

CONSTRUCTIVE-ENGAGEMENT DIALOGUE
THE METAPHYSICAL, THE SEMANTIC, THE LOGICAL (1)

AUTHOR MEETS CRITIC:

**CUTTING CORNERS:
A CRITICAL NOTE ON PRIEST'S FIVE-VALUED *CATUṢKOṬI***

ANDREAS KAPSNER

ABSTRACT: *Graham Priest has offered a rational reconstruction of Buddhist thought that involves, first, modeling the *Catuṣkoṭi* by a four valued logic, and then later adding a fifth value, read as “ineffability”. This note examines that fifth value and raises some concerns about it that seem grave enough to reject it. It then sketches an alternative to Priest’s account that has no need for the fifth value.*

Keywords: *Catuṣkoṭi, Buddhist logic, Graham Priest, ineffability, many-valued logic*

1. INTRODUCTION

In his book “The Fifth Corner of Four” (Priest 2018), Graham Priest draws together material from many years of work on the logical aspects of Buddhist philosophy.¹ The result is a stimulating and original account of Buddhist philosophy’s journey from India to China, and from there on to Japan.

This note is a critical comment on the first part of the book, dealing with Indian discussions of ineffability, emptiness and ultimate truth. The particular lens through which these issues are observed is Priest’s analysis of the *Catuṣkoṭi* (“four corners”), a traditional reasoning pattern in Indian philosophy.

KAPSNER, ANDREAS: PhD, Munich Center for Mathematical Philosophy, Germany. Email: Andreas.Kapsner@lrz.uni-muenchen.de

¹ For this piece, the most important papers that the book draws on are Priest 2009, Priest 2010, Priest 2011, Priest 2014, Priest 2017 and Deguchi et al. 2008. It is interesting to note the subtle changes Priest has made when working these materials into the book, but I have chosen not to get too far into the weeds and to take the position defended in the book as definitive.

Here is one of the textual examples in which the four perspectives are displayed (from the *Agivacchagotta Sutta*, quoted on p.16ff of Priest's book):

“How is it, Master Gotama, does Master Gotama hold the view: ‘After death a Thathāgata exists: only this is true, anything else is wrong’?”

“Vaccha, I do not hold the view: ‘After death a Thathāgata exists: only this is true, anything else is wrong’.”

“How then, does Master Gotama hold the view: ‘After death a Thathāgata does not exist: only this is true, anything else is wrong’?”

“Vaccha, I do not hold the view: ‘After death a Thathāgata does not exist: only this is true, anything else is wrong’.”

“How is it, Master Gotama, does Master Gotama hold the view: ‘After death a Thathāgata both exists and does not exist: only this is true, anything else is wrong’?”

“Vaccha, I do not hold the view: ‘After death a Thathāgata both exists and does not exist: only this is true, anything else is wrong’.”

“How then, does Master Gotama hold the view: ‘After death a Thathāgata neither exists nor does not exist: only this is true, anything else is wrong’?”

“Vaccha, I do not hold the view: ‘After death a Thathāgata neither exists nor does not exist: only this is true, anything else is wrong’.”

Not only is the question viewed from four angles; what is more, all of the options are *denied*. This adds an intriguing twist that we will come to. For now, we take Priest's point that the mere mention of these four alternatives shows that the Buddhists were willing to engage with them all, in particular the challenging third and fourth options.

Being a reconstruction that uses the tools of modern logic, Priest first tackles the *Catuskoṭi* by modeling it in a four-valued logic. Then, he sees reason to add a fifth value to the logic, in order to deal with negated forms of the *Catuskoṭi* (where all four possibilities seem to be denied). This point is where the main interest of my essay lies. I will question whether the addition of the fifth value really makes sense, or whether what it signifies should better be treated outside of the logical part of the reconstruction. My conclusion will be that the fifth value is, indeed, rather problematic.

To locate my critique with respect to two particularly interesting additions to this debate: Cotnoir criticizes the logic Priest presents on the grounds that it does not capture the inferences that are taken to be valid in the Buddhist texts. Cotnoir then offers an alternative formalization in the spirit of the Tibetan philosopher Tsongkhapa (Cotnoir 2015). Kreutz, in turn, offers a critique of this Tsongkhapian treatment, and proposes a further amendment (Kreutz 2019).

My criticism here is somewhat more abstract than theirs, as I will not be concerned with any particular inferences. Rather than worrying about the right way to fit a fifth value into the picture, I wonder whether we should make the

attempt at all.

I'd like to state from the outset that this critique only concerns a particular part of Priest's otherwise splendid book. At the same time, given that the book is called "The Fifth Corner of Four" and my critique is exactly about this fifth corner, it is clear that it is a rather central piece of the puzzle that is at stake here.

