### The Temporal Knowledge Argument 2 draft, in progress

...Nancy is in a room whose time is entirely described by McTaggart's B-series. At t=10 minutes she walks into a room described at least partly by McTaggart's A-series. Does anything new happen? Does she experience anything new? Does she learn anything new?

The Knowledge Argument is famous. There appears to be an analogous argument with respect to time, what I'll call the Temporal Knowledge Argument (TKA). The knowledge argument was intended to show that physicalism is false. Analogously, the TKA may be read as an attempt to show B-theorism (the idea that all temporal features can be accounted for by B-series information) is false.

### Definitions

The A-series is {past, present, future} and the B-series is {earlier, simultaneous, later}. The A-series theory, for the purposes of this note, includes the information of (1) ontological temporal becoming, and (2) an ontologically privileged moment 'now'. B-series times are structurally related to each other, made complicated by relativity. 'Hybrid time' includes both kinds of information as non-inter-reducible. (Baker 2007).

The physical is physical matter. Qualia are what it is like to experience, for example, the color blue.

# The TKA, take 1

The Knowledge argument is (Jackson (1982))

"Mary is a brilliant scientist who is, for whatever reason, forced to investigate the world from a black and white room via a black and white television monitor. She specializes in the neurophysiology of vision and acquires, let us suppose, all the physical information there is to obtain about what goes on when we see ripe tomatoes, or the sky, and use terms like 'red', 'blue', and so on. She discovers, for example, just which wavelength combinations from the sky stimulate the retina, and exactly how this produces *via* the central nervous system the contraction of the vocal chords and expulsion of air from the lungs that results in the uttering of the sentence 'The sky is blue'.... What will happen when Mary is released from her black and white room or is given a color television monitor? Will she *learn* anything or not? It seems just obvious that she will learn something about the world and our visual experience of it. But then it is inescapable that her previous knowledge was incomplete. But she had *all* the physical information. *Ergo* there is more to have than that, and Physicalism is false."

# The TKA is

"Nancy is a brilliant scientist who is, for whatever reason, forced to investigate the world from a Bseries room. She specializes in the philosophy of time and acquires, let us suppose, all the B-series information there is to obtain about what goes on when we experience becoming (/now). She discovers, for example, just which periodic systems are in the brain, and exactly how this produces *via* the brain's methods of keeping track of time the neural processes that lead to the expulsion of air from the lungs that results in the uttering of the sentence 'there is ontological becoming (/now)'. What will happen when Nancy is released from her B-series room to an adjoining A-series room? Will she *learn* anything (or experience anything new) or not? It seems just obvious that she will learn something about the world and our temporal experience of it. But then it is inescapable that her previous knowledge was incomplete. But she had *all* the B-series information. *Ergo* there is more to have than that, and B- theorism is false."

If she leaves the first room at t = 10 minutes, she then experiences A-series features. What happens to the 'previous' B-series information? I don't know.

I will not attempt to canvas the vast array of responses to either knowledge argument, but there are a couple of things.

### Zombies

...

"[philosophical zombies] are exactly like us in all physical respects but without conscious experiences: by definition there is 'nothing it is like' to be a zombie. Yet zombies behave just like us, and some even spend a lot of time discussing consciousness." (Stanford, 2015)

Might be compared to

"temporal zombies are exactly like us but without an ontologically privileged 'now' or genuine temporal becoming. Yet temporal zombies are structurally related to their immediately past and immediately future (B-series) selves just like us, and some even spend a lot of time discussing the Aseries."

### Spectrum inversion and time reversal

Does spectrum-inversion correspond to time-reversal? (Stanford, 2015) I don't know, but for the sake of clarity I will note there are (at least) 3 notions of time-reversal in a hybrid theory.

1. The A-series is reversed but the B-series stays the same. In this case there is still a ontologically privileged 'now', but temporal becoming runs backwards. So if temporal becoming normally runs (reading the A-series from left to right over the structurally related B-series values b), ...  $b_i < b_{i+1} ...$ , the reversed notion will run as ...  $b_{i+1} > b_i ...$ 

2. The A-series stays the same but the B-series is reversed. In this case there is still a ontologically privileged 'now' and temporal becoming still runs forwards. But the B-series is reversed, so becoming runs as  $\dots b_i > b_{i+1} \dots$ ,

3. Both the A-series and the B-series are reversed. In this case there is still a ontologically privileged 'now', but temporal becoming runs backwards over a B-series that has been reversed ...  $b_{i+1} < b_i$ ....

