

“Metaphysical” Possibility Revisited

- *Metaphysical Possibility*: That alethic, non-deontic, modality whose necessities are supposed to include the likes of conceptual truths, (pure) mathematical truths, truths of fundamental ontology (such as that there are, or are not, propositions, properties, or possible worlds), mereological truths, identity truths, explanatorily basic normative truths, and grounding truths.
 - *Sider*: “We are told that logic...is metaphysically necessary. We are told that laws of nature are not....[I]t is metaphysically necessary that “nothing can be in two places at once”, and so on. This conception falls...short of a full criterion. But a thin conception is not in itself problematic. For when a notion is taken to be fundamental, one often assumes that the facts involving the notion will outrun one's conception [2011, 266].”
- It is widely agreed that the *intelligibility* of metaphysical modality has been vindicated.
 - *Quine*: “I do not myself make sense...of metaphysical necessity [1990, 224].”
 - *Williamson*: “[M]etaphysical modality is only one member of the extended family of objective modalities. Arguments for scepticism about metaphysical modality tend [implausibly] to generalize to other objective modalities [2016, 462].”
- But even if metaphysical modality is intelligible, it could lack much *metaphysical significance*.
- I will argue that this is the case, and will conclude with an alternative conception of possibility.

Extant “Deflationist” Critiques

- *Sidelle [1989] & Unger [2014]*: “Twin Earth” thought experiments just concern the meaning of a word. We all agree what worlds there are. We just disagree about how to describe them.
- *Problem*: This critique is quite limited. What about logic, mathematics, normativity and so on?
- *Sider [2011]*: Assuming the availability of some non-modal account of logical consequence, we can “reduce” the modal claim that, $\Box P$, to the claim that P follows from some contextually determined “modal axioms”. No particular collection of modal axioms has a privileged status.
- *Problem*: One should not be prepared to accept a non-modal account of logical consequence unless one is antecedently prepared to accept a non-modal account of metaphysical necessity.

- *Cameron [2009]*: If worlds are, e.g., sets of sentences, then there is not an important difference between the possible and impossible ones.¹ They are all there, consistent and inconsistent alike.
- *Problem 1*: The critique can be taken further. There is no *non-verbal difference* between Mortensen [1989]’s *possibilism*, which virtually no one accepts, and the view that there are also impossible worlds, and all worlds are of the same metaphysical kind, which many accept.
- *Problem 2*: This only generates problems if one assumes a worlds-based semantics.

A Simple Question

- *Question*: The notion of metaphysical possibility (necessity) has played a central role in metaphysics in the last half century. What about this notion is metaphysically significant?
- *Compare*: What is metaphysically significant about the iterative concept of set or classical notion of consequence?

The Obvious Answer

- *Answer 1 (Kripke [1980], Lewis [1986], Lowe [1998], van Inwagen [1997], Williamson [2016])*: Metaphysical possibility (necessity) is *maximal* – i.e., *absolute* – possibility. If something is possible in any other sense, then it is metaphysically possible, but not conversely.
 - *Idea*: Metaphysical possibility is the “ultimate court of appeals” for modal questions.
 - For any other kind of possibility and necessity, $\langle N \rangle$ and $[N]$, we have $\langle N \rangle A \leftrightarrow \langle M \rangle (T \& A)$ and $[N]A \leftrightarrow [M](T \rightarrow A)$, where $\langle M \rangle$ and $[M]$ are metaphysical possibility and necessity, respectively, and T is the (perhaps infinite) conjunction of uniquely N -necessities.
 - *Compare*: The iterative concept of set or classical notion of implication is maximal.
- *Problem*: There are certainly senses of “possible” for which this is not the case!
- *Response*: These are merely *epistemic* (or *deontic*), not objective, senses of “possible”.
- *Problem*: What does “objective” mean? Not alethic. *It is known that* satisfies $(T) []P \rightarrow P$.

¹ Also, who cares about sets of sentences?