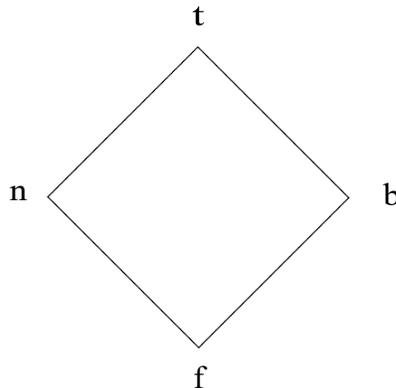
2. PRIEST'S LOGICAL RECONSTRUCTION OF THE *CATUṢKOṬĪ*

2.1 FOUR CORNERS, FOUR VALUES

Before we get to the fifth value, let us see how Priest gets to the already unconventionally high number of *four* truth values in the first phase of his analysis. In classical logic, of course, there are only two truth values: True and False. However, as indicated above, there are several instances in Indian philosophical texts in which a question seems to be viewed from four angles, the four corners of the *Catuṣkoṭi*: A given statement might be true, it might be false, it might be both true and false, or it might be neither true nor false.

To anyone familiar with the current landscape of non-classical logic, this will immediately be reminiscent of the logic known as First Degree Entailment (FDE), and indeed, it is Priest's suggestion to use this logic as a basis for his analysis of the Buddhist texts (2018, 25 ff).

FDE arranges the four values of the *Catuṣkoṭi* in a lattice, as displayed in the following Hasse diagram:



Here is the intended interpretation of these four values, corresponding to the four values of the *Catuṣkoṭi* (P being a statement):

- P has the value t : P is true and not false.
- P has the value f : P is false and not true.

- P has the value b : P is both true and false.
- P has the value n : P is neither true nor false.

To get a logic, we interpret conjunction as the meet, disjunction as the join, and negation as an operator that flips t and f but is a fixed-point operator for b and n . As is customary, Priest takes t and b as the designated values, as they contain (at least) truth, and truth is what is normally preserved in logical inference. I have, in earlier work, questioned that choice of designated values in other contexts, and I believe that my worries could be deployed here, as well.² However, for this piece, I will go with Priest and the mainstream concerning this point in order to get to my main concern as swiftly as possible.

2.2 THE FIFTH VALUE

After making his case for FDE as the right logical framework for the “normal” occurrences of the *Catuskoṭi*, Priest moves on to the even more challenging cases in which each of the four alternatives seems to be *denied*. Especially the famous and influential philosopher Nāgārjuna uses this form of argument to stir up interpretational trouble, but it also appears throughout the texts that predate him (the quoted example above is such an earlier occurrence).

Priest solves this conundrum by introducing a new value, e , that is meant to be interpreted as “ineffable”.³ The idea is that this value attaches to things that are impossible to capture in words, so that all four cases the *Catuskoṭi* has to offer need to be denied.

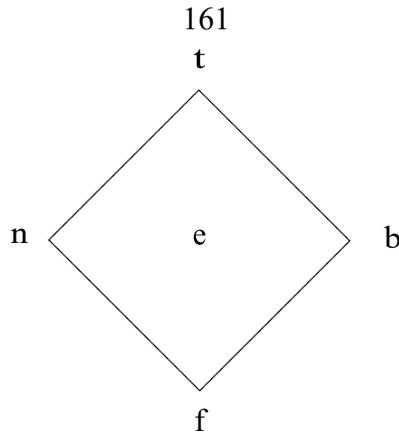
The rules for the new value are straightforward, in that e is considered to be an “infectious” value: A complex statement takes value e iff at least one of its constituent statements does. Thought about as representing ineffability, that makes intuitive sense. If something is ineffable, then so is its negation, its conjunction with something else, etc.

Priest places his new value in the middle of the four values (2018, 66), even though, as he points out, it could just as well have been anywhere else.⁴

² See Pietz (=Kapsner) and Riviuccio 2013, Kapsner 2014, and Kapsner 2016.

³ There are also hints throughout the book that the value might stand for “empty” or “ultimately true”. For the purposes of this piece, however, my criticism is aimed at the “ineffability”-interpretation.

⁴ The structure is not a lattice any more, and thus the diagram seems to be of limited use to compute the values of complex statements. However, the picture is an evocative one, especially if the new value is thought about in one of the alternative ways mentioned in the last footnote.



Now, the last technical question to be settled is whether e is to be regarded as a designated value or not. Priest says that we should not think of e as designated, for reasons I will return to in the next section.

With all that in place, Priest is able to describe the new consequence relation and give a proof system for it. He calls it FDE e and shows that it does not coincide with FDE.

