

## QUINE, BARCAN MARCUS, AND KRIPKE ON MODALITY

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This paper reviews the transition from Quinean to Kripkean views of modality. Ruth Barcan Marcus played a central role in this transition, and in this paper her arguments are highlighted. The purpose of the paper is to examine the interplay between common sense and formal considerations in the debate concerning the nature of modality.

Quine's philosophy seems most at odds with contemporary philosophy in his attitude towards questions of possibility and necessity. He rejects any consideration of possibilities that fall beyond the way the world actually is. For Quine, talk of possible worlds, counterparts and counterfactuals, is simply misguided. While certain features of Quine's naturalism have become relatively standard parts of philosophical practice in contemporary philosophy, his views of logic and modality appear strangely old fashioned. Quine's view of necessity, possibility, and essence place him in clear opposition to some of the most prominent metaphysicians in the second half of the twentieth century. Contemporary metaphysics is, in large part, a matter of reasoning about the consequences of basic beliefs about necessity and possibility.

Quine's opposition to modal logic and modal metaphysics rested on arguments whose validity has been challenged repeatedly in recent decades. As we come to understand some of the shortcomings of Quine's criticisms of modality, it is possible that we will be able to separate the broader naturalistic perspective from the anti-modal arguments that defined much of Quine's perspective on metaphysics. While Quine's specific criticism of modality may have been mistaken, his general philosophical position has a number of important implications for metaphysics.

Naturalism came of age prior to the heyday of modal metaphysics over the past three or four decades. As a result, Quine's work is largely disconnected from analytic metaphysics as it is currently practiced. The work of philosophers like Kripke, David Armstrong, David Lewis, and Alvin Plantinga set the stage for some of the most important work in contemporary metaphysics. Kripke, Lewis and Plantinga develop metaphysics around certain features of ordinary terms like "can," "must," "possible," "necessary," and so on. These modal notions can be understood in formal terms using the techniques of modal logic. Since the late 1960s philosophers have developed sophisticated accounts of traditional metaphysical notions like identity, essence, and causality via the use of modal logic.

Unfortunately, Quine defined his own position in opposition to philosophers who explored modal notions using the techniques of formal logic. He famously denied that notions like necessity and possibility can play any significant role in philosophical or scientific investigation. Against philosophers like Jaakko Hintikka, Ruth Barcan Marcus, and Kripke, Quine argued that realistic interpretations of notions like possibility and necessity lead to incoherence. As we shall see, Quine mistakenly believed that realistic interpretations of modal notions have no place in legitimate discourse. One of the most unfortunate consequences of Quine's denial of modality was its effect on the development of a sophisticated naturalistic metaphysics. Historically, it can easily look as though Quinean naturalists were on the wrong side of the development of contemporary metaphysics.

Quine's criticism of modality rested on a view of language which was closely tied to the Russellian descriptivist tradition. Barcan Marcus was one of the first philosophers to recognize that once we consider an alternative approach to language, the core objection to modal reasoning is circumvented. Rather than thinking of names in descriptivist terms, Barcan Marcus suggested that we consider names on the model of what she called "tags" (1961). These tags can be understood as picking out objects directly in some sense. Rather than seeing the naming relation as somehow including or involving descriptions which mediate between the words and their reference, for Marcus, tags can be seen as simply attaching to objects directly and arbitrarily. Her insight paved the way for Kripke to provide a full exposition of the metaphysical implications of what he called "rigid designation." Once Barcan Marcus' response to Quine was in place, his criticisms of modal reasoning could be understood as unnecessarily restrictive. Quine's resistance rested on the failure of substitutivity in modal contexts.

Quine's reasoning runs along the following lines: Sentences which involve modal claims do not meet one of the necessary conditions of legitimate scientific discourse, namely the requirement that replacing a term in a sentence with a different term referring to the same object as the original term should have no bearing on the truth value of the original sentence. If for instance the terms "Farookh Bulsara" and "Freddie Mercury" pick out the same man, then replacing one for the other in some sentence should not alter the truth value of that sentence. Quine argued that both modal terms and the propositional attitudes were useless for science. Consider the following sentence:

(A) If Freddy Mercury comes to town there will be a commotion.

Notice that this sentence contains no propositional attitudes, no mention of belief, desire, thought, and the like, nor does it make any reference to the necessity or possibility of the truth of the sentence. Given this statement as part of my wider theory, I can make a number of perfectly reasonable predictions and inferences. Despite its strangeness, this little law of nature in our imaginary theory has the same logical structure as

(B) If water is brought to 100° Centigrade, it will boil

or

(C) If enough snow falls on that branch, it will break.

