determinate options obtains.

Apart from these two problems, the account does not square well with OI. Under OI, Harry is ontically indeterminate with respect to the bald state of his head. It is not meant that he is either determinately bald or determinately not bald and the world is unsettled between the two options. Rather, Harry cannot be determined conclusively as bald or not bald: he is neither determinately bald nor determinately not bald.[14] Before we know more of OI, let us consider Wilson's determinable-based account.

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[12]This is hinted in Eklund [2011: 159]. Cf. Barnes and Williams [2011: 114n18] and Barnes and Cameron [2017].

[13]Incidentally, Calosi and Wilson [forthcoming] argue that the account fails to accommodate quantum metaphysical indeterminacy.

[14]To conform to common usage, when writing from the OI-perspective, I sometimes use the word 'determinately' but take it to mean 'definitively'.

3.2 Wilson's Account of MI

For Wilson, current accounts of MI typically take MI to involve its being *indeterminate* which of various *determinate* (precise) states of affairs obtains. She refers to this sort of account as locating MI at the *meta-level*. Barnes and Williams's account thus emerges as being meta-level. By contrast, Wilson [2013: 360−3, 2017: 105−6] sees her account as locating MI at the *object-level*. For her, certain states of affairs are irreducibly indeterminate, and MI is a matter of its being *determinate*, or just plain true, that an *indeterminate* state of affairs obtains. It seems to me that an object-level account fares better in capturing the actual subtlety of the phenomenon of worldly indeterminacy.

Wilson [2017: 107] characterizes the metaphysical indeterminacy of states of affairs as follows:

> *Determinable-based MI*: What it is for a state of affairs *S* to be metaphysically indeterminate at a time *t* is for *S* to constitutively involve an object (more generally, entity) *O* such that (i) *O* has a determinable property *P* at *t*, and (ii) *O* does not have a unique determinate of *P* at *t*.

Using as an example an iridescent hummingbird feather, which can simultaneously be seen in different colours (red, blue, etc.) by different persons from different perspectives, Wilson argues that an object may possess a determinable property (say, the property of being coloured) at a time, yet not have one and only one property that is a determinate of the determinable (that is, a property that determines the determinable) at that time. The determinable is irreducibly imprecise, not reducible to any combinations of precise determinates. Thus, we have *multiple relativized determination*, where determination is always relative to perspectives or other circumstances. For instance, the colour of the feather can be determined from different perspectives, as red, blue, etc., while none of the

determinations is precise and non-relative.

OI can be viewed as an object-level approach of indeterminacy, and Wilson's account is particularly useful for substantiating it. However, before undertaking to develop OI, it is worthwhile mentioning a few differences between OI and the account.

According to TOI, all things are indeterminate with respect to the ways that they are. Derivatively, unlike on Wilson's account, OI regards *all* actual states of affairs as indeterminate: a state of affairs is indeterminate if the thing (or things) that it constitutively involves is not conclusively determinable. Moreover, OI highlights conceptual and linguistic indeterminability, whereas Wilson's account emphasizes the determinable/determinate relation. Finally, the account appears to affirm higher-order determinacy along with first-order indeterminacy, for MI is taken to involve its being determinate that an indeterminate state of affairs obtains. By contrast, OI affirms both first-order and higher-order indeterminacy. For example, since all actual states of affairs are indeterminate, the state of affairs of Mount Everest's being indeterminate with respect to its spatial boundary is likewise indeterminate. This poses no problem, however, because it means merely that the thing that this indeterminate state of affairs constitutively involves—namely, Mount Everest—is not conclusively determinable as indeterminate (more on this later).

3.3 Fleshing out OI

As noted above, OI is originally based on the works of Sengzhao and Jizang. In developing it, I go far beyond those texts, and also incorporate some ideas from Wilson's account of MI. Consequently, OI may at best represent a contemporary development of Chinese Madhyamaka thought (and the author alone is responsible for its shortcomings).

The constitutive elements of OI can be given as follows.

(1) All things are ontically indeterminate with respect to the ways that they are. For a thing *X*

to be ontically indeterminate is for *X* to be such that no concept or expression can conclusively determine or represent the way that it is. No determination that we may impose on *X* excludes other determinations, and no determination is definitive.

(2) As ontically indeterminate, *X* is subject to multiple relativized determinations. We can determine *X* as such-and-such, where the determinations are relativized to different conceptual perspectives and far from conclusive. (The perspectives can be based on *X*'s objective states, and so are not purely subjective.) These determinations are *provisional* in the sense that they are not definitive and do not predicate of *X* any determinate feature in such a way as to make it conclusively determinable.