Once ineffability is in the picture, Priest points out that statements cannot plausibly be the kind of things these five values attach to (2018, 67). If something is a statement, then it is effable, so statements can never take value e . Instead, Priest suggests that we should start, at this point, to think about states of affairs that either obtain, don't obtain, both obtain and do not obtain, or neither obtain nor do not obtain. In his terminology, to the semantic *Catuskoṭi*, which is about truth, we are now adding a new ontological *Catuskoṭi*, which has five values⁵ and can be applied to ineffable states of affairs as well as effable ones.

Here is how he suggests to read the ontological truth values (A being a state of affairs):

- A has the value t : A is effable, A obtains and $\neg A$ does not.
- A has the value f : A is effable, $\neg A$ obtains and A does not.
- A has the value b : A is effable, both A and $\neg A$ obtain.
- A has the value n : A is effable, neither A nor $\neg A$ obtains.
- A has the value e : A is ineffable (as is $\neg A$). (2018, 68)

Priest also sketches a correspondence theory of truth that connects the semantic and the ontological *Catuskoṭi*. The link is the rather obvious principle that “to be true is for the state of affairs described to obtain” (2018, 71), though, of course, how this plays out in a setting with truth value gaps and gluts as well as ineffable

⁵ A five-valued *Catuskoṭi* is in itself a contradictory concept, but that is deliberately done and could easily have been avoided. After all, Priest's book is called “The Fifth Corner of Four”.

states of affairs is not quite so obvious. Though he does not pin down all the details, Priest makes a plausible case for the viability of such a theory.

2.3 PLURIVALENT LOGIC

Having achieved as much, Priest then goes on to argue that the Buddhists are headed for a new cluster of contradictions, in that they talk in their texts about ineffable states of affairs. That is, they talk about things one cannot talk about. The ineffable seems to be, in a way, effable after all (2018, 75).

The way he solves this problem is by going to a *plurivalent* logic, that is, by allowing states of affairs to take more than one value. That is, a state of affairs might be ineffable and effable and obtain, viz, take value $\{e, t\}$. He says that, at least as far as the Buddhist texts go, he sees no reason to allow for more than one value out of t, f, b , and n to attach to a state of affairs.⁶

He does not list them explicitly, but here is, if I understand him correctly, the space of nine values that this construction gives us:

$$\{t\}, \{f\}, \{b\}, \{n\}, \{e, t\}, \{e, f\}, \{e, b\}, \{e, n\}, \{e\}$$

A state is designated iff at least one of t and b attaches to it. To be explicit, the designated values are:

$$\{t\}, \{b\}, \{e, t\}, \{e, b\}$$

The resulting logic, as it happens, coincides with FDEe.

Before I move on, note two things about the plurivalent construction; the point of these observations will become apparent below.

First, all two-membered values are contradictory, because effability is built into values t, f, b and n .

Second, if $\{e\}$ were also excluded from the space of values, the consequence relation would obviously coincide with FDE, and e would be logically incapacitated, in that it would play absolutely no role to logical inferences whether a state of affairs relates to e or not.

⁶ I don't want to dwell on this too much, but here is a stanza from Nāgārjuna that, to me, would sound like a state of affairs that takes $\{t, f, b, n\}$ (or maybe even all five values, given the larger context):

Everything is real and is not real,
 Both real and not real,
 Neither real nor not real.
 This is Lord Buddha's teaching. (MMK XVIII:8)

3. CONCERNS ABOUT VALUE e

So much for exposition of Priest's work. I will now get to the critical part of this essay, in which I will point to four interconnected problems I see with value e . In the next section, I will develop an alternative account that avoids these problems.

As I have mentioned in the introduction, there are questions about Priest's reconstruction that may be raised before this point in the book. Indeed, such questions *have* been raised, some of them rather cogently so.⁷ Here, I am not concerned with these. I am assuming, for the purposes of this essay at least, that Priest's treatment of contradictory statements in Buddhist texts makes sense, that the question of what happens to logical consequence makes sense, and that the application of FDE is a sensible one. What I'll have to say about value e will interact with those questions, but my critique here is not primarily meant to undermine Priest's reconstruction at these points.

With that in mind, let us examine value e and its properties. Here are a number of desiderata for newly introduced logical values that, as I will argue, e fails to espouse.

1. The logical values should form a cohesive set.
2. The values should "look like" topics apt for logical study. If they don't, we should at least have a strong argument for showing that appearance wrong.
3. The addition of the value should make a difference to logical consequence.
4. We should be able to get a clear idea whether or not a value is designated.

I speak of desiderata because I don't think of e 's failing to have them as necessarily disastrous on an individual level (though the last point, to my mind, comes very close). However, the fact that e is not meeting them should, collectively, raise some serious doubts about it.

