Takashi Yagisawa: *Worlds & Individuals: Possible and Otherwise*
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In his book *Worlds & Individuals: Possible and Otherwise*, Takashi Yagisawa presents yet another version of the so-called modal realism, a thesis according to which possible worlds are real entities. The substantive outline of the theory presented in chapters 1-8 (*Modal Realism; Time, Space, World; Existence; Actuality; Modal Realism and Modal tense; Transworld Individuals and their Identity; Extensionalism; Impossibility*, respectively) and subsequent testing of the theory in Chapters 9-10 (*Proposition and Belief; Fictional Worlds*) present a project of a significant philosophical value. And although Yagisawa's book is not a defence of modal realism in its core form, Lewis's views clearly influenced Yagisawa in formulating the proposal. So let put at least three differences on the table.

First of all, possible worlds in Yagisawa's sense are not worlds as understood by Lewis. Rather, worlds are defined as modal indices that are (but not exist)[1] along its temporal and spatial counterparts. Also, modal indices are not concrete mereological sums of individuals. What Lewis describes as the actual world, or the universe, Yagisawa calls the actual-world-stage of the universe. Therefore, the universe *à la* Lewis is not a modal index. Instead, it is the comprehensive subject of possibility and necessity (p. 44). The Lewisian actual world is one way at one possible index while another way at another possible index, since it extends in temporal, spatial and modal dimension. Possible worlds are neither concrete, nor abstract, and whether they are objects at all is an open business:

> [I] take moments of time to be real but I am non-committal about whether they are non-concrete objects of some kind. If they are, I will be happy to accept that worlds in my sense are also non-concrete objects of some kind. (179, fn. 7)

One way or the other, there is a plurality of worlds, a plurality of different world-stages of the same universe. Modal space contains many concrete objects all of which are modal parts of one and the same universe. Some of them may

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[1]   For Yagisawa, reality is fundamental and monadic and existence is domain-relative.

be unified by spatiotemporal relatedness, some may be unified by some other relation, and some others may not be unified by any relation other than being part of the universe and whatever that requires (p. 45).

The second crucial distortion from Lewis's theory is the analogy between trans-temporal and trans-world identification. Lewis sympathized with the former, (so that we perdure through time by having distinct temporal stages at different times) but formulated several objections against the latter (see Lewis 1986, 218-219). Yagisawa, on the other side, accepts such an analogy and poses the so-called 'Closest-Continuer' relation holding between modal parts of a single individual. The relation is defined along the following lines:

> A modal stage x at a possible world w_1 and a modal stage y at a different possible world w_2 are parts of the same modally extended object of a kind K if and only if there is a chain of possible worlds from w_1 to w_2 ordered by the overall similarity relation such that x and some modal stage, x+1, at the next world in the chain are sufficiently similar to each other in relevant respects and are each other's closest continuer at their respective worlds, x+1 and some modal stage, x+2, at the next world in the chain are sufficiently similar to each other in relevant respects and are each other's closest continuer at their respective worlds, ..., and x+n and some modal stage, x+n+1=y, at the next world, w_2, in the chain are sufficiently similar to each other in relevant respects and are each other's closest continuer at their respective worlds, where the sufficient similarity, relevant respects, and closeness are relative to the kind K. (Yagisawa 2009, 109)

That's the Closest-Continuer relation operating on the modal stages in a nutshell.

The third move away from the traditional modal realism is the acceptance of impossible worlds. Again, such worlds are neither concrete nor abstract, but as real as possible worlds. Besides, there are impossible individuals. They do not exist in the domain of possible objects. They exist in the domain of metaphysically impossible objects, yet given the 'Closest-Continuer' relation between world-stages, they also exist at some possible worlds (by having stages that exist at those worlds). But let discuss this point in more details as it has raised quite serious accusations from inconsistency.