However, as soon as I introduce propositional attitudes or modal qualifiers into the statements of my theory, trouble ensues. The reason is simple. Given, for instance,

(D) Jean believes that Freddy Mercury was the lead singer for Queen,

we cannot infer with certainty that

(E) Jean believes that Farookh Bulsara was the lead singer for Queen.

This is the case despite the little known fact that Freddy Mercury and Farookh Bulsara were the same person. As all die-hard fans know, Bulsara changed his name to Freddy Mercury in order to make himself more acceptable to a British audience. Jean, of course,

may not be a fan and may never have heard the name Farookh Bulsara; therefore, (E) may not be true. So, (D) and (E) are not interchangeable, by virtue of containing propositional attitudes. But now consider our original statement (A) above, the one that contained no mention of propositional attitudes:

(A) If Freddy Mercury comes to town there will be a commotion.

If this is true, then it will also be true that

(A\*) If Farookh Bulsara comes to town there will be a commotion.

In (A) and (A\*) we are referring to a particular physical object— a man—whose presence is likely to cause a commotion; whereas, in (D) and (E) we are referring to a something far more problematic, the propositional attitude belief that Quine argued that this failure of substitutivity in (D) and (E) is enough to vitiate all theories that include propositional attitudes, and that, if we want good science, the very least we can ask for is that the law of substitutivity hold. Therefore, according to Quine we should eliminate talk of propositional attitudes from our science.

A similar problem obtains in the case of modal notions. If I say for instance that

(F) Necessarily, nine is greater than seven

and

(G) Nine is the number of planets.

I cannot replace “the number of planets” with “nine” in the modal context without generating the false claim that

(H) Necessarily, the number of planets is greater than seven.

The failure of substitutivity in modal contexts is the principal reasons for his rejection of modality. Barcan Marcus points out that Quine’s argument is undermined by what she sees as his confusion with respect to the nature of identity and by his failure to recognize the possibility of a non-descriptivist account of names.

In terms of identity, she argues, Quine fails to distinguish between the “is” of predication and the “is” of identity. So for example to make the claim that nine is the number of planets is to invoke the “is” of predication whereas claims like “nine is nine” or “nine equals nine” are meant to indicate identity rather than predication. The “is” of predication involves ascribing properties or characteristics to objects whereas the “is” of identity makes a metaphysical claim concerning the objects themselves/itself.

When one makes the assertion that “Her shoes are purple,” the word “are” serves to indicate a relationship of predication. Obviously since other things are purple one cannot say that her shoes are related to purple via an “is” of identity because if one claims that

her shirt is also purple one is committed to saying that her shoes are her shirt since identity is a transitive relation. Now, clearly, the “is” of predication does not have the property of transitivity; by contrast, transitivity is a defining characteristic of the “is” of identity.

Understanding the two different ways in which we use the word “is” sheds some important light on the notion of reference. In addition to problems related to identity, Quinean objections to the introduction of modal terms involve confusing tags with the objects picked out by those tags. Once this confusion is removed, then Quine’s claim that substitution fails in modal contexts can be overcome. The price, according to Quine is a return to what he calls “Aristotelian essentialism.”

Ruth Barcan Marcus’ response to Quine set the stage for Kripke’s treatment of modality. Kripke’s *Naming and Necessity* is widely appreciated as central to the recent history of philosophy insofar as it clarifies the distinction between logical, epistemological, and metaphysical notions of necessity. The implications of this distinction are deep and far reaching. Most strikingly, it allows for Kripke’s recognition of a posteriori necessary truths. By untangling necessity from apriority and analyticity, Kripke shows how metaphysical investigation can avoid traditional epistemological criticisms.

The argument of the lectures is well known: Kripke follows Barcan Marcus in arguing against a descriptivist view of reference and for a direct-reference model of names. Direct reference is intended to capture the way proper names and natural-kind terms serve to track objects across possible states of affairs. In this context, names serve as rigid designators. While Kripke’s claims concerning rigid designation are widely regarded as providing a new theory of reference, it is important to recognize the function of notions like rigid designation in support of his more basic metaphysical argument. Insofar as there is a new philosophy of language in Kripke’s work his account of language is secondary to the more basic metaphysical purpose of the lectures.

*Naming and Necessity* begins with some relatively straightforward metaphysical assumptions. For example, identity is understood to be a relation. Identity, he claims, never holds between two things, and if it holds, it always holds of necessity. From here, the claim that if  $a$  is identical with  $b$  then it is *necessarily* identical with  $b$  is the result of a very simple semi-formal argument which runs as follows: If we accept the necessity of self-identity, then for all  $x$ , necessarily  $x=x$ . If we accept the principle of the indiscernibility of identicals then, for all  $x$  and for all  $y$ ,  $x=y \rightarrow \forall \phi (\phi x \leftrightarrow \phi y)$ . Now, if  $a$  is identical with  $b$ , and if  $a$  is identical with  $b$  then whatever is true of  $a$  is true of  $b$ , then it is necessarily the case that  $a$  is identical with  $b$  since it is true of  $a$  that it is necessarily identical with  $a$  and whatever is true of  $a$  is also true of  $b$ .