3.1 INCONGRUOUS CONCEPTS

Here is the first problem: The five values seem to be a rather incongruous bunch. The first four, of course, fit together quite well, but the new value seems to stick out quite dramatically. Whether a state of affairs obtains or not (or both or neither) seems to have little to do conceptually with whether it is effable.

Ineffability also seems independent from the other values in the following sense: Both being effable and being ineffable are perfectly compatible with obtaining, not obtaining, both and neither. Adding ineffability as a fifth logical

⁷ In addition to the references given above, see, for example, Siderits 2019 and Westerhoff 2019.

value seems to indicate, at least *prima facie*, incompatibility with the other values. It's true that there is indeed such a *prima facie*⁸ incompatibility with the semantic values—but *we're not adding the fifth value to the semantic values*. It is the ontological values that receive the augmentation, and here there is, as I just said, no reason to expect any of the first four values to be incompatible with the new value.

Of course, the later development in the plurivalent direction makes these combinatorial possibilities explicit. But in a way, that solution seems to be a technical fix for a problem that stems from a design that brings together values of radically different kinds. The suspicion, at this early stage, is that there might be a simpler way to deal with these issues by keeping the strata from which these values are drawn more cleanly apart.

Now, one might object that I've been phrasing this worry too strongly. The way Priest interprets the first four ontological values (e.g. as "*A* has the value *t*: *A* is effable, *A* obtains and $\neg A$ does not."), they are both about obtaining *and* being effable. So there is a connection, and also a *prima facie* incompatibility here.

But I am not sure why we need to do it in the way Priest does. An ontological value that only concerns itself with issues of obtaining seems perfectly coherent, and, indeed, more cleanly "ontological" than the "ontological/semantic" hybrid we get in Priest's book. I'll try to set up such a "cleaner" alternative in section 4.

3.2 IS INEFFABILITY APT TO BE MODELLED LOGICALLY?

The strata from which the five values are mined are not only different ones, they also appear to lend themselves to logical treatment to unequal degrees: While "obtaining" is something that clearly seems apt to be treated by logical means, (in)effability seems to be a much more exotic object of logical study.

That does not mean that logic is the wrong tool to use, but in applying it we should give a good supporting story that clarifies why logic is the *right* tool. Let me illustrate by making the following analogy involving a clearly misguided expansion of the logical space: Instead of adding a fifth value to the ontological values, let's add a fifth value to the semantic values which, remember, attach to sentences. Call it *c*, for "clumsily phrased".

Of course, this is a facetious example. I know of no one who would consider "clumsily phrased" deserving of a status as a logical value. But where, exactly, lies the difference between "ineffable" and "clumsily phrased" that makes one a worthy logical value and the other not?

I'm not sure. It is not, as one might think, that ineffability is inherently more important to a philosopher of logic than clumsy phrasing. I have more than one

⁸ Of course, the "prima facie" aspect is soon discovered to be just that as the story in Priest's book unfolds. Once things that are effable and ineffable are considered, the supposed incompatibility disappears, and the plurivalent construction bears that out.

book on my shelf that is supposed to help avoid the latter. Needless to say, none of them propose to set up a consequence relation with the help of something like a value c .

Let us explore one potential answer I can imagine being given that tries to explain why the logical value c should be ruled out, while e should not. In order to bring it out clearly, we'll need to pretend for the length of a couple of paragraphs that we're really trying to make the setup with c work.

Now, we know from experience that some sentences are true and clumsily phrased, others false and not clumsily phrased, and so on. If our experience includes gaps and gluts, we also know from experience that some sentences are both true and false and clumsily phrased, others neither true nor false nor clumsily phrased, and so on again. That is, we will be needing to resort to Priest's plurivalent construction. However, should we expect to be using the full line-up of nine values corresponding to Priest's values, viz.:

$$\{t\}, \{f\}, \{b\}, \{n\}, \{c, t\}, \{c, f\}, \{c, b\}, \{c, n\}, \{c\}?$$

It seems to me that no declarative sentence can be clumsily phrased without being at least one of true, false, both or neither. If it's *just* clumsily phrased, it's not a declarative sentence (and even if we were to allow other linguistic constructions as values for our propositional variables, such as questions or even nonsensical sentences, one of the values, namely "neither true nor false" would seem to apply to them). That is, we should get rid of $\{c\}$ in the above list.

Keeping everything else parallel to the exposition in section 2, we will be faced with an analogous observation to the one I made at the very end of that section: Value c is logically idle. And, in a way, that seems quite apt, in that it makes no difference to logical consequence whether the sentences in an inference are clumsily phrased or not.