- *Response*: In addition to being alethic, objective “modalities...are not sensitive to the guises under which the objects, properties, relations and states of affairs at issue are presented....[I]dentity is simply objectively necessary...[Williamson 2016, 454].”
- *Problem 1*: Why think that modalities which fail to respect to Necessity of Identity (NI) thereby fail to represent “real” possibility – i.e., fail to represent *how the world could have been*?
 - *Wilson*: “(NI) leads to difficulties [but there is] a modal logic in which (NI) is rejected – a so-called *contingent identity* system....Kripke objects to this approach because ‘=’ doesn’t seem to mean *real identity* in such a scheme....[However] I think further reflection on the relations between the notions of *attribute* and *possibility*...provide intelligible underpinnings for the contingent identity semantics [1982, 303].”
 - *Priest*: “Consider the zygote that was to become me. Consider a world in which this split at the appropriate time, and my mother gave birth to identical twins, Graham₁ and Graham₂. In that world, I am two people; and in this world, they are one...[2012, 374].”
- *Problem 2*: The Necessity of Identity wildly underdetermines the metaphysical necessities!
 - *Williamson*: “[T]he conception of metaphysical modality as the maximal objective modality leaves open a wide range of theoretical options [2016, 460].”
- *Question*: Why think that alternative mathematics, normativity, etc. is objectively impossible?

Modal Epistemology

- *Answer 1 – Conceivability* [Chalmers 2002, Yablo 2003]: Because, for paradigmatic metaphysical impossibilities, P, we cannot conceive of a scenario in which P.
- *Problem*: Some people certainly seem to be able to!
 - *Mathematics*: “[Nominalists]s believe that numbers do not exist....[Y]ou know perfectly well what they think....When we work...through the nominalist’s system...we encounter neither contradiction nor...absurdity....[I]f [the view is incoherent], there must be some nonmodal fact given which it is palpably absurd to suppose that there might have been no numbers. But...[w]e cannot imagine what it could...be” [Rosen 2002, 292-4].
 - *Properties*: “The word...‘red’...is true of...individual entities which are red...but there is not...any entity...which is named by the word ‘redness’ [Quine 1948, 29—30].”

- *Mereology*: “[Influential philosophers hold that] ‘unrestricted composition’ ...is...necessary... [But w]hy suppose that...it is impossible for the world to have different principles governing the part-whole relation? [Nolan 2005, 36].”
- *Morality*: “There are no objective values [Makie 1977, 58].”
- ...
- *Objection*: The sense in which such views are “conceivable” is not a sense that supports judgements of objective possibility. The conceptions in question are not *coherent*.
- *Rejoinder*: Why believe that only “coherent” conceptions are guides to objective possibility, *independent* of the view that it is not objectively possible that paradigm necessities fail?
- *Answer 2 – Counterfactuals* [Williamson 2007]: Because, for paradigm impossibilities, P, “had it been the case that P, snow would have been both white and not white” is vacuous.
- *Problem*: Again, this is certainly not a generally shared judgement!
 - *Mathematics*: “If one [says] “nothing sensible can be said about how things would be different if the axiom of choice were false,” it seems wrong: if the axiom of choice were false, the cardinals wouldn’t be linearly ordered, the Banach-Tarski theorem would fail and so forth [Field 1989: 237–238].”
 - *Evolutionary Debunking Arguments*: “Suppose that the actual world contains real categorical requirements – the kind that would be necessary to render moral discourse true. In such a world humans will be disposed to make moral judgments...for natural selection will make it so. Now imagine...that the actual world contains no such requirements... nothing to make moral discourse true. In such a world, humans will *still*...make these judgments...for natural selection will make it so [Joyce 2001, 163].”
 - ...
- *Objection*: Any counterfactual may *seem* non-vacuous. But this can be explained pragmatically.
- *Rejoinder*: The question is: why treat, e.g., “had the mathematical truths been different, snow would have been white and not white” differently from “had the physical truths been different, snow would have been white and not white”? There does not seem to be a reason do this which is independent of the assumption that alternative mathematics is objectively impossible.
- *Answer 3 – Essence* [Lowe 2012]: Because, for paradigmatic metaphysical impossibilities, P, P is ruled out by the essence of things.
- *Problem*: Again, no one doubtful of the maximality of metaphysical necessity should agree.

