

Abstract

Do worlds other than this actual world – so called *possible worlds* – exist? If possible worlds exist, what metaphysical status do they have? That is to say, *metaphysically speaking as what* do possible worlds exist? David Lewis has famously presented the theory of *genuine modal realism*, which insists that possible worlds exist as *concrete* entities. This article circulates objections against genuine modal realism and presents a novel categorization based on three layers: *system*, *disappointment*, and *conversion*.

1 Introduction: metaphysical debates on possible worlds

Possible worlds (i.e., worlds including not only our actual one but also non-actual merely possible ones) appear in many areas of philosophy. Metaphysical natures of worlds *per se* attract philosophers (see [5]). In addition, philosophers have employed possible worlds as a powerful but handy analysis tool to give accounts of many kinds of modality, ubiquitous throughout philosophy (cf. [3]). Modality offers a more detailed description of truth; it describes *how true* something is rather than simply *whether or not* it is true. Modal notions (including possibility, necessity, counterfactuals, dispositions etc.) and reasoning on modal claims via modal logics (recall widespread semantics of Kripke [8] features possible worlds as its crucial components.) are apparent cases of possible world talk. Furthermore, non-metaphysical philosophers have also enjoyed possible world analysis or possible worlds *talk* for other kinds of *modes*, including epistemic (as Hintikka [7] initiated), temporal (e.g. transitions, process), and ethical issues.

Most philosophers seem to agree with the *existence* of possible worlds until we begin to give a definition. This trend is due to the combination of two dominating schemes; one employs *possible worlds talk* and the other holds Quine's [15]'s ontological commitment. The former is observed in how widely possible worlds are used in philosophical enterprises. The latter secures ontological existence from mentioning or being quantified in such possible worlds talk. Hence, the existence of possible worlds is no longer the central metaphysical problem. Rather, the current concern is a *qualitative* question about the ontological status of possible worlds.

The current paper gives direction towards a program of defending *concrete modal realism*. The next section digests concrete modal realism. The subsequent section presents a novel categorization of these attacks based on three layers: *system*, *disappointment*, and *conversion*. Upon this chart, I will pinpoint the problem of current discussion concerning genuine modal realism. In the appendix, I will sketch the new program of the concrete modal realism to come. That should be, for one aspect, generalization of genuine modal realism, which can and should be more general than what David Lewis presented. This generalization, however, is not done by compromising or weakening. Rather, it made possible to cast the hard vision of concrete modal realism by shrinking it to spatial entities.

2 Digest: concrete modal realism

Toward the *as what* question on possible worlds, there are two major options. One is *abstractionism*, a more popular, more modest, more intuitively believable position, which includes possible worlds as *abstract* entities. The other, less popular, less modest, and less believable one is *concretism*, which insists possible worlds exist as concrete objects [10]. Concretism is suggested and supported (almost solely) by David Lewis [9].

On top of their existence, Lewis further specified the ontological profile of possible worlds. A possible world, according to Lewisian concrete modal realism, is a *maximal mereological sum of spatiotemporally (and causally) connected individuals*. According to this clarification, our actual world then contains the farthest galaxies as well as the ancient Romans. This description entails, Lewis argues, the isolation among possible worlds. There cannot be any overlap between two possible worlds since they are characterized as entities spatiotemporally (hence causally) isolated from each other.

This view is, fairly speaking, unpopular (witness [17]). Lewis himself noticed that his courageous statement –whose list appears to violate a widely believed ontological virtue known as Ockham’s razor, for containing talking donkeys, and Wittgenstein’s unborn daughter and too many merely possible entities– is hard to accept for most, meriting less a response than an *incredulous stare*. His strategy is to appeal its *theoretical utility*; concrete modal realism is *fruitful*. Theoretical benefit of expanding the list of concretes overweights, Lewis insists, the cost of incredulity.

What is the virtue? Firstly, as shown in the introduction, concrete modal

realism provides powerful but handy analysis of modality. However, this benefit is not solely promised for Lewisian gang but also modal realists camps in general. Two distinctive prizes are prepared for concretism believers. The first one is *reduction* [17]. Supporters [11] argue that the only successful reduction is done by Lewis. Recall that possible worlds are employed to give an account of what modality is. However, possible worlds under abstractionists understanding need modal concepts to explain what possible worlds are. For instance, linguistic ersatz approach sees a possible world as a maximal consistent set of propositions. Once they move on to what is these propositions composing the set, it would end up with saying that a proposition which is *possible*. Such explanation relies on unanalyzed or *primitive* modal concept, which is exactly what we are supposed to give an account to.