Now, here is the potential argument that might be made on the basis of these observations: One might argue that the addition of value e needs to be of concern to logic, as it has repercussions for logical consequence. The value c , I've argued, doesn't have such repercussions, and thus it should not be allowed among the logical values. That argument has its appeal, but it depends on the plurivalent value $\{e\}$ making more sense than $\{c\}$. Does it?

3.3 LOGICAL INERTIA

Let us then turn to this question, concerning the plurivalent construction: Does it make sense to allow $\{e\}$ as one of the plurivalent values? As we have seen, e only makes a difference to logical consequence if states that are only $\{e\}$ exist, so this is an important question.

The case is not as clear as in the case of clumsy c . However, I have to say that I don't see evidence of the thought that there are $\{e\}$ -states in the Buddhist scriptures,

neither in the texts Priest cites nor in the (admittedly limited) selection of texts I know that go beyond those quotes.

Following Priest's analysis, I'm happy to acknowledge that there are (according to Buddhist philosophy) ineffable states that obtain, and that under the plurivalent construction in the book they will receive value $\{e, t\}$. Of course, if there are some of these, there will be corresponding $\{e, f\}$ states. As Priest shows, there is a very close proximity between ineffability and paradox, so one should expect there to be $\{e, b\}$ states, as well. If there are any left after sorting them into these three categories, they'll probably be naturally viewed as $\{e, n\}$ (the sorting and viewing will, of course, have to be done by some enlightened being).

What I don't see is why after all this, we should want to have $\{e\}$ as a possible value. What might make us think that there will be any states left after the $\{e, t\}$ -, $\{e, f\}$ -, $\{e, b\}$ -, $\{e, n\}$ -states are accounted for? That is, why should there be ineffable states of affairs that neither *obtain*, nor *fail to obtain*, nor *both obtain and do not obtain*, nor *neither obtain nor do not obtain*?⁹

Here is a potential argument one might make on behalf of Priest's construction and the necessity of $\{e\}$ -states: If there aren't any states that are just $\{e\}$, then all states of affairs are effable (such as $\{t\}$ -states, which, on Priest's reading, are states that *are effable and obtain*), or effable and ineffable (such as $\{e, t\}$). But why shouldn't there be any states that are *just* ineffable, without being effable as well? So we can't rule out $\{e\}$, and, a fortiori, e itself as logical values.

Of course, I have no argument to offer why there wouldn't be states that are just ineffable (without being effable as well). To the contrary, I find it much more plausible to assume that there are such states of affairs than not. Therefore, I would surely not want to prejudge that issue by proposing a potentially rash choice of formalism that rules this possibility out. However, the argument above crucially depends, again, on the following fact: On Priest's reading, *effability is built right into* the meaning of the ontological values $\{t\}$, $\{f\}$, $\{b\}$ and $\{n\}$. If it wasn't, $\{e, t\}$ (for example) would denote a state of affairs that obtains and is ineffable (without being effable as well).

I have indicated above that I think this mixing of the semantic and the ontological is not necessary, and that a cleaner picture might be attainable by keeping things apart. Again, I will try to sketch such a picture in section 4.

What remains to be said in this subsection is this: If we have no reason to allow $\{e\}$ as one of the plurivalent values, we also have made no logical difference when compared to the situation before we introduced value e , as the plurivalent logic coincides with FDE. Maybe the picture with the fifth value in place is somehow more complete, but in terms of logical consequence, we could have had it easier.

If one looks a bit closer, it becomes apparent that this point rests not only on the (in)admissibility of $\{e\}$. It also depends on the fact that e is an *undesigned*

⁹ I italicized the parts corresponding to logical values just to make this more readable.

value, which leads me to the biggest problem I see with this value.

3.4 THE QUESTION OF DESIGNATION

In the exposition in section 2, I have told you that Priest chooses to treat *e* as an undesignated value. I have not, though, told you why he does so.

His reason is deceptively simple: Ineffability is not a species of truth, and truth is what is to be preserved in logical inferences. Hence, *e* cannot be among the designated values:

From the old values, *t* and *b* are designated, since they are both species of truth. *e* is not designated: ineffability is not a species of truth. So the designated values are still just *t* and *b*. (p.66)

This argument comes before the pivot to states of affairs as bearers of ontological values, and the question of the (non)designation of *e* does not come up again.

What goes by unmentioned is that once we move away from the semantic values, i.e., once we are not talking about truth and falsity any more, it does not seem to make much sense to base the decision whether *e* should be designated on the question whether it represents a “species of truth”. Of course it doesn’t, it isn’t a semantic value. But all the other ontological values fail to be species of truth, as well! Taking this criterion would lead us to a logic with *no* designated values at all.