- *Example:* If it is objectively possible that the Axiom of Choice fails, then of course it is not part of the essence of being a set that every set has a Choice function.
- *Answer 4 – Concepts* [Peacocke 1997]: Because, for paradigmatic metaphysical impossibilities, P, there is no assignment of semantic values to concepts in P which respect the rules that govern their application in the actual world
- *Problem:* Similar.
- *Answer 5 – Intuition* [Bealer 2002]: Because, for paradigmatic metaphysical impossibilities, P, we intuit that it is not possible that P.
- *Problem:* Similar.
- *Summary:* There is no reason to believe that “objective” modalities (modalities which respect the Necessity of Identity) exhaust modalities which represent “real” possibility –i.e., *how the world could have been*. But even if there were, there is no reason to believe that metaphysical modality is maximal among them. The Obvious Answer to the Simple Question fails.
 - *Caveat:* One can gesture at “abductive considerations” (Williamson [2013]). But I know of no abductive argument *from neutral “data”* to the “real” impossibility of the above.

Alternative Answers

- *Answer 6:* Even if metaphysical possibility is not maximal, it is metaphysically significant because an array of notions are defined in terms of it are.
 - *Example 1:* F-ness *supervenies* on G-ness just in case it is *metaphysically impossible* for the distribution of F-ness to vary while the distribution of G-ness remains the same.
 - *Example 2:* The *Kripkean essence* of a thing is the set of properties it has in every *metaphysically possible* world in which it exists.
- *Problem 1:* More inclusive notions of possibility allow one to define everything that was definable in terms of metaphysical possibility, but the converse is not true.
 - *Example:* One can define the ordinary notion of supervenience in terms of metaphysical possibility-minus-existential truths (MME) as follows. The property, F, supervenes on G just in case it is MME-impossible that, given the metaphysically necessary existential truths, there is a change in the distribution of G absent a change in the distribution of F.
 - However, one cannot define MMM-supervenience in terms of metaphysical possibility.

- *Problem 2*: Corresponding to more inclusive notions of possibility *are stricter notions of supervenience and essence*. The view that there is something metaphysically significant about the standard such notions is just as much in need of defense as the thesis to be defended.
 - *Example*: Being such that $2+2=4$ is part of Socrates' standard, but not MME, essence.
- *Answer 7*: Even if metaphysical possibility is not maximal, “some of the relative modalities are more “natural” than others....If we add...that this naturalness gives rise to increased “eligibility”, so that this “joint in logical space” is more fit to be picked up as a semantic value of a use of “necessarily” or “possibly” than nearby divisions that fit usage similarly well...a privileged metaphysical feature of the world can be referred to...[Nolan 2011, 322].”
- *Problem 1*: Other examples of “natural” modalities, such as physical or biological modality, seem considerably less gerrymandered than metaphysical modality [Sider 2011, Ch. 12].
- *Problem 2*: Even if this suggestion explains how the notion of metaphysical possibility could be one of many “noteworthy restricted modalities” – along with physical possibility, MME-possibility etc. – it does not explain how it could play the central role that it has played.
 - *Compare*: The iterative conception of set is “metaphysically privileged” *despite the fact that* the well-founded sets form a proper sub-class of the universe of all sets.
 - *Compare*: The classical notion of consequence is “metaphysically privileged” *despite the fact that* intuitionistic logic is a correct theory about what follows from what.

Taking Stock

- Is there an argument for the view that metaphysical possibility is metaphysically significant? I cannot think of one. I suggest that the reason it occupies a central place in our thinking is basically that *we were taught that the metaphysical necessities are the “real” necessities*.
- *Compare (Martin)*: “For individual mathematicians, acceptance of [a ZFC] axiom is probably often the result of nothing more than knowing that it is a standard axiom.” [1998, 218]

A Different Picture

- *Modal Pluralism*: There are a plurality of possibility concepts, all having equal claim to representing how the world could have been, and none is “metaphysically canonical”.

