

Modal Dimensionalism

Where (*Im*)possible Things Are¹

SHIMPEI ENDO²

July 21, 2018 (Sat) 10:20-11:35

Everything possible or otherwise is *somewhere*. Dimensions make spaces even for impossibilia. Such a dimensional idea turns out to reduce further than its creator expected.

WE SEEM TO AGREE THAT THERE ARE POSSIBLE WORLDS. Observe the two mainstream schema: (i) theoretical utility of possible worlds as a handy but powerful analysis tool³, and (ii) Quine⁴-like ontological commitment.

WE DO NOT AGREE ON AS WHAT POSSIBLE WORLDS EXIST. Two options are available⁵: (i) *abstractionism*, a popular view which claims possible worlds are *abstract* and (ii) *concretism*, an unpopular view which insists that possible worlds are as concrete as our surrounding physical objects. David Lewis⁶ is (in)famous for the latter.

DAVID LEWIS PROMISES HIS PARADISE. Concretism believers enjoy Lewisian *paradise* for philosophers: a fruitful theory, which *fully reduces* modality into concrete individuals. A modal sentence “A donkey could talk” is understood via a donkey which talks and lives in a non-actual possible world.

MANY OBJECTIONS HAVE ATTACKED. Literally, really, many objections have been attacking Lewisian reductive project. They spread through the following layers⁷.

1. *System*. Lewis' theory is ill: inconsistent, containing paradoxes⁸ or incomplete, leaving explanatory gaps^{9 10 11}.
2. *Disappointment*. Lewis breaks his own promise. Lewis does not take us to his promised paradise¹².
3. *Conversion*. So what? Why do I need to change my mind?¹³ Lewis' argument heavily relies on his metaphysical preference or taste.

MODERATE LEWIS? Lewis' particular constraint over worlds, namely, *mereological sums of spatiotemporally related individuals*, seems (unnecessarily) to cause these problems. It is tempting to revise Lewis' modal theory by *weakening* or *thinning* it¹⁴.

¹ An individual presentation at Forum for Young Philosophers, National Youth Center (Room 307), Tokyo. The latest version of this handout is available here: <https://www.overleaf.com/read/bmwbrvrbtkqd>

² Master of Logic, ILLC, University of Amsterdam. My main interests are metaphysics and logic(s), viz., modal realism and semantics for non-classical modal logics.
✉endoshimpeiendo@gmail.com

³ “Possible world talk” analyzes many intensional notions including proposition, property, and modality. Its formal semantics (e.g. Kripke's relational semantics) is applied to epistemic and ethical notions. cf.

Jaakko Hintikka. *Knowledge and Belief*. Cornell University Press, Ithaca, 1962

⁴ Willard V Quine. On What There Is. *Review of Metaphysics*, 2:21–39, 1948

⁵ You may be familiar with different names: *modal actualism* or *ersatz modal realism* for (i) and *possibilism* or *(genuine) modal realism* for (ii). (i) includes a *ersatz* such that sees a possible world as a maximally consistent set of sentences.

⁶ David Lewis. *On the plurality of worlds*. Blackwell, Oxford, 1986

⁷ Shimpei Endo. Contemporary Debates on Possible Worlds. *Japanese Student Research Notes of Philosophy of Science*

⁸ E.g. *epistemic* objection asks how we get modal knowledge about spatio-temporal and causal isolated worlds.

⁹ William G. Lycan. Two Concepts of Reduction. *Journal of Philosophy*, 83(11):693–694, 1986

¹⁰ Peter van Inwagen. Plantinga on Trans-World Identity. In *Alvin Plantinga*, pages 101–120. Springer Netherlands, Dordrecht, 1985

¹¹ E.g. *irrelevance* objection requests further explanation why and how such possible worlds have something to do with modality.

¹² Scott A Shalkowski. The Ontological Ground of the Alethic Modality. *The Philosophical Review*, 103(4), 1994

¹³ Ross P. Cameron. Lewisian Realism: Methodology, Epistemology, and Circularity. *Synthese*, 156(1):143–159, 3 2007

¹⁴ Richard B Miller. Moderate Modal Realism. *Philosophia*, 28(3):3–38, 2001

YAGISAWA MODERATES. In a nutshell, Yagisawa's modal *dimensional* metaphysics¹⁵ ¹⁶

1. proposes *metaphysical indices* (dimensions) as its metaphysical fundamentals,
2. adopts a serious analogy between modality and time, and
3. understand worlds in terms of *modal* indices (modal kind of metaphysical indices).