The second benefit is *metaphysical economy*. Lewis' ontological system, at a first glance, seems to be further generous than others since it adds merely possible but not actual entities such as the dragon breathing fire, Wittgenstein's unborn daughter into the list of what concretely exists. Lewis argues that we should count the cardinality of kinds instead of simply and naively counting the cardinality of entities. Lewis' list has only one single category: everything exists is concrete. This is ontologically speaking huge advance compared to abstractionist's list which requires an *extra* category: concrete and abstracts. The similar argument holds for a counterargument to who approves possible worlds only as a way of speaking such as metaphor or useful fiction); Lewis (nor I) does not find any point of importing an extra kind of entities "entities of reality" and "entities only appears in the possible world story". Therefore, Lewis concludes his concrete version gains the same benefit out of more restricted metaphysical resource, which is a ontological reasonable deal.

3 The three layers over anti-concretism objections

Many objections have been made to Lewis' theory of modality. Contemporary discussions for and against Lewis' perspective have been executed in a piece by piece manner. Some critics picks up a particular problem of their (occasionally unjustified and arbitrary) choice from Lewis' theory; others defend some objections (relatively easy ones) of their choice.

This might, preferably for Lewis' methodological preference (shown in [14,

Ch. 9], [13]), reflect that there is no single shot knocking down argument in philosophy. Nevertheless, this piecemeal situation harms another virtue of philosophical studies that blesses analysis of a theory *as a whole*, not particular segments of the theory. Moreover, being suffocated with each particular objection and its particular consequences might miss the broad picture of our strategy to defend concrete modal realism. This section presents three layers laying through these countless objections. The layers are: *system*, *disappointment*, and *conversion*.

3.1 System objections. The first kind of objection claims that Lewis' ontology is ill or unsound as a *system*. Let us call this line of disputes system objections since it attacks Lewis' belief or thought as if it were a formal system such as of logic. Once a formal system (e.g. classical propositional logic) is expressed in a formal syntactical manner as a set of propositions, we usually expect the set to satisfy two norms: consistency and maximality. Neither an inconsistent system, which contains contradictions nor a non-maximal system, which has some explanatory gap, is wanted.

The non-maximal failure hosts especially many famous charges. The most prominent one may be the *epistemic* objection. It disputes that Lewis does not or cannot explain how we get modal knowledge. How do we know, the objection questions, what is going on in such Lewisian multiverses isolated from us? A similar charge [18] aims at *irrelevance*. How do such Lewisian isolated multiverses, if any, have anything to do with modality? This irrelevance objection charges Lewis' shortening to give an account to how such concrete and isolated worlds contribute to our modal notions.

3.2 Disappointment objections. The second type of disagreements is based on *disappointment*. These are points where Lewis fails to achieve the goal he himself promised. As observed previously, Lewis advertises his modal realism with expectations of its theoretical benefits which he even calls *paradise* for philosophers. Objections of this kind demonstrate that it is unobtainable by believing Lewis.

Fruitfulness? The most general merit of Lewisian modal realism is its *fruitfulness*. No one refuses to admit the fruitfulness of possible worlds analysis. However, there is a huge space for arguing how much, if at all, possible worlds with Lewisian characteristics solely enable this practical purpose. It seems to suffice to observe two facts. Firstly, what possible world semantics

the majority enjoys is Kripke semantics [8], whose ontological characterization and commitment are very different from of Lewis. Secondly, some critics along this line provide a more creative counterargument. They (e.g. [2] [4]) try to build possible worlds semantics without relying on Lewisian ontological entities.

Reduction? More crucially, reduction was a distinctive deal for genuine modal realism. Lewis' is claimed to be the *only* option which succeed to eliminate primitive modality in explaining what is modality. Shalkowski [16] doubts that Lewis achieved this goal. Shalkowski points out that primitive modality still remains in Lewis' theory when considering *alethic* modality. Everything (appearing in his discourse, which exists due to Quinean ontological commitment) is possible in Lewisian framework. In other words, anything in Lewis' discourse should be *already modalized*. Lewis' argument then becomes *circular* i.e. *non-reductive* argument, which the whole program of concrete modal realism should avoid.