Given that the designated values of Priest’s five valued logic are *t* and *b* (this is, I believe, only explicitly mentioned in the technical appendix on page 73), it is therefore apparent that truth is not the mark of designation in the ontological setting. What *t* and *b* have in common (and don’t share with any of the other values) is that they attach to states of affairs that obtain. The clear suggestion is, then, the following: Whether an ontological value is designated must hinge on whether or not it *obtains*.

So, do *e*-states obtain, or do they not? If Priest’s analysis is correct, then it is surely the point of some of the Buddhist texts that *some* of them do obtain. On the other hand, it seems absurd to assume that *all* possible ineffable states of affairs obtain. So, it would seem that if “obtaining” is the criterion of designation, we can’t make a decision whether *e* should be designated, which is a serious problem for a logical value. Some *e*-states will have to be designated, some others will not be designated, and there are no structural clues¹⁰ as to when the first option or when the second option holds.

¹⁰ Such as in the work of Cobreros, Egge, Ripley and van Rooi (e.g., Cobreros *et al.*, 2012), in which values can also be both designated and, in other cases, undesignated, but where there is a clear intra-logical indication which of these cases we are dealing with at any given time. Likewise, I myself have developed similar ideas in Kapsner 2014. where the question of designation is partly settled by the linguistic context.

Are there other reasons to hold, with Priest, that value *e* should be undesignated? Here is one way of thinking about this that might seem appealing (but, I'll argue presently, isn't really): Designation is often tied to assertability, for example in the works of Michael Dummett and others. Under such a view, a statement is true if and only if it is assertable.

Now, there might be a sense that ineffability and unassertability are conceptually closely related, maybe even identical: They both, after all, refer to things you can't say.

But here lurks a misunderstanding of the nature of the modality in "ineffable" and "unassertable". The latter, understood as a bridge to truth, is certainly normative in nature: you *should* not assert something that is unassertable in this sense (for example, because it is false). But of course, you *could*.

Ineffability seems to be of a different nature: Something is ineffable if it can't be conceptualized or put into words. This is a practical impossibility¹¹, not a normative matter. For all the Buddhists care, you can go right ahead and try to eff the ineffable, it's just that their bet is that you won't succeed.

Ineffability, in that regard, is like unpronounceability: The longest place name in Britain, Llanfairpwllgwyngyllgogerychwyrndrobwlantysiliogogoch, is all but unpronounceable, but that does not mean that there is a *norm* against pronouncing it.

Maybe, a more appealing story about *e*'s logical status might be this: Logical consequence is about drawing inferences, which is done in language. So, only things that are effable should be transmitted over the turnstile. In that case, it would be clear why *e* is undesignated. The value *e*, in this picture, would behave much like the middle value in Weak Kleene logic under Bochvar's "meaningless" interpretation.¹²

However, there is an important difference to Bochvar's interpretation: The position under consideration seems rather unstable in that it holds that logic should be about statements, and at the same time cannot be about statements if the value *e* is to be read as ineffability, for the reasons Priest gave. I don't know that there is much hope for *e* in this alternative arrangement.

Let us suppose, for the span of this paragraph, that there were some way to overcome this problem. If we then chose to go down that road, we would have to revise the definition of plurivalent designation, as well. We'd need to exclude all plurivalent values from the subset of designated ones that contain *e*, because these are unsuitable for logical treatment (even if they, in addition, obtain, or if they both obtain and do not obtain). That is, the only designated values would be $\{t\}$ and $\{b\}$. This would result in a very weak logic, in which, for example, disjunction introduction would not be valid any more. This proposal would, then, clearly be

¹¹ At least until you get to the effability gluts discussed in Priest's book, then it is not even clear that it is a practical impossibility any more.

¹² Bochvar and Bergmann 1981.

deviating from the direction in which Priest is heading in the book (if there is some sense that can be made of it at all).

4. AN ALTERNATIVE PROPOSAL

The last section has presented my reasons for being quite hesitant to adopt the fifth value, and I take this critical part to be the main contribution this piece has to make to the discussion. Nonetheless, one might quite naturally ask: Assuming my critical remarks are convincing, then what can be done? Let me end by giving at least a sketch of an answer.

My alternative proposal is very simple. I will propose to use four values for both the semantic as well as the ontological *Catuṣkoṭi*. I will differentiate these by subscripts, such as t_s and n_o .

Here are my readings of these values (P is a statement; A is a state of affairs):

Semantic Values:

- P has the value t_s : P is true and not false.
- P has the value f_s : P is false and not true.
- P has the value b_s : P is both true and false.
- P has the value n_s : P is neither true nor false.