- *Compare:* Set-theoretic pluralism [Hamkins 2011] or logical pluralism [Beall and Restall 2009].
 - *Note:* While the modal pluralist says that none of the above concepts of possibility is canonical, she need not hold that *all are on a metaphysical par*. Physical necessity may be “special”, but so may be MME possibility, (strict) logical possibility, and so forth.
 - ...
 - N_{-2} = technological possibility
 - N_{-1} = physical possibility
 - N_0 = metaphysical possibility
 - N_1 = metaphysical possibility minus the mathematical truths
 - N_2 = metaphysical possibility minus the mathematical and origin truths
 - N_3 = metaphysical possibility minus the mathematical, origin, and mereological truths
 - N_4 = metaphysical possibility minus the mathematical, origin, mereological, and normative truths
 - N_5 = metaphysical possibility minus the mathematical, origin, mereological, normative, and theological truths
 - ...
 - *Note:* While the N s are totally ordered by the *more inclusive than* relation, one can define concepts of possibility neither of which is more inclusive than the other.
 - *Example:* Let N^* = metaphysical possibility minus just the mathematical truths, and let N^{**} = metaphysical possibility minus just the origin truths, then, for select P , we have neither $(\langle N^* \rangle P \rightarrow \langle N^{**} \rangle P)$ nor $(\langle N^{**} \rangle P \rightarrow \langle N^* \rangle P)$.

Pluralism or Permissivism?

- *Objection:* There must be a metaphysically canonical concept of possibility – the most inclusive one. One gets this by amalgamating all of the others. What you are really advocating is radical *permissivism*, the view that much more than is commonly supposed is (“really”) possible.
- *Response 1:* If this argument worked, then an analogous argument would rule out logical pluralism from the start. However, the analogous argument seems highly suspect.
 - *Beall and Restall:* “[W]e see no place to *stop* the process of generalisation and broadening of accounts of cases. For all we know the only inference left in the

intersection of all logics might be the *identity* inference: From A infer A. How bizarre it would be say that *identity* is the only valid argument. It seems a much more appropriate use of the term to call each of [the myriad stronger systems] systems *logic*” [2000, 490].

- *Response 2*: Beginning with any concept of possibility, it seems that we can always construct a more inclusive one that has equal claim to being a “real” concept of possibility by non-vacuously considering the counterfactual, “had some necessity in that sense failed, what would have been the case?” The concept of most inclusive possibility seems *indefinitely extensible*.
 - *Dummett*: “[I]f we can form a definite conception of a totality all of whose members fall under the concept [of objective possibility], we can, by reference to that totality, characterize a larger totality all of whose members fall under it” [1993, 441].
 - *Note*: There may still be *propositions* whose modal status is the same for all modalities.
 - *Note*: It does not follow that *any* more extensive concept of possibility is “real”.
- *Rejoinder*: Logical possibility, *for the correct logic, L*, must be most inclusive (if it is “real” possibility). If it is possible that some L-validity fails to hold, then L is not the correct logic after all. It is constitutive of the correct logic that it guards against all possibility of error.
 - *Response 1*: The reasons to be a modal pluralist may also be reasons to be a *logical* pluralist.
- *Response 2*: There is no reason to believe that the correct logic, L, must guard against all possibility of error, as opposed to guarding against all *L-possibility* of error. None can guard against all epistemic possibility of error. But part of the point of pluralism is that *there seems to be no principled divide between (sufficiently idealized) epistemic and “real” possibility*.
 - *Mortensen*: “The Law of Excluded Middle and its relatives such as the Law of Bivalence, have come under a lot of pressure.... [Philosophers] have provided extensive descriptions of how they see the world, how the world *would* be if they *were* right....[I]t is open to believe that the Law of Excluded Middle is true, without holding the additional thesis that it is necessary” [1989, 326].
- *Response 3*: Even if the correct logic must guard against all objective possibility of error, this just shows that the notion of “real” *consistency* is itself an indefinitely extensible concept.

