

Modality and the New Republican Realism

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The modal revolution

- The modal revolution in analytic philosophy was ushered in by Kripke, Lewis, and others
- It made concepts of conceptual, metaphysical, and nomic necessity and the counterfactual conditional are central to philosophical theorizing across the board



The modal and the categorical

- Modal facts concern what is *possibly* or *necessarily* the case.
- Categorical facts concern only what is *actually* the case.
- Modality enters science with notions like *cause, natural law, probability, dispositions, capacities*.
- These are typically locally defined quantities



Laws

- Laws are related to regularities in the pattern of actual fact
- But to say that L is a law is to say more than that things always happen in accord with L.
- It is to say that they *couldn't* happen otherwise.



Chance

- Facts about chance are related to frequencies in the pattern of actual fact
- But to say that a type of event has a certain chance of occurring is to say both more and less than it will occur or occur with a certain frequency in actual cases.
- It is to say something about expected frequencies in *hypothetical* cases.

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- In both cases, there is an ineliminable modal component to the content of these.
 - They have implications not just for the way things are in actuality, but for the way they are in *non-actual, possible* worlds.



Modality and Empiricism

- Modality is a sticking point for empiricists
- science comes with a heavy dose of modal commitment
- But some shun it on the grounds that it involves commitment to noxious metaphysics.



Van Fraassen

- “To be an empiricist is to withhold belief in anything that goes beyond the actual, observable phenomena *and to recognize no objective modality in nature*”



Elucidating modal notions

- There are different ways of trying to elucidate modal notions:
 - One can give an analysis that doesn't use modal vocabulary.
 - Or clarify its formal and logical properties, and its inferential and analytic connections to other notions.
 - Or turn attention to a side-on view of the role modal beliefs play in our cognitive lives.



Kment

- “Before we start to philosophize about modality, we have an implicit theory about it. The philosopher provides this pre-philosophical system of beliefs with a foundation, and refines, extends and corrects it from within. She acts as a participant of our practice of modalizing, i.e. her standpoint is internal to this practice. But the philosopher should also **make the practice of modalizing itself an object of study**. She should, as it were, take a standpoint external to the practice, in order to **describe the practice, and explain what its function is, i.e. why it exists.**”

Consider laws

- Laws entail the existence of regularities
- But cannot be reduced to regularities
- The notion of law recognizes the possibility of regularities that are not laws.



Consider Chances

- Chances bear **necessary connections** to frequencies (characterized by a collection of theorems that relate them probabilistically)
- But – as with laws - they **cannot be reduced** to frequencies.



Intermediate Structures

- These are typically locally defined
- They encode information about distributed structures or 'patterns' in the manifold of categorical fact
- That information is drawn out in empirical inferences

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- It is tempting to suppose that intermediate structures are just redescrptions of lower level patterns
 - But we've already seen why no reduction is possible.



the argument, briefly

- Make any stipulation you like about what the laws are and that stipulation will have models in which **there are exceptionless regularities that are not laws.**
- Make any stipulation you like about what the chances are and that stipulation will have models in which the **chances diverge arbitrarily far from the frequencies.**
- Make any stipulation you like about what the laws and chances are, and there will be models of that chance+law package that contain exceptionless regularities that are not laws and frequencies that diverge arbitrarily far from the chances.

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- There is an ineliminable *looseness of fit* between the modalized structures on the second-order overlay and patterns in the manifold of categorical fact, a *difference in truth conditions*.
 - Information about the pattern of actual fact can provide *evidence* for claims about law or chance, but the relationship between them falls short of *identity*.



Why we construct models

- We use models as the setting for an explicit form of practical reasoning
- In **deciding what** to do, we represent potential actions, imaginatively trace out their effects, and make a choice based on projected outcomes.
- This gives humans a kind of flexibility and foresight that holds perhaps our greatest advantage over natural competitors



Models are tools

- Model construction is not merely a matter of copying.
- It involves restructuring, reorganizing, transforming, and reconfiguring.



What intermediate structures do

- Some of the structures defined in a model have the job of **representing, tracking, or mirroring** localized elements in the landscape.
- Others that **encode information about distributed structures**
- Others that **facilitate computation**

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- Chance is an epistemic tool.
 - Chances guide expectation in open-ended classes of systems.
 - Epistemic tools aid in carrying information, computing, predicting.

