Knowledge Arguments for Time 1 30 2023

Abstract

In 1982 Jackson introduced the Knowledge Argument to elucidate the phenomenal, interior aspects of experience. In 1908 McTaggart defined two series that characterize one dimension of time, the A-series and the B-series. The A-series is usually thought to be phenomenal [Farr 2019], [Dainton 2018]. Thus there is the possibility of giving a Knowledge Argument for time [Merriam 2012, 2022a]. One (informal) statement of the classical Knowledge Argument might be "Mary knows all the facts about color qualia but lives in a black-and-white room. Upon being released into a colorful world, it would seem she learns something new." The analogous Knowledge Argument for Time (KAT) would be "Nathan knows all the facts about time but lives in a B-series room. Upon being released into a world that has both an A-series and a B-series it would seem he learns something new." I give variations of the KAT based on various distinctions. I don't give any particular proposed solutions to the Knowledge Arguments for Time. Rather, the point is to state the Arguments (or indicate how they may be stated). It may be hoped that these will help clarify some issues in the philosophy of time and lead to a cross-fertilization between the philosophy of time and the philosophy of mind.

1. Introduction

The name "Knowledge Argument" is standard usage. In this paper the word "Argument" should be understood more in the sense of a Gedankenexperiment. I will stick with the name "Knowledge Argument for Time," abbreviate it KAT and sometimes express the Argument as an open question.

[McTaggart 1908] introduced two series that might characterize one dimension of time. There is the B-series and the A-series:

> "Positions in time, as time appears to us *prima facie*, are distinguished in two ways. Each position is Earlier than some, and Later than some, of the other positions [the B-series]. And each position is either Past, Present, or Future [the A-series]. The distinctions of the former class are permanent [for time-like separated events], while those of the latter are not. If M is ever earlier than N, it is always earlier. But an event, which is now present, was future and will be past."

McTaggart's A-series is usually thought of as having two components: 1. a 'future/present/past' spectrum, and 2. some dynamic notion of 'becoming'. The B-series is usually thought of as an ordering from earlier-times to later-times.

A *B-theory* is a model of time in which the B-series is taken to be fundamental (i.e. the A-series is reducible to the B-series in some way). An *A-theory* is a model of time in which both the A-series and the B-series are taken to be fundamental (i.e. they are not inter-reducible and both are required).

The idea of this paper is this. If, informally, the classical Knowledge Argument is "Mary knows all the facts about color but lives in a black-and-white room. But on being released from the room into a colorful world it would seem Mary learns something new." This would be because the phenomenal qualia Mary actually experiences for the first time upon leaving the room. On the other hand, the A-

series is usually taken to be phenomenal [Farr 2019, Dainton 2018]. This suggests there is a corresponding Knowledge Argument for Time (KAT) "Noah knows all the facts about time, but lives in a B-theory room. But on being released from the room into a A-theory world it would seem Nathan learns something new."

This paper suggests variations on KATs (and Knowledge Arguments) employing various distinctions.

2. Three different KATs

One may begin with a more precise statement of the classic Knowledge Argument. I paraphrase the stronger of two statements given in [Nida-Rümelin et al. 2021] as

(2.1)

(2.1a) Mary knows all the *physical facts* concerning human color vision before her release from a black and white room into a colorful world.

(2.1b) But there are *some facts* about human color vision that Mary does not know before her release (namely, what it is like to actually experience color for herself).

(2.1c) Therefore there are *non-physical facts* concerning human color vision.

This suggests the KAT:

(2.2)

(2.2a) Noah knows all the *physical facts* concerning time before his release from a B-theory room into an A-theory world.

(2.2b) But there are *some fact*s about A-theory worlds that Noah does not know before his release. (Namely, what it is like to be in an A-theory world.)

(2.2c) Therefore there are *non-physical* facts concerning time.

Here (2.2) is meant to be exactly analogous to (2.1), whatever the best formulation of the original Knowledge Argument turns out to be. The purpose of this paper is not to investigate solutions to these problems but just to state them.

I will give two more Knowledge Arguments and their corresponding KATs.

(2.3)

(2.3a) Ophelia is in a colorful world *and* knows all the physical facts about color.

(2.3b) But there are some facts about colors that Ophelia *forgets* upon her entering a black and white room.

(2.3c) Therefore there are non-physical facts concerning colors.

The corresponding KAT is

(2.4)

(2.4a) Paul is in an A-theory room.

(2.4b) But there are some facts about A-theories that Paul *forgets* upon his entering a B-theory room.

(2.4c) Therefore there are non-physical facts concerning time.