YAGISAWA'S NEW PARADISE WELCOMES IMPOSSIBILIA. A benefit of modal dimensionalism is an import of *impossibilia*¹⁷, which provides a *finer-ground* analysis (viz. for *hyper-intensionality*)¹⁸.

YAGISAWA'S PARADISE IS SOFT. Modal dimensionalism is officially placed somewhere between ersatzers' abstractionism and Lewisian concretism¹⁹. Yagisawa offers a non-circular one-step reduction of modality into modal indices. However, Yagisawa's is still *soft*; it does not explain what makes the modal kind of indices among metaphysical indices in general.

GO THIN BUT STRONG BY SPATIALIZING. I propose to re-locate modal dimensionalism at a more hardcore position. Lewisian lost paradise reappears when metaphysical indices are taken to be *all spatial*: anything can be signified by pointing at where the things are existentially like "things from here to there".

SPATIALIST CLAIMS TWO ACTS.²⁰ Spatialists insist that everything is *spatial*. Worlds are thus spatial in the following sense; *locusism*: worlds are *somewhere* and *dimensionalism*: worlds are dimensional.

SPATIALIST PARADISE LOOKS BETTER;

1. System sound and complete. Yagisawa-Endo's modal (and metaphysical) space is free to customize.²¹
2. Promised paradise: true reduction. Spatial is concrete and extensional. Reduction has already reached at the rock bottom! Yagisawa already confirms that any kinds (spatial, temporal, spatio-temporal, or modal) of metaphysical indices is no more fundamental than another.²² Impossibilia is a bonus.
3. Embracing pagans. You do not have to change your mind. Since modal spatialism (as dimensionalism already does) leaves many details unspecified in itself, you can construct your own philosophical and metaphysical standpoint within my spatial framework, however wild.

¹⁵ Takashi Yagisawa. *Worlds and Individuals: Possible and Otherwise*. Oxford University Press, Oxford, 2010

¹⁶ Also see my summary: <https://www.overleaf.com/read/nyvcvknwrhsm>

¹⁷ *Ibid.*, Ch. 8.

¹⁸ Recall that possible-world-talk is motivated by extensional explanation of intensional notions such as intentions. In fact, appealing its utility is a common practice for expanding to impossibilia; if you adopt possible worlds for the sake of utility, why not for impossible worlds?

¹⁹ *Ibid.*, Ch.7.

²⁰ My next talk deals with these spatialized modal realism. See: <https://www.overleaf.com/read/mzhctvfkrhmf>

²¹ An unsaid *soft* aspect of Yagisawa is its customizability. Many details are unspecified on purpose.

²² *Ibid.*, Ch.2.

References

- [1] Ross P. Cameron. Lewisian Realism: Methodology, Epistemology, and Circularity. *Synthese*, 156(1):143–159, 3 2007.
- [2] Shimpei Endo. Contemporary Debates on Possible Worlds. *Japanese Student Research Notes of Philosophy of Science*.
- [3] Jaakko Hintikka. *Knowledge and Belief*. Cornell University Press, Ithaca, 1962.
- [4] David Lewis. *On the plurality of worlds*. Blackwell, Oxford, 1986.
- [5] William G. Lycan. Two Concepts of Reduction. *Journal of Philosophy*, 83(11):693–694, 1986.
- [6] Richard B Miller. Moderate Modal Realism. *Philosophia*, 28(3):3–38, 2001.
- [7] Willard V Quine. On What There Is. *Review of Metaphysics*, 2:21–39, 1948.
- [8] Scott A Shalkowski. The Ontological Ground of the Alethic Modality. *The Philosophical Review*, 103(4), 1994.
- [9] Peter van Inwagen. Plantinga on Trans-World Identity. In *Alvin Plantinga*, pages 101–120. Springer Netherlands, Dordrecht, 1985.
- [10] Takashi Yagisawa. *Worlds and Individuals: Possible and Otherwise*. Oxford University Press, Oxford, 2010.