However, accepting the result leads to some odd-sounding claims. As Kripke points out, it seems to entail, for instance, that if Ben Franklin is the first postmaster general, then it is necessarily the case that Ben is the first postmaster general. There is an apparent mismatch between the formal reasoning (which led us to the necessity of identity) and our ordinary ways of using the word “is.”

Kripke's lectures criticize descriptivist approaches to language replacing it with his account of names as rigid designators. The elaboration of Kripke's so-called "new theory of reference" in *Naming and Necessity* serves to reconcile the formal or semi-formal insights with respect to modality and identity with ordinary identity statements. Kripke's arguments in these lectures are designed to lend some commonsense plausibility to the underlying metaphysical argument.

In *Naming and Necessity*, the notion of intuition is deployed in three distinguishable ways. Intuition is connected to the meaningfulness of certain terms and concepts, it is taken as indicating the conclusiveness of arguments, and it serves as a way of distinguishing between formal and informal reasoning in philosophy. Distinguishing the various roles played by intuition in Kripke's work is important insofar as it clarifies our own uses of this notion in philosophical investigation.

Carrying the heaviest argumentative burden in Kripke's defense of modal reasoning is the idea of intuition as the means by which we connect to the "ordinary" or "commonsensical" meanings of our words. So, for example, he stresses the familiarity of modal discourse when he writes, "When you ask whether it is necessary or contingent that *Nixon* won the election, you are asking the intuitive question whether in some counterfactual situation, *this man* would in fact have lost the election" (1980, 41). Modal questions can be intuitive and presumably, he believes, ordinary questions. That modal questions have some connection to ordinariness is intended as a means of certifying their meaningfulness; on this view, ordinary sentences and questions are meaningful sentences and questions. While neither "Is it contingent that Nixon won the election?" nor "Is it necessary that Nixon won the election?" sound like ordinary questions to my ear, Kripke is less concerned with these particular examples and is focused instead on leading us to recognize that we ask a range of modal questions in ordinary daily life. He is specifically interested in counterfactual reasoning—"Would Nixon have lost his bid for re-election had he not followed Kissinger's advice?" and the like.

Kripke's notion of meaningfulness here is informed by the ordinary language tradition in philosophy. His confidence that the meaningfulness of words and questions is grounded in their ordinary usage as we see in the following passage, where Kripke writes:

It is very far from being true that this idea [that a property can meaningfully be held to be essential or accidental to an object independently of its description] is a notion which has no intuitive content, which means nothing to the ordinary man. Suppose that someone said, pointing to Nixon, "That's the guy who might have lost." Someone else says, "Oh no, if you describe him as 'Nixon,' then he might have lost; but, of course, describing him as the winner, then it is not true that he might have lost." Now which one is being the philosopher, here, the unintuitive man? It seems to me that obviously the second. The second man has a philosophical theory. (1980, 41)

Kripke's characterization of meaningful and meaningless questions introduces the notion of "intuitive content." If an idea has "intuitive content" then, according to Kripke, it is meaningful to the "ordinary man." The reference to the ordinary man here is connected with the idea of intuition or common sense which is operative. By adding "intuitive" to 'content,' he means to distinguish contexts where the content of a term might be due to

John Symons

some stipulation or some unusual specialist usage. The ordinary man is contrasted with the philosopher, who in this passage is characterized as the “unintuitive man.” Here, Kripke is deploying common sense or intuition in a manner very close to that of the ordinary language philosophers. Intuitive content contrasts with content derived via formal or technical considerations. In Kripke’s thinking, formal considerations are distinguished from and perhaps even subordinated to intuitive content. In terms of justificatory force, one clear impression is that intuitive content plays a more central role in philosophical deliberation than theories generated by “unintuitive men.”

Kripke’s account of possible worlds marks a break with Quine’s naturalism in terms of its methodological emphasis on common sense or intuition. As indicated above, Kripke’s philosophy owes a great deal to ordinary language philosophy insofar as it rests on the idea of familiar intuitions which serve as guides in our ontological or philosophical reflection. Quine’s naturalism runs counter to the emphasis on common sense and ordinary experience in twentieth century analytic philosophy. The interplay between formal considerations and intuitive common sense principles is an ongoing theme of contemporary metaphysics.

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