Deflating Modal Metaphysics

- Modal pluralism is like set-theoretic or logical pluralism. It is *metaphysically inflationary* but *methodologically deflationary*. Paradigmatic categorical questions seem to lose their force.

- *Illustration 1*: Could Kripke’s table *really* have been made of different wood? For the modal pluralist, this is like the question of whether CH is *really* true or whether LEM is *really* valid. It is not metaphysically possible that it could have been, is N_2 possible, and that is all there is to it. In particular, metaphysical possibility is in no way “canonical”.
- *Illustration 2*: Is it part of your Kripkean essence that you have the parents that you have? The pluralist says that *there is no objective fact as to a thing’s Kripkean essence*. Does the normative supervene on the natural? The pluralist says that *there is no objective fact* as to whether a property, F-ness, supervenes on a property, G-ness.
- *Illustration 3*: Is the mind identical to the body? An influential argument proceeds from the premise that it is (ideally) conceivable that the mind exists without the body (or vice versa) to the possibility of this (Chalmers [2002]). By the Necessity of Identity $(\forall x)(\forall y)(x=y \rightarrow \Box(x=y))$, it follows that the mind and body are distinct. The key question in this area is commonly supposed to be whether “conceivability is a guide to possibility”. However, the modal pluralist should reject the argument even if it is such a guide. The problem is that the worlds in which the mind fails to be identical to the body may lie outside the class of worlds for which the Necessity of Identity is valid.

Conclusions

- There is no good argument that metaphysical modality is metaphysically significant.
- I propose an alternative conception of modality, on analogy with set-theoretic or logical pluralism, according to which there is no objective fact as to how the world could have been.

Appendix

- *Objection (Hale-McFetridge)*: Let \Box and \Diamond represent any non-epistemic necessity and possibility, respectively, and let \Box^* and \Diamond^* represent logical necessity and possibility.
 - Then five assumptions are made:
 1. If $\Box^*(A \rightarrow B)$ then $\Box^*[(A \& C) \rightarrow B]$
 2. $\Box^*(A \rightarrow A)$
 3. If $\Box^*(A \rightarrow B)$ and $\Box^*(A \rightarrow C)$ then $\Box^*[A \rightarrow (B \& C)]$
 4. If $\Diamond A$ and $\Box^*(A \rightarrow B)$ then $\Diamond B$
 5. $\sim \Diamond(A \& \sim A)$
 - The Hale-McFetridge Argument then proceeds:
 - a. $\Box^*(A \rightarrow B)$ (assume for *reductio*)
 - b. $\Diamond(A \& \sim B)$ (assume for *reductio*)
 - c. $\Box^*[(A \& \sim B) \rightarrow B]$ (from a., by 1.)

- d. $[*](\sim B \rightarrow \sim B)$ (by 2.)
- e. $[*][(A \& \sim B) \rightarrow \sim B]$ (from d. by 1.)
- f. $[*][(A \& \sim B) \rightarrow (B \& \sim B)]$ (from c., e. by 3.)
- g. $\diamond(B \& \sim B)$ (from b. and f., by 4.)
- h. $\sim \diamond(B \& \sim B)$ (by 5.)
- i. $\sim \diamond(A \& \sim B)$ (b.,g.,h. *reductio*)
- o *Problem*: 4. and 5. are both unconvincing.
 - o With respect to 5., Hale claims that “there is no reasonable sense of ‘possible’ in which it is possible for a contradiction to be true” [1996, 97]. However, this simply assumes that “paraconsistent possibility” is merely epistemic.
 - o With respect to 4., Hale claims “[i]f the logical consequences of \diamond -possibilities need not...be \diamond -possible... we would...be deprived of any...way to test...claims about \diamond -possibility [2013, 108].” However, to deny 4. is only to deny that there is a *single* logic which allows one to reliability reason about possibilities of *every* kind.

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