(3) The provisional determinations of *X* are not epistemically equal. Some of them may seem plausible, supported by good reasons, experiential evidence, and convention. Some others may seem arbitrary and implausible. There may also be cases where none of the determinations of *X* seems plausible.[15] It remains true that *X* is provisionally determinable.

(4) Generally, meaningful statements are either true or false. Any statement stating that *X* is definitively such-and-such is false; any statement negating the former statement is true. A statement expressing a plausible provisional determination can be said to be true; a statement expressing an implausible determination can be said to be false.[16]

(5) The use of expressions to refer to ontically indeterminate things should be provisional in the sense that an expression thus used connotes no determinate feature in its referent. In consequence, a thing that is provisionally expressed by the word 'X' does not possess the determinate feature of *X-ness*, is not definitively *X*, and may as well be reasonably

[15]This corresponds to Wilson's [2013, 2017] *gappy* MI, where a determinable property fails to be uniquely determined because it is not determined, even in relativized fashion, by any determinate property.

[16]See Wilson [2017: 110] for related ideas. A given statement may be judged true from one perspective, but false from another.

expressed by the word ‘non-X’.

In a nutshell, OI centres on two complementary ideas—namely, conclusive indeterminability and provisional determinability. That is, *X* is conclusively indeterminable, yet provisionally determinable, with respect to the way that it is.[17] ‘Conclusive indeterminability’ negates the conclusiveness of any of the determinations of *X* and characterizes *X* as failing to possess determinate features. ‘Provisional determinability’, in contrast, affirms the feasibility of relativized determinations of *X*, giving weight to our pretheoretical intuitions about positive determinability of things in the world. Combining and implementing these two ideas, we have a freshly illuminating, arguably sustainable, account of the phenomenon of worldly indeterminacy.

For example, the aforementioned iridescent feather is indeterminate with respect to its colour property (assuming that colours are objective features of physical objects). Although we can determine provisionally the feather as red, blue, etc., relative to different perspectives, none of the determinations is conclusive and to the exclusion of other determinations. Likewise, the famous duck-rabbit figure (suppose that this counts as a thing) is indeterminate with respect to its form. The figure can, at different times, from different perspectives, be determined by the same person as a duck, a rabbit, both a duck and a rabbit, or neither a duck nor a rabbit. It is false that the figure is definitively a duck in form, whereas it is true that the figure is not conclusively determinable as a duck. Further, in the light of our linguistic conventions, a statement expressing the provisional determination of the figure as a rabbit can be said to be true, whereas a statement expressing the provisional determination of the figure as a magpie is false.

[17]These two ideas roughly echo Jizang’s ideas of the middle (*zhong*) and the provisional (*jia*) in *A Commentary on the Middle Treatise*, *T* 42: 28a12−b1. By ‘conclusively indeterminable’, I mean ‘*not* conclusively determinable’.

Since OI acknowledges higher-order indeterminacy, someone might propose the following argument in order to nullify TOI:

A1. The state of affairs of all things' being ontically indeterminate is indeterminate. (Given higher-order indeterminacy)

A2. It is indeterminate that all things are ontically indeterminate. (From A1)

A3. Therefore, the thesis that all things are ontically indeterminate is indefinite in truth-value. (From A2)

Against this, recall that OI construes *indeterminacy* in terms of conceptual and linguistic indeterminability, but not of unsettledness between determinate options. Thus, if we can derive A2 from A1, A2 must mean that things are not conclusively determinable as ontically indeterminate; that is, they are not endowed with the *determinate* feature of ontic indeterminateness. A2 in no way means that it is unsettled whether all things are ontically indeterminate. Consequently, we cannot draw A3, and so TOI is not nullified.

4. Application of OI

Having developed OI in section 3.3, we can investigate how it copes with the three issues concerned of worldly indeterminacy. The above discussion generally presupposes TOI. However, we shall now disregard TOI (and its underlying framework) and grant for argument's sake that certain things in the world may be determinate, and so conclusively determinable, with respect to certain ways that they are. As the word 'ontic' may literally mean 'relating to real existence', it is advisable to begin with the issue of indeterminate existence.

4.1 Indeterminate Existence

Suppose that at time T_1 a woman is pregnant with a six-month-old foetus, which will, three months later at time T_2, be born and become a new-born baby named Betty who has the cognitive capacities that would make her a person. Let us grant that Betty determinately exists at T_2. Yet the question now is that of whether she exist at T_1.