Considering causality or entropy would complicate things further...

(Does reversal have implications for ineffability and an explanatory gap in the temporal context, in analogy to the dualist context? If the A-series is ineffable then each 'now' is associated with a particular actualized (and quantum) system S. And if an explanatory gap between the A- and B-series holds then the complete temporal specification of a system's state or an event e is irreducibly a function of an A-series value a and a B-series value b, so that  $e = e(a_S, b_S)$ . (Where b is relativised to S because of relativity.))

# The TKA, take 2

(Chalmers 2002) has given a focused account of the knowledge argument, ultimately concluding in a form of dualism in which 'Mary gains old knowledge in a new way' [check this yo yo]. He uses a theory of 2-dimensional meaning.

The idea of 2-dimensional meaning is that there is epistemic intention and subjunctive intention. Epistemic intention is true or false depending on the way the actual world is. Subjunctive intention is true or false depending on the way the world (counter-factually) could have been. Either intention can be a priori or a posterior, and necessary or contingent... [...definitions....]

The simplest 2-dimensional argument in the case of hybrid time is Q = A and P = B series.

(1) 'B  $\supset$  A' is a posteriori.

(2) If 'B  $\supset$  A' is a posteriori, 'B  $\supset$  A' is 1-contingent.

(3) If 'B  $\supset$  A' is 1-contingent, 'B  $\supset$  A' is 2-contingent

(4) If 'B  $\supset$  A' is 2-contingent, B-theorism is false.

B-theorism is false.

...since the idea that the B-series implies the A-series is (counter-factually) contingent, the B-series does not account for A-series phenomena in all worlds. So B-theorism is false.

[...next 2 versions...]

... [translate all this] "Here, (1) is the epistemic claim arising from the Mary situation, (2) is an instance of the 2D thesis, (3) is the result of a straightforward piece of reasoning, while (4) is the modal constraint on physicalism. It is not clear whether (5) is as strong as a denial of physicalism, since it is not clear whether or not panprotopsychism is a form of physicalism. But if it is a form of physicalism, it is clearly a strange and unusual form, so the conclusion of the argument remains strong either way.

So here we have a very promising version of the knowledge argument: a valid argument for a strong ontological conclusion about consciousness, based on the epistemic intuition about the Mary case along with three other independently plausible premises."

The temporal translation 'BT- > A' is a posteriori

Here we try to follow Chalmers' reasoning with respect to becoming. Then we try to see if one can escort the argument through with respect to a privileged moment 'now'. [re-order all this...]

Chalmers: "The epistemic intension for an indexical concept is also very simple. The epistemic intension of my concept *I* picks out the individual at the center of a scenario. The epistemic intension of *now* picks out the time at the center. The epistemic intension of *here* picks out the location of the individual at the center, at the time at the center. The epistemic intension of *today* picks out (roughly) the day that includes the time at the center. And so on."

...so if A-series information is indexical, each ontologically privileged 'now' gets its own possible world...

... if 'now' is the 6<sup>th</sup> of september, it cannot be otherwise, in terms of epistemic intention (A-series information), i.e. it cannot be that the *actual* world is *now* at some other time. (A-series information)

[...On the other hand, counter-factually, it *might have been the case* that the time is the 5<sup>th</sup> of September. So Chalmers' 2-dimensional framework of meaning is appropriate....this part not finished.... this is the B-series...]

# Other arguments?

If the correspondence holds, the philosophy of mind and the philosophy of time could enrich each other. In this note I only pointed out there may be a correspondence by translating a few notions in the philosophy of mind into the philosophy of time. This note is not more ambitious than that. Of course the correspondence might be tested with many more interesting topics, including but not limited to the unity of consciousness, conceivability, hybrid temporal logics, and the rate of becoming..

# TKA, take 3

[this part not finished yet...] ...the A-series and the B-series have "distinct modes of presentation" (Chalmers 2002)... [not finished yet...]

# References

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