Ontological Values:

- A has the value t_o : A obtains and $\neg A$ does not.
- A has the value f_o : $\neg A$ obtains and A does not.
- A has the value b_o : both A and $\neg A$ obtain.
- A has the value n_o : neither A nor $\neg A$ obtains.

The semantic values are just what Priest took them to be. The difference lies with the ontological ones: In addition to being just four, they do not make any mention of effability.

It is by keeping these matters cleanly apart in this manner that we can make do with two four-valued *Catuṣkoṭi* (cf., the argument towards the end of sec. 3.3). These will be joined at the hip in the case of effable states of affairs, but in the case of ineffable states, there will be nothing more to apply than the ontological *Catuṣkoṭi*.

That the effable states and the corresponding statements are “joined at the hip” does not at all mean that there needs to be some bridge built into the values themselves (such as Priest does when he builds effability into the ontological

values). It is quite enough to set up a correspondence theory along the lines that Priest sketches in his book. As he admits, there will be many more things to be said about this than he himself has space to spell out; I will not try to do the issue any more justice here, but I'm happy to assume, with Priest, that this is a feasible endeavor.

Where does ineffability enter this picture? It is just a property that those states that have no corresponding statements share. We can add a predicate that corresponds to this property, as long as we are happy with the paradoxical direction in which this is obviously taking us. As Priest argues, the Buddhists were fearless in that regard, so it makes sense to take such a predicate on board. But, beyond that, will anything go awry if we do not have a *logical value* corresponding to ineffability in our analysis?

Well, how does the *e*-less analysis deal with the examples that motivated the introduction of this value in the first place, i.e., the negated occurrences of the *Catuṣkoṭi*? Once all alternatives that the four semantic values represent are denied, what value is left to attach to the statement in question on the proposed account?

None. But note that Priest does not have a value to offer, either, at least not a semantic one. The underlying state of affairs might be *e*, but that does not tell us what to say about the *statement*. Both accounts seem to be in similar predicaments here.

I think that the best way to go here is to argue that the denial is a meta-linguistic one: Vaccha and the other characters who are laying out four-fold alternatives are not using the right words to get at what they are trying to get at. And by not giving an alternative formulation, their interlocutor is indicating that there is none: What Vaccha *et al* are trying to get at is ineffable.

The denial of the *Catuṣkoṭi* is trying to point at a state of affairs that might obtain, or not, or both, or neither, but in any case cannot be correctly referred to with words. Wittgenstein's ladder is kicked away right as we are trying to climb it, in the hope, maybe, that we land on our backs in just the right angle that allows us to spot the semantically unattainable ultimate reality high above us.

I don't pretend that that is a full theory of all that is going on, and I'm not out to develop one. In addition to being more than sketchy about exegetical matters, I have also completely ignored the question of whether the induced consequence relation is able to model Buddhist thinking, the main problem the works mentioned in the introduction, Cotnoir (2015) and Kreutz (2019), concerned themselves with. Maybe the four values will have to be treated quite differently from the way FDE treats them, even if that will mean that the eminently picturesque four-cornered lattice will be lost.

However, I think it is *prima facie* plausible that *some* such logical picture can be made sense of and that it can be brought into harmony with informal attempts to interpret the Buddhists' use of the *Catuṣkoṭi*. Ineffability is clearly an important part of the larger story, but I am highly doubtful of the suggestion that it needs to be drawn into the *logical* part of that story.

5. SUMMARY

To sum up, I'll repeat my reasons for being wary of treating ineffability as a logical value:

1. Value e , representing ineffability, seems of a quite different kind than all the other four values, whether they are thought of semantically or ontologically.
2. More, while “being true” for statements and “obtaining” for states of affairs seem quite clearly candidates for things one might want to preserve over a turnstile, “being effable” does not quite as clearly suggest itself for a logical treatment.
3. It is not obvious that the plurivalent $\{e\}$ has any use, and if we disallow it, then no changes in terms of logical consequence will ensue compared with the four valued account.
4. Lastly, it is not clear whether e should be a designated value.

I have furthermore argued for the following claim: If we strip the ontological values of all mention of effability, we get a much simpler picture that avoids these problems. We end up with two four-valued logics, one for statements and one for states of affairs.

This picture is not only simpler, but also logically equivalent to Priest's plurivalent logic, provided there are no states that take value $\{e\}$. That is, provided there are no ineffable states of affairs that neither *obtain*, nor *fail to obtain*, nor *both obtain and do not obtain*, nor *neither obtain nor do not obtain*. As I indicated, I don't see why we need to provide for this possibility in our analysis of Buddhist texts.

A full description of the states of affairs the ontological logic deals with will include the property of ineffability being ascribed to some of them. But to encode that property as a logical value seems to bring more problems than benefits.