It seems wrong to say that Betty definitively exists at T_1. For at T_1 the foetus does not have the cognitive capacities to make it the person who Betty is at T_2, and it is absurd for an existing thing to be born (into existence) again. However, it also seems wrong to say that Betty definitively does not exist at T_1. For in that case, given that Betty is in no way substantively connected with the foetus, when she is born she would be born *ex nihilo*, or she could have been born from another foetus, which is absurd. From the OI-perspective, we can state the situation as follows:

P1. *Betty is ontically indeterminate at T_1 with respect to her existence.*[18]

Some may see a problem here: P1 seems to be ill-formed. In saying that Betty is indeterminate at T_1, they would think, we are presupposing Betty's existence then, in which case her existence at T_1 is not indeterminate at all.[19]

However, this thought appears to rely on a mistaken understanding of how language functions. Arguably, nominal words can be used meaningfully to signify their referents without our presupposing the latter's real existence.[20] If we can assert meaningfully 'Pegasus is a winged white horse' without presupposing Pegasus's existence, we can assert P1 without

[18]This indeterminacy appears to involve the nature of the foetus and the person named Betty. In addition, the issue is related to that of the temporal boundaries of a thing, and the boundaries are objectively fuzzy. Then it is reasonable to characterize the indeterminacy as ontological.

[19]Cf. Barnes and Cameron [2017: 129]. My response differs from Wilson's [2017: 113−14] response to Barnes and Cameron's challenge.

[20]Sengzhao expresses this view in *The Treatise of Sengzhao*, *T* 45: 152a24−6, c20−3.

presupposing Betty's existence at T_1. Likewise, we can assert 'Pegasus does not exist' without first affirming Pegasus's existence and then denying that existence. If I assert '*X* is coming into existence', I affirm *X*'s coming into existence but not some existent *X*'s coming into existence. Similarly, if I assert '*X* has indeterminate existence', I affirm *X*'s indeterminate existence but not its (determinate) existence. There is no compelling reason to analyse P1 as 'There *is* at T_1 someone named Betty such that she is ontically indeterminate with respect to her existence'.

Meanwhile, if one insists on analysing P1 in the above way, Buddhism still provides a useful strategy. Here we can take P1 or its assertion to superimpose onto the world an object-of-thought as the signified of the name 'Betty', whose actualization as something existent is revealed to be indeterminate. Hence, we can assert P1 without presupposing Betty's existence at T_1.

Let us proceed further with P1. It may be advisable to employ the following negative tetralemma to represent the idea of conclusive indeterminability associated with P1:[21] (The italic '*not*' indicates nonimplicative negation.)[22]

S1. Betty is *not* definitively existent at T_1.

[21]Madhyamaka thinkers often use positive and negative tetralemmas. See Westerhoff [2009: ch. 4] for discussion of Nāgārjuna's use of the two kinds of tetralemma. See Priest [2018: chs. 4−6] for interpreting the tetralemmas from the perspective of non-classical logic. Briefly, S1 to S4 below constitute a form of negative tetralemma, while S5 to S7 (soon to appear) constitute an incomplete form of positive tetralemma.

[22]Madhyamaka thinkers distinguish *implicative negation* from *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 feature (say, *non-P*) of *X*. An assertion of S commits one to acceptance of that feature in *X*. If we treat S as involving a nonimplicative negation, it simply negates any substantial relation between *X* and *P* without predicating any feature of *X*. For Sengzhao and Jizang, Madhyamaka highlights nonimplicative negation. If a Mādhyamika speaks approvingly of *X* as not-arising, the intent is to show that *X* is *not* arising (negating any substantial relation between *X* and arising), but not that *X is* non-arising (predicating of *X* the feature of non-arising). See Jizang, *A Commentary on the Twelve Gate Treatise*, *T* 42: 185b28−c3.

S2. Betty is *not* definitively non-existent at T_1.

S3. Betty is *not* definitively existent and non-existent at T_1.

S4. Betty is *not* definitively not-existent and not-non-existent at T_1.

S3 can be construed as saying that at T_1 Betty is *not* partly existent and partly non-existent, where 'partly' signifies a specifiable portion of Betty. If the nonitalic 'not-' in S4 indicates implicative negation, S4 basically ends up being the same as S3. Otherwise, S4 can be said to negate the attribution to Betty of the determinate feature of being neither existent nor non-existent.