Recall that for Yagisawa, times, places and worlds are metaphysical indices and are all equally real. Following these assumptions together with metaphysical parity between possible and impossible worlds, impossible worlds are real too. Consider now an extended object, me. I have properties-at-world-w in virtue of having a w-stage with those properties. That means that I have a world-

stage such that I am a philosopher-at-w. Besides that, I have plenty of other word-stages. For instance I have a-football-player-at-w_1 stage, a-pianist-at-w_2 stage, a-talking-donkey-at-w_{99} stage, since I could be a football player, I could be a pianist and (under a very charitable reading) I could be a talking donkey, respectively.

So far so good. But a lot of things are impossible. It is not possible for me to be a philosopher and not a philosopher at the same time, a football player and not a football player at the same time or a talking donkey and not a talking donkey. If that is so, modal stages strategy requires there to be stages such that

Martin-is-a-fotball-player-and-non-a-football-player-at-i_1
Martin-is-a-pianist-and-not-a-pianist-at-i_2
Martin-is-a-talking-donkey-and-not-a-talking-donkey-at-i_{99}

But if impossible worlds are real, there really are the abovementioned inconsistent stages. And that's a plain actual contradiction because inconsistent stages turn out to be actually true. End of the 'exportation' objection.

I think, however, that the situation is not as desperate as it might seem. The reason is that although modal realistic in spirit, Yagisawa's theory appears to represent modal phenomena in a way modal realists don't. For, speaking about reduction of modal facts to non-modal facts, Yagisawa's motivation is more modest. Instead of full modal reductionism, he prefers soft reductionism (p. 152) according to which a) temporal, spatial and modal indices are taken to be metaphysically simple and b) the at-a-world relation is primitive. These features of the theory place it somewhere between modal realism and actualism and, more importantly, between two ways of representation: genuine and ersatz. And while the former causes exportation troubles the latter does not necessarily so.

In Lewis (1986, ch. 3), Lewis identifies one kind of ersatz representation in a dialogical form:

> Say I: [Lewis]: you make a second mystery, because you don't tell me what it is for the concrete world to 'select' an element.
> Says he: [magical ersatzer]: that's primitive. All theories have their primitives, and 'selects' and 'elements' are mine.
> Say I [Lewis]: you cannot explain modality, because you took that as primitive also.
> Says he: [magical ersatzer]: I did. I don't pretend to explain modality, but there are plenty of other purposes for the theory to serve. (Fair enough.) The choice is between primitive modality and crazy ontology like yours, and I choose the former. (Lewis 1986, 176)

Apparently, one of the Lewis's objections takes the meaninglessness of the relation between the concrete cosmos and an element to be crucial. Whatever we take the relation of 'selection' to be, either way lies trouble. Given the primitive at-a-worldness, combined with the simplicity of indices, Yagisawa does not seem to avoid the accusation of magical representation. It is rather by magic how the concrete cosmos 'selects' one index rather than another. But the question might stand otherwise. Namely: are the criteria so strong that any theory that fulfils them should be replaced by a theory that does not? Or: is the 'selection' relation a sufficient reason to deny a theory that makes use of it?

Suppose that the use of the selection relation is enough to dismiss a theory and consider any kind of set theory. Given a set of things it seems obvious that what makes it the case that those very things are its members is a membership relation. Since we do not grasp of intrinsic natures of sets themselves (unless we refer to their members), set-membership relation is a good example of the 'selection' (cf. Van Inwagen 1986, 207-210). But does the presence of such a relation provide reason to deny set theory? It obviously seems too strong to answer the question positively even if we do not have an ultimate story as how it works. I therefore have for it that one way of avoiding the exportation problem is to (bite the bullet and) admit that the representation goes by magic rather than genuine instantiation. Doing so, it would not be the case that real impossible stages make the actual world inconsistent, for the way they *represent* does not bring any inconsistencies in home language. They represent impossible phenomena in a harmless (although magical) way.

Overall, Yagisawa's book provides a systematic treatment of various philosophical issues and gives the reader a unified package. It is thus no doubt that *Worlds & Individuals: Possible and Otherwise* is a unique endeavour in contemporary metaphysics and deserves the attention of a broad philosophical community.

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References

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