And an Ambiguous Knowledge Argument:

(2.5)

(2.5a) Quella knows all the physical facts about colors and is gently dropped into either a black and white room or else a colorful room.

(2.5b) Quella can veridically *determine* which room she was dropped into (based on color qualia).

(2.5c) Therefore there are non-physical facts concerning colors.

With the corresponding KAT

(2.6)

(2.6a) Ronald knows all the physical facts about time and is gently dropped into either a B-theory room or else an A-theory room.

(2.6b) Ronald can veridically *determine* which room he was dropped into.

(2.6c) Therefore there are non-physical facts concerning time.

3. Three distinctions between KATs

Torrengo (2013) makes the useful distinction between the *ontology*, the *metaphysics*, and the *semantics* of time. With respect to the KATs these might be stated:

(3.1) Samantha knows all the physical facts about the ontology of time but lives in a block-world room. On being released from the room into a world that has a presentist ontology it would seem she learns something new (the Ontological Knowledge Argument for Time).

(3.2) Tim knows all the physical facts about the metaphysics of time but lives in a B-theory room. On being released from the room into a world that has an A-theory metaphysics it would seem he learns something new (the Metaphysical Knowledge Argument for Time).

(3.3) Uve knows all the physical facts about tensed rooms but lives in a tenseless room. Upon being released into a tensed room it would seem she learns something new (the Semantic Knowledge Argument for Time).

These three KATs correspond to the one Knowledge Argument (2.1). If each of the three KATs from section 2 is stated using the three variations of this section we have 9 KATs.

Here is an example (chosen at random) of combining (2.6) and (3.3)

(3.4)

(3.4a) Victor knows all the physical facts about tenses and is gently dropped into either a de-tensed room or else a tensed room.

(3.4b) Victor can veridically determine which room he was dropped into.

(3.4c) Therefore there are non-physical facts about tense.

4. 27 KATs

I would like to make three more distinctions. The three relevant questions could be stated

(4.1) Would *Wendy* learn something new?

(4.2) Would *I* learn something new?

(4.3) Would *Paul Merriam* learn something new?

These questions are not necessarily the same, and Section 7 shows they are in fact different. To assume that these 3 question are the same question is to assume a restricted set of possible KATs. If one assumes that the above questions are reducible to each other then one has effectively made assumptions that ignore what the arguments were designed to address in the first place.

Constructing a KAT from the three variations of section (2) and the three variations of section (3) and the three variations of section (4) gives 27 KATs.

Here is one example, combining (3.4) and (4.2)

(4.4)

(4.4a) I know all the physical facts about tense and I am gently dropped into either a de-tensed room or else a tensed room.

(4.4b) I can veridically determine which room I was dropped into.

(4.4c) Therefore there are non-physical facts about tense.

5. More KATs

There are more distinctions that can be made based on whether the A-series spectrum has the same nature (irreducibly phenomenal or not) as the A-series 'becoming'. Applying these four possibilities to the 27 KATs of section 4 gives 108 KATs.

Other distinctions can be introduced, for example one could explore the idea that an Argument that states section (2) criteria and then section (3) criteria is not necessarily the same Argument as one that states section (3) criteria and then section (2) criteria. Different statements of the classical Knowledge Argument (2.1) could be given to begin with, giving the different analogous KATs. And one could consider the temporal C-series, D-series, and R-series [McDaniel 2020a, Queequeg 2022, Oaklander 2012].

6. Possible worlds and an infinity of KATs

Let w_1 be a possible world. We distinguish between propositions *in* w_1 and propositions *about* w_1. Suppose w_1 is contained in another 'meta-' possible world w_2. We'll say that the propositions that are true *about* w_1 are those that are true *in* w_2. Suppose the temporal ontology of w_1 is a block-world. The true propositions about time in w_1 are those of a block-world. Then consider the two cases

(6.1) The ontology of w_2 is presentist.

(6.2) The ontology of w_2 is block-world.

In the case of (6.1) we would say that the block-world in w_1 exists 'now', as defined in w_2. In the case of (6.2) we would say that a block-world in w_1 exists at each time t in w_2.

We can consider a nested series of possible worlds w_1 , w_2 , w_3 , … each with the variations of section 5 assumed, or some with only some KATs specified, either with a finite or an infinite number of levels, and may start with the 1st world or the nth world or somewhere in between, where n may be infinite (or indeed using a non-wellfounded set as index [Barwise et al. 1996] in which case the worlds could form a kind of Ouroboros).

I am not sure whether it makes sense to have, for example, the ontology of w_1 be presentist and the ontology of w_2 be block-world, but the point is we can ask the question.