Thus, in the present case OI entails Betty's being conclusively indeterminable with respect to her existence at T_1 such that the way she is then, existent or otherwise, is not represented definitively by such expressions as 'existent', 'non-existent', and 'existent and non-existent'. We can say that it is indeterminate whether Betty is existent at T_1, which means that Betty cannot conclusively be determined as existent or non-existent at T_1.

Meanwhile, we can subject Betty to multiple relativized determination. In so far as it is false that Betty definitively does not exist at T_1, and she could be said to have a foetal existence then, it seems reasonable to provisionally determine her as *existent* at T_1. In so far as it is false that Betty exists definitively at T_1, and she clearly differs from the foetus, it seems reasonable to provisionally determine her as *non-existent* at T_1. Finally, given that the foetus represents an intermediate stage of its development as a person named Betty, it seems also reasonable to provisionally determine her as *partially existent* and *partially non-existent* at T_1, where 'partially' signifies an unspecifiable portion of Betty. All of these determinations are relativized to different conceptual perspectives and are far from conclusive. As they do not predicate of Betty determinate and mutually exclusive features, we can without contradiction simultaneously affirm as true the following statements expressing them (S7 involves partial existence and nonexistence):

S5. Betty is provisionally existent at T_1.

S6. Betty is provisionally non-existent at T_1.

S7. Betty is provisionally existent and non-existent at T_1.

Surely, different persons may have different takes on the statements' truth (say, they have different takes on what counts as a good reason), but this is expected, given OI.

Finally, S1 to S4 indicate Betty's conclusive indeterminability with respect to her existence at T_1, which seems to reflect our pretheoretical intuition about her indeterminate existence that would characterize her as failing to be determinately existent or non-existent. S5 to S7, in contrast, indicate Betty's provisional determinability with respect to her existence at T_1, which seems to reflect our pretheoretical intuition that the expressions 'existent' and 'non-existent' can still be applied to Betty if their use is relativized. Overall, this application of OI to the present issue appears to be coherent and to conform to common intuitions.

4.2 Indeterminate Identity

The issue of worldly indeterminate identity is significant yet challenging. It is significant because identity-with-difference represents a fundamental category by virtue of which people recognize and classify things in the world. It is challenging because Gareth Evans long ago launched a powerful argument against this type of indeterminacy. Unlike previous studies on the issue, this discussion will stress a more or less *everyday* sense of the word 'identical': roughly, two distinct things (say, your car and my car) are identical if they are similar in almost every way; two elements of one and the same spatio-temporal continuum (my car yesterday and my car today) are identical if they are similar in most ways.

Suppose that Tibbles is a cat who lives at time T_1 and continues to live seven years afterwards, at time T_2. Call them, respectively, Tibbles_1 and Tibbles_2. Let us assume that

Tibbles has no unchanging self. The question, then, is this: Is Tibbles_2 identical with Tibbles_1?

It seems wrong to say that Tibbles_2 is definitively identical with Tibbles_1. For, in the span of seven years, Tibbles's body and mind have undergone many changes (especially if we accept the widely held Buddhist view that things are ever-changing), including complete cell replacement. It also seems wrong to say that Tibbles_2 is definitively different from Tibbles_1, for the two cats represent only two different stages of one and the same spatio-temporal continuum and might still be similar in most ways. Meanwhile, it is contradictory to say that Tibbles_2 is definitively identical with, and definitively different from, Tibbles_1. From the OI-perspective, we have the following proposition:

P2. *Tibbles_2 is ontically indeterminate with respect to his identity with Tibbles_1.*[23]

Here OI entails Tibbles_2's being conclusively indeterminable with respect to his identity with Tibbles_1, such that the way that he is in relation to Tibbles_1, identical or otherwise, is not represented definitively by such expressions as 'identical' and 'different'. We can say that it is indeterminate whether Tibbles_2 is identical with Tibbles_1, which means that Tibbles_2 cannot conclusively be determined as identical with, or different from, Tibbles_1.

Again, we can subject Tibbles_2 to multiple relativized determination. In so far as it is false that Tibbles_2 is definitively identical with Tibbles_1, and he has different physical and psychological constituents from Tibbles_1, it seems reasonable to provisionally determine him as different from Tibbles_1. In so far as it is false that Tibbles_2 is definitively different from

[23]Both this and the previous issue have ethical significance. Does the abortion of a six-month-old foetus amount to killing a person? Is it morally right to imprison an old man for crimes committed in *his* youth? That these questions are ethically challenging suggests that the indeterminacy at play cannot be reduced to something that is merely semantic. See Williams [2008: 140−1].