Alethic modalities

- Recognizing the **practical dimension of use** is what we need to understand the 'alethic modalities'.
- Alethic modalities concern not just 'how things might actually be, given what we already know', but 'how things would be, had they been otherwise'.
- Alethic modal force doesn't have an effect on one's opinions about what *actually* happens.
- But it does add something of practical importance, something that **makes a difference to choice**



Representation as coping not copying

- representation is not (mere) reproduction
- it is *transformative* rather than conservative.
- It has both *practical* as well as *epistemic* functions.



How to think of models

- Functionally, models are *partially prepared solutions to frequently encountered problems* (heretofore PPS's).
- They package information in a form that facilitates application in tasks that we expect to encounter.



Viewing models as PPS's to FEP's

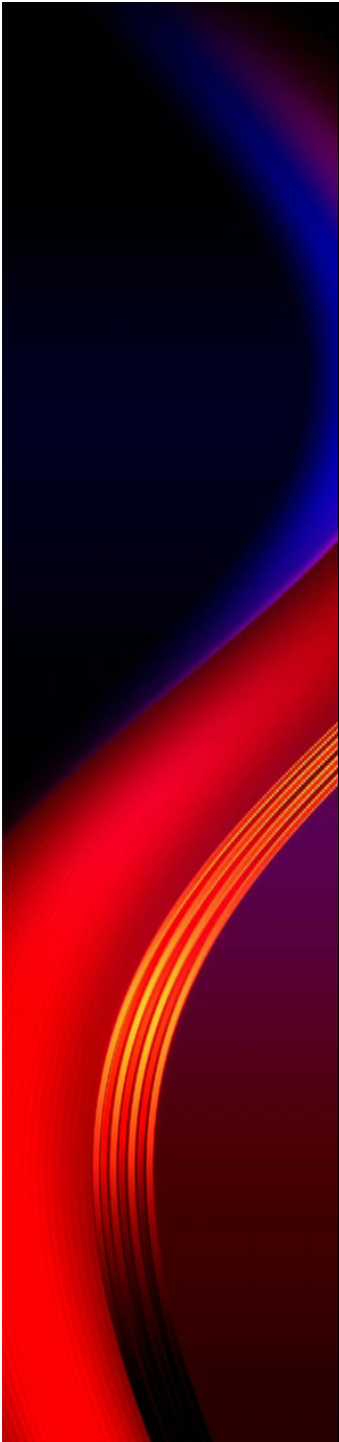
- gives us a more nuanced differentiation of structures, corresponding to the **array of possible uses** described above.
- captures the fact that the shape our tools will depend in detail on both **the tasks for which they are fashioned and the capacities of their users.**
- is a good antidote to the temptation to reify the modalized structures

The 'Metaphysical' Question

- "I assume that there are truths involving modal qualification ... If modality is grounded in reality, it is either a primitive or a non-primitive feature of that reality. If it is **primitive**, then there is nothing nonmodal in virtue of which reality possesses modal characteristics-there are no nonmodal facts that wholly constitute modal facts. If it is **not primitive**, then there is something non- modal in virtue of which modality is present in reality-there are nonmodal facts that wholly constitute modal facts. "

- The Ontological Ground of the Alethic Modality Author(s): Scott A. Shalkowski, Source: The Philosophical Review, Vol. 103, No. 4 (Oct., 1994), pp. 669-688.

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- There is a presumption that there is something illuminating to say about intermediate structures that **doesn't include the agent as a third term.**
 - This gives us the reduced menu of options: primitivism, reduction, anti-realism

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- If it's illumination we are looking for, we should trade the question 'what to modal beliefs *refer to?*', or 'what do models of possible worlds stand for?' for the question 'what do modal beliefs *do?*'



Pragmatic Pragmatism

- Pragmatism as a **methodological stance** than a philosophical doctrine.
- In trying to understand the structures that define a model, pragmatists don't look for static correspondences between a model and the world
- They **reintroduce** the agent as a third-term mediating the relation between agent and world, and **resituate** models in the **dynamics of interaction**, looking at their role in transforming belief and behavior.

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- The pragmatist doesn't deny that modal beliefs represent.
 - She rejects the representationalist idea of what *representation amounts to*.



Methodological consequences for Naturalistic metaphysics

- For questions about laws or causes or chances, all of those modalized structures on the second order overlay of the manifold of fact, the **side-on view of the cognitive and human sciences** may provide the naturalistic alternative to neo-scholastic metaphysics.

Huw Price