ACKNOWLEDGMENTS

First of all, I am deeply indebted to Graham Priest for his guidance over the years in general, and for the kind exchanges we had about this topic in particular. I trust that as a philosopher he knows that critical engagement can be meant as high form of praise in our profession; my piece was certainly written in that spirit.

I would also like to thank the members of the audience of a workshop held in honor of the 40th anniversary of Graham Priest's “Logic of Paradox” for their comments, as well as the organizer Hitoshi Omori for inviting me to present the preceding thoughts in Bochum, where the workshop took place.

In preparing the manuscript, I also had valuable exchanges with Paolo Visigalli about the *Agivacchagotta Sutta* and other matters for which I would like to thank

him.

In part, my research has been supported by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation), project 436508789, and project grant PIDPID-107667GB-I00 of the Spanish Ministry of Science and Innovation.

REFERENCES

- Bochvar, D. A. and Bergmann, M. (1981), “On a three-valued logical calculus and its application to the analysis of the paradoxes of the classical extended functional calculus”, *History and Philosophy of Logic* 2.1-2: 87–112. <<https://doi.org/10.1080/01445348108837023>>
- Cobrerros, P., Egré, P., Ripley, D., and van Rooij, R. (2012), “Tolerant, Classical, Strict”, *Journal of Philosophical Logic* 41.2: 347–385. <<https://doi.org/10.1007/s10992-010-9165-z>>
- Cotnoir, A. (2015), “Nāgārjuna’s Logic”, in Graham Priest, Koji Tanaka, Yasuo Deguchi, and Jay Garfield (eds), *The Moon Points Back* (Oxford: Oxford University Press), 176–188.
- Deguchi, Y., Garfield, J. L., and Priest, G. (2008), “The way of the dialetheist: Contradictions in buddhism”, *Philosophy East and West* 58.3: 395–402. <<https://doi.org/10.1353/pew.0.0011>>
- Kapsner, A. (2014), *Logics and falsifications* (Cham: Springer).
- Kapsner, A. (2016), “On Gluts in Mathematics and Science”, in Holger Andreas and Peter Verdée (eds.), *Logical Studies of Paraconsistent Reasoning in Science and Mathematics* (Cham: Springer), 91–101. <https://doi.org/10.1007/978-3-319-40220-8_6>
- Kreutz, A. (2019), “Recapture, Transparency, Negation and a Logic for the *Catuṣkoṭi*”, *Comparative Philosophy* 10.1: 8. <[https://doi.org/10.31979/2151-6014\(2019\).100108](https://doi.org/10.31979/2151-6014(2019).100108)>
- Pietz (=Kapsner), A. and Rivieccio, U. (2013), “Nothing but the Truth”, *Journal of Philosophical Logic* 42.1:125–135. <<https://doi.org/10.1007/s10992-011-9215-1>>
- Priest, G. (2009), “The structure of emptiness”, *Philosophy East and West* 59.4: 467–480. <<https://doi.org/10.1353/pew.0.0069>>
- Priest, G. (2010), “The Logic of the *Catuṣkoṭi*”, *Comparative Philosophy* 1.2: 51–51. <[https://doi.org/10.31979/2151-6014\(2010\).010206](https://doi.org/10.31979/2151-6014(2010).010206)>
- Priest, G. (2011), “Two truths: Two models”, in The Cowherds (eds), *Moonshadows: Conventional truth in Buddhist philosophy* (New York: Oxford University Press), 213–220.
- Priest, G. (2014). “Speaking of the Ineffable...”, in JeeLoo Liu and Douglas L. Berger (eds.), *Nothingness in Asian Philosophy* (New York: Routledge), 121–133.
- Priest, G. (2017), “Plurivalent Logics”, in Vladimir Markin and Dmitry Zaitsev (eds.), *The Logical Legacy of Nikolai Vasiliev and Modern Logic* (Cham: Springer), 169–179.

- Priest, G. (2018), *The Fifth Corner of Four: An Essay on Buddhist Metaphysics and the Catuskoṭi* (New York: Oxford University Press).
- Siderits, M. (2019), “Review of: *The Fifth Corner of Four: An Essay on Buddhist Metaphysics and the Catuskoṭi*, by Graham Priest”, *Notre Dame Philosophical Reviews*: <<https://ndpr.nd.edu/news/the-fifth-corner-of-four-an-essay-on-buddhist-metaphysics-and-the-catuskoti/>>
- Westerhoff, J. (2019), “Review of *The Fifth Corner of Four: An Essay on Buddhist Metaphysics and the Catuskoṭi*, by Graham Priest”, *Mind*. <<https://doi.org/10.1093/mind/fzz047>>