Tibbles$_1$, and they are conventionally one and the same cat, it seems reasonable to provisionally determine him as identical with Tibbles$_1$. It seems also reasonable to provisionally determine Tibbles$_2$ as partially identical with, and partially different from, Tibbles$_1$. (People may have uncertainty about the relative reasonableness of these determinations.) All of these determinations of Tibbles$_2$ are relativized to different perspectives, and do not predicate of him determinate and mutually exclusive features.

This application of OI is probably coherent, intuitive, and intelligible, but only pending a response to Evans's argument, which can be formulated concisely as the following *reductio* [Evans 1978; Williams 2008: 135−40]:

(1) It is indeterminate whether *a* is identical with *b*. [Assumption]
(2) *b* has the property of being indeterminately identical with *a*. [From (1)]
(3) It is not indeterminate whether *a* is identical with *a*. [Based on strict self-identity]
(4) *a* does not have the property of being indeterminately identical with *a*. [From (3)]
(5) Therefore, *a* is not identical with *b*. [From (2) and (4), by Leibniz's law]

Here, conclusion (5) contradicts premise (1), which suggests that the concept of indeterminate identity is incoherent.

Significantly, for the argument to be valid, the word 'identical' must be used uniformly in the Leibnizian sense (I will use 'L-identical' for this sense). Here, *a* is L-identical with *b* if and only if, for every property *F*, *a* has *F* if and only if *b* has *F*. Yet premises (2) and (4) express that *b* has, but *a* does not have, the property of being indeterminately L-identical with *a*. It follows that *a* is not L-identical with *b*.

However, when our above discussion states that *it is indeterminate whether Tibbles$_2$ is identical with Tibbles$_1$*, the word 'identical' is used in the broad everyday sense (I will use 'e-identical' for this sense): two things can be e-identical even if they do not share *all* of their

properties. Now, if 'identical' in all of the premises of the argument is used in the everyday sense, then, even though *a* is not L-identical with *b*, premise (1)—'It is indeterminate whether *a* is e-identical with *b*'—can still be true. To contradict premise (1), the conclusion has to affirm that *a* is not *e-identical* with *b*. Yet we are unable to draw such a conclusion from the fact that *b* has, but *a* does not have, the property of being indeterminately e-identical with *a*. For instance, even if Tibbles_1 has, but Tibbles_2 does not have, the property of being indeterminately e-identical with Tibbles_2, we cannot conclude that Tibbles_2 is not e-identical with Tibbles_1, because they could still be similar in most ways.

Although Evans's argument poses no threat to the discussion surrounding P2, it may pose a challenge to OI. I have acknowledged worldly indeterminacy in existence, yet indeterminate existence may lead inevitably to indeterminate identity (see Hawley [2002: 131−4]). For instance, suppose that *SA* is the set of all members in Betty's family, and *SB* is the set of these members except Betty. If Betty is existent at T_1, *SA* is then not identical with *SB*; if Betty is non-existent at T_1, *SA* is then identical with *SB*. Since it is indeterminate whether Betty is existent at T_1, it is indeterminate whether *SA* is identical with *SB* at T_1. One can then apply Evans's argument to conclude that *SA* is not identical with *SB* at T_1, which contradicts the first premise that it is indeterminate whether *SA* is identical with *SB* at T_1. If this concept of indeterminate identity proves to be incoherent, claims of indeterminate existence such as P1 are in jeopardy.

Nevertheless, for the conclusion, which should be '*SA* is not L-identical with *SB* at T_1', to contradict the first premise, the latter has to be 'It is indeterminate whether *SA* is L-identical with *SB* at T_1'. Yet such a premise is false (and the argument cannot proceed), for the reason that *SA* is certainly *not* L-identical with *SB*, because *SB* has, but *SA* does not have, the property of not having Betty as one of its members. In consequence, Evans's argument leaves

OI unscathed, and it makes sense to speak of indeterminate identity.[24]

4.3 Indeterminacy in the Phenomenon of Change

The specific issue to be discussed here is probably not noted by advocates of MI as a case of worldly indeterminacy. However, given that change is all-pervasive, if a certain indeterminacy is involved in the phenomenon of change mentioned below, then some examination is required.

Suppose that I touch a button on my desk lamp to turn it off. The lamp is lit at time T_1 but becomes unlit at time T_2. So, it changes from 'on' to 'off', from having the property of being lit to having the property of being unlit.

