

A Knowledge Argument for Time

Abstract

On being released from her black-and-white room into a colorful world it would seem Mary learns something new (the Knowledge Argument). On being released from his B-theory room into an A-theory world it would seem Mark learns something new (the Temporal Knowledge Argument). These thought experiments are parallel to each other and can inform each other.

1.

For the purposes of this paper, I'll use the A-theory of time, presentism (or at least the growing block universe), and the moving spotlight theory interchangeably. And I'll use the B-theory of time, the block universe, and eternalism interchangeably.

The A-theory holds that

- (a) there is an ontologically distinguished Present (or at least a growing block),
- (b) there is a real, irreducible process of temporal becoming

The B-theory/Eternalism holds that

- (a) there is no objective flow of time
- (b) time is a dimension ontologically like the dimensions of space
- (c) present, past, and future are only indexical; there are no objective tensed facts

Consider the (ontological) Knowledge Argument, which was originally stated:

"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 is it 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." (Jackson 1982)

Compare that with the parallel time argument:

Mark is a brilliant scientist who is, for whatever reason, forced to investigate the world from a block universe via a block-universe's clock. He specializes in the neurophysiology of the perception of time and acquires, let us suppose, all the physical (block/eternalist) information there is to obtain about what goes on when we experience a present, or perceive a temporal becoming, and use terms like 'past', 'future', and so on. He discovers, for example, just how long Caesium hyperfine transitions are (the basis of atomic clocks), and exactly how this correlates with cyclic brain processes which produce 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 'I am in the present and time is flowing'.... What will happen when Mark is released from his block universe (at, say, $t = 10$ min.) into a presentist, A-theoretic (or even growing block) universe or is given a moving spotlight television monitor? Will he learn anything or not? It seems just obvious that he will learn something about the world and our temporal experience of it (e.g. what an actual present and temporal becoming are like). But then is it inescapable that his previous knowledge was incomplete. But he had all the physical (block/eternalist) information. Ergo there is more to have than that, and Eternalism (and the B-theory) is false.

Major responses to the Knowledge Argument include

1. Mary could sufficiently imagine blue before leaving the room (Dennett 2007; Churchland 1989; Maloney 1985)
2. Mary acquired a new mode of presentation on leaving the room (Lockwood 1989; McConnell 1994; White 2007)
3. Mary learned something new on leaving the room (Raymont 1999; Chalmers 2002; Nida-Rümelin 2007)

Parallel responses to the Temporal Knowledge Argument would seem to include

1. Mark could sufficiently experience the A-series before leaving the block universe (A-theorists include Craig 2000; Crisp 2004; Forrest 2005)
2. Mark acquired a new mode of presentation on leaving the block universe (Meyer 2011; Muller 2011; Dieks 2007¹)
3. Mark learned something new on leaving the block universe (Le Poidevin 1991; Oaklander 1991; Saunders 2002)

Concepts used to understand Mary can be applied to Mark, and vice versa.

References

- Chalmers, D., 2002, "Content and Epistemology of Phenomenal Belief", in Q. Smith & A. Jokic (eds.), *Consciousness: New Philosophical Essays*, Oxford, OUP
- Churchland, P., 1989, "Knowing Qualia. A Reply to Jackson", in *A Neurocomputational Perspective: The Nature of Mind and the Structure of Science*, Cambridge, MA: MIT, pp. 67–76.
- Craig, W. L. 2000, *The Tensed Theory of Time*, Dordrecht: Kluwer.
- Crisp, T. 2004, 'On Presentism and Triviality', in: D. Zimmerman, ed., *Oxford Studies in Metaphysics: Volume 1*, Oxford: Oxford University Press, pp. 15–20.
- Dennett, D., 2007, "What RoboMary Knows," in T. Alter & S. Walter (2007): 15–31.
- Dieks, D., 2007, "Probability in modal interpretations of quantum mechanics," *Studies in History and Philosophy of Modern Physics*, 19, 292-310.
- Forrest, P. 2005, 'General Facts, Physical Necessity and the Metaphysics of Time', in: D. Zimmerman, ed., *Oxford Studies in Metaphysics: Vol. 2*, Oxford: Oxford University Press.
- Jackson, F., 1982, "Epiphenomenal Qualia", *Philosophical Quarterly* 32: 127–136.
- Le Poidevin, R. 1991, *Change, Cause, and Contradiction*, London: Macmillan.
- Lockwood, M., 1989, *Mind, brain, and the quantum*. Oxford: Blackwell.
- Maloney, Ch., 1985, "About Being a Bat", *Australasian Journal of Philosophy* 63 (1): 26–49.
- McConnell, 1994, "In Defense of the Knowledge Argument," *Philosophical Topics* 22 (1&2): 157–187.
- Meyer, U., 2011 "Time and Modality," in C. Callender, ed., *The Oxford Handbook of the Philosophy of Time*. Oxford University Press, 2011.

¹ Modal interpretations of quantum mechanics are prominent, and time in quantum mechanics is both a parameter and an operator, justifying it's inclusion here.

Muller, Thomas (2011) Branching space-times, general relativity, the Hausdorff property, and modal consistency. [Preprint at <http://philsci-archive.pitt.edu/8577/>]

Nida-Rümelin, M., 2007, "Grasping phenomenal properties," in T. Alter & S. Walter (eds.), 2007, *Phenomenal Concepts and Phenomenal Knowledge. New Essays on Consciousness and Physicalism*, Oxford: Oxford University Press. 307–349.

Oaklander, N. 1991, 'A Defense of the New Tenseless Theory of Time', *Philosophical Quarterly*, 41, pp. 26–38.

Raymont, P., 1999, "The Know-How Response to Jackson's Knowledge Argument", *Journal of Philosophical Research* 24: 113–126.

Saunders, S. 2002, 'How Relativity Contradicts Presentism', in Callender (ed.), *Time, Reality, and Experience*, University of California, San Diego pp. 277–292.

White, St. L. 2007, "Property Dualism, Phenomenal Concepts, and the Semantic Premise," in T. Alter & S. Walter (eds.), *Phenomenal Concepts and Phenomenal Knowledge. New Essays on Consciousness and Physicalism*, Oxford: Oxford University Press. 210–248.