7. A Calculus of Qualia argument for A-theory

Introduction

It is sometimes argued that the A-series characteristics of time are (merely) indexical, and therefore could be handled by a B-theory [Braun 2017]. A Calculus of Qualia (CQ) was proposed in [Merriam 2022c] and I'll use the CQ to give an argument that the A-series characteristics are not indexical.

In the CQ it is recognized that

(7.1) red ≠ ▮

because the subjective experience of the left hand side *refers to* (or perhaps is a *word* and a *reference to*), but the subjective experience of the right hand side is of *redness*. By *refers to* I could just as well say *is about* or *points to*. It is critical to appreciate for oneself that the subjective experience of the right hand side does not refer to anything, *not even itself*.

It's interesting to note that the left hand side would be changed if we moved from English to German, whereas the right hand side would remain unchanged. On the other hand, if we moved instead to a color-blind appreciation of (7.1) then the left hand side would remain unchanged but the right hand side would be changed. Since the invariants of the left hand side and the right hand side are not the same then the left hand side and the right hand side cannot be the same thing.

I give an argument for A-theories based on the CQ.

(7.2)

It is sometimes argued that time is indexical like space [Braun 2017]. Here is an argument against that conclusion based on the CQ.

Consider

(7.2a) CA is west of NY
(7.2b) CA is west of here
(7.2c) April 2 is later than April 1
(7.2d) April 2 is later than now
(7.2e) April 2 is in my future
(7.2f) when I look at a firetruck I see red
(7.2g) when I look at a firetruck I see ▮

Now,

(7.2h) (7.2a) is like (7.2c); these propositions express concepts; the first one about space and the second one about time
(7.2i) (7.2b) is like (7.2d) is like (7.2f); these propositions express indexical concepts
(7.2j) (7.2e) is like (7.2g); the correct appreciation of these are experiences

One can have a concept *about* redness; that's what happens in (7.2f) and (7.2i). In contrast to these, (7.2g) cannot be written without colored ink (or a color computer screen). The information in (7.2f) and (7.2i) strictly do not contain the information in (7.2g).

Is there is disanalogy here? No: (7.2g) is the analogy to what we *mean* by (7.2e). Just as (7.2g) is experiential and not reducible to indexicality so is (7.2e). I conclude A-theories are correct.

8. More cross-fertilization

It is hoped that one of the applications of these ideas is further cross-fertilization between the philosophy of time and the philosophy of mind. Here are four informal examples.

(8.1) Consider a *zombie*, as given in the philosophy of mind. A zombie is a being just like a human except it does not have any subjective experience or qualia. Now, we have A-series characteristics (for the sake of this argument). So a *temporal zombie,* then, is a being just like a human except it does not have (or is not within) any irreducibly A-theory characteristics (or phenomena), meaning it is not in an A-series spectrum nor in an A-series 'becoming'. It may be argued that a zombie is behaviorally indistinguishable from a human. So it might be argued that a temporal zombie is behaviorally indistinguishable from a human through time.

(8.2) We could adapt the Ambiguous KAT to the philosophy of mind. Xerxes is gently dropped into a room that is black and white, or else a room that has colors in it. The question is then whether Xerxes can veridically tell which room he was dropped into (based on his color qualia).

(8.3) Classical Spectrum Inversion: It could be that when (for example) Yelena experiences what she calls 'red' Zoltan experiences what he calls (what Yelena would call) 'green' given the same external stimuli. It could be that their entire subjective color-spectrums are different, given the same external stimuli, a scenario which is usually called Spectrum Inversion [Byrne 2020b].

(8.3a) Temporal Spectrum Inversion 1: It could be that Angelika's 'forward' direction of time is Braxton's 'backward' direction of time.

(8.3b) Temporal Spectrum Inversion 2: It could be that Cathy's 'future' is David's 'past'.

(8.4a) A Semantic Knowledge Argument for Time: Informally speaking, Emily knows all the facts about the language of time. She then goes from a tenseless-language room into a tensed-language world. Does she learn anything new? (Or perhaps: can she express anything new?)

(8.4b) The correspondding Classical Semantic Knowledge Argument: Franklin knows all facts about the language of qualia. He then goes from a room whose language has terms that are ultimately reducible to 3rd-person referents into a room whose language has (or indeed are) terms that have irreducibly 1st-person referents. Does he learn anything new? (Or perhaps: can he express anything new?)

9. Conclusion

A Knowledge Argument for Time was given based on an analogy with the famous Knowledge Argument for qualia. Then it was shown how variations of the KATs could be stated. An argument based on the Calculus of Qualia was given that A-phenomena are not reducible to B-series. Finally, examples were given of how there might be further cross-fertilization between the philosophy of time and the philosophy of mind.

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