To explain this phenomenon of change, some may say that the lamp undergoes a change when it first has the property of being lit at T_1 and then has the property of being unlit at T_2. Because the lamp has incompatible properties at different times, there is no contradiction to the effect that something is both *P* and not-*P* all over in the same way at the same time.

The above picture implies that the lit and the unlit lamp are temporally *discrete* from each other, with a temporal hiatus between them. However, if that is the case, it becomes a mystery how the unlit lamp can arise immediately following the lit one while resembling it in most ways. To avoid the mystery, the two lamps should be regarded as temporally *conjoined*. Yet we then have to concede that, in a crucial moment of change (call this moment T_C), my lamp is simultaneously both lit and unlit, which appears to be a contradiction.

One way to solve this *problem of change* is to adopt the philosophical position known as dialetheism, according to which the law of noncontradiction fails and some contradictions are true. One can then claim that contradictions do arise in a state of change, yet are true (see

[24]Wilson [2013, 2017] leans towards denying that there is metaphysically indeterminate identity. Our discussion proposes a different type of indeterminate identity that is worthy of consideration.

Priest [2002: 344]). However, OI may provide means for resolving the problem while preserving the law.

We may grant that the lamp is definitively lit at T_1 but unlit at T_2. Yet it should be evident that at T_C the lamp is neither definitively lit nor definitively unlit. It is not definitively both lit and unlit either. It is indeterminate whether the lamp at T_C possesses the property of being lit. From the OI-perspective, we have this proposition:

P3. *The lamp is ontically indeterminate at T_C with respect to its property of being lit/unlit.*[25]

Here, OI entails the lamp's being conclusively indeterminable at T_C with respect to one of its properties such that the way that it is then, lit or otherwise, is not represented definitively by such expressions as 'lit', 'unlit', and 'lit and unlit'.

Meanwhile, we can subject the lamp to multiple relativized determination. Relative to different perspectives, we can determine the lamp at T_C provisionally as lit, unlit, and so on, in a way that does not predicate of it determinate, mutually exclusive properties. The above expressions can be used provisionally to express the lamp such that, as they connote no determinate properties, there is no contradiction to the effect that the lamp is both *P* and not-*P* in the same way at the same time. The problem of change can thus be resolved.

How will this problem be treated by a meta-level account of MI? One may propose that it is determinately either true or false that the lamp is lit, and that at T_C the world fails to settle which of the two options obtains. However, the problem concerns a *paradoxical* (seemingly contradictory) situation in which the lamp seems both lit and not lit. Any solution that retains classical logic must account for the paradoxicality while resolving the possibly alleged

[25]It is a matter of how the lamp objectively is at T_C that there is indeterminacy about which property it then possesses. Thus, it is reasonable to characterize this indeterminacy as ontological.

contradiction. Yet the proposed solution by itself is silent in these respects. By contrast, our OI-based resolution precludes the convergence of the mutually exclusive properties of being lit and being unlit, thereby resolving the contradiction. The ideas of provisional determinability and provisional use of expressions allow for the convergence of seemingly, but *not* actually, incompatible properties, and can thereby account for the paradoxicality in question. Unlike the proposal based on meta-level MI, the resolution pierces to the core of the problem.

The above discussion concerns the case of *property* change, but we can also consider that of *thing* change. Imagine that, due to enigmatically exotic quantum-mechanical effects, my desk lamp undergoes drastic changes at T_C to become, say, a pineapple lamp. It is then indeterminate whether the lamp at T_C is a desk or a pineapple lamp. Hence, the following proposition obtains:

P3*. *The lamp is ontically indeterminate at T_C with respect to its ontic status.*

There should be no need for further elucidation.

I have in this section tackled three issues of worldly indeterminacy. There are other such issues that occupy advocates of MI, and I believe that OI can cope well with most, if not all, of these. However, it goes beyond the scope of this paper to discuss them at length.

5. Conclusion

Using the Chinese Madhyamaka interpretation of emptiness, together with Wilson's account of MI as a basis, I have developed an ontological conception of indeterminacy, OI, which is centred upon two complementary ideas—conclusive indeterminability and provisional determinability. It is shown that OI is well-equipped to tackle the two issues of indeterminate existence and identity, along with a third issue pertaining to the problem of change. My

overarching aim has been to present an original, viable, and sustainable perspective on the subject of worldly indeterminacy with the hope of engaging with contemporary philosophers to gain greater insights into the intricate nature of reality. It is left to readers to judge whether I have succeeded in that aim.[26]

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