3.3 Conversion objections. The third and final variation is also the grumpiest. These are conversion objections, which attack at Lewis' strategy or methodology. Lewis' methodology (see [13]), they claim, cannot work for convincing non-Lewisians. The former two layers are not methodological in this sense. Rather, they simply complains that what Lewis describes is *not* the promised paradise. This "conversion" version, in contrast, criticizes the attitude itself. This attitude can be said to which merely describe one option among many, plausible perhaps but lacking the means (say, uniqueness of explanatory power) to convince the skeptical.

Bad deal? To begin with, genuine modal realism offers ontological shoppers a bad deal. Some cannot buy Lewis' theory due to its unacceptable consequences, which require them to revise wide range of their beliefs – not only metaphysics but also common sense, scientific knowledge, and epistemological system. To them, therefore, such huge workloads seem a bad ontological deal.

Transcendental argument? Moreover, Lewis does not provide sufficient arguments to discard the competition. Even those who admit that genuine modal realism delivers all the merits it promised have no reason to convert until they are convinced that no other tool could do the same job. Lewis,

from their perspective, demonstrates *at most* how his theory works as a possible (and hopefully plausible) account. The creative counterarguments such as [2] and [6], which suggest alternative theories which can do the same job (modeling modality) without the aid of possible worlds, follow this type of objection.

Begging the question? Another allegation is that parts of Lewisian ontology are only acceptable to those who are already Lewisians. This argument is here represented by Cameron [1] as the common fallacy of *begging the question*. Lewis only explains what would happen if we accept Lewis' assumptions. But whether or not we should take these assumption is the very question that we are supposed to be discussing.

Merely philosophical tastes? Finally, we can point out the many other unjustified preferences which ground Lewis' whole argument. We may have some preferences which we take as our common starting points or aims, which we have traditionally called *Moorean facts*. Conversion charges permit Lewis to set facts of his own choice. However, they question how he can (or whether he even intends to) convince(s) other philosophers with different starting points.

In total, the strategical issue is that Lewis's argument does not address everyone. To resist Lewis, they do not have to conquer Lewis. It is enough to declare that Lewis' theory does not provide sufficient reason for them to discard their current position.

4 Conclusion: usage of this categorization

What did I do by offering such an overview of objections? The majority, anti concrete modal realists, can make use of this layered list for further elaborating their counterarguments. However, this guide is more important for the minority, hard pressed to reply to so many objections and doubly challenged by concrete modal realism's widespread unpopularity. The merit of my chart is to help to cast a grand plan of effective defense strategy for concrete modal realists. We do not have to provide an ad hoc revision or interpretation to avert a particular issue. The new genuine modal realist to come does not provide a response to each piecemeal objection propped against genuine modal realism. Rather, she intends to suggest a "general" kind of modal realism as the next step.

Appendix: feature of concrete modal realism for everyone

The tragedy of genuine modal realism is that, due to its unpopularity, many assume genuine modal realism is exactly as Lewis explicates. The endless stream seems to force us to abandon concrete modal realism completely; we ought to not get pushed further downstream than is warranted. Granted, the three layers are strong enough to challenge a portion of Lewisian modal realism. Nevertheless, these layers do not and should not conclude the end of concrete modal realism in general (or *in genuine*). The possibility of a more general version of concrete modal realism which eliminates some problematic Lewisian constraints remains open.

The general modal realism should keep the heart of concretism, and so worlds (and their residing individuals) should all be *concrete*. To be concrete is, following the standard criterion, to be *spatio-temporal*, or to be placed in space(-time). This weakened and thin version only requires us to admit possible worlds as spatial entities while leaving open what properties space satisfies. Each philosopher may want to express properties or constraints over worlds and other ontological entities of their choice. This general concretism, for the time being, may host such disputes by providing a vast common ground or platform called *space*. They would express their stances and differences from others in terms of space. In fact, most common characterizations can be easily expressed through spatial terms. (Lewisian *isolated* universes, Kripke's *accessibility*, dimensions or areas for the "abstracts" and "concretes" distinction, etc.)

Our first step should be not to knock down but to tame attackers by offering the general version of concrete modal realism, which does not commit to some of Lewis' opinions (as [12]). Once we succeed in securing that thin but rich ground, we can start the next phase, where the original disputes may be conducted in the unified framework of a general concretism.

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