

A Critique of Quine's Critique of *de re* Modality

Christian Straßer

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In the following lines I will show that Quine's critique on *de re modality* offered in §41 of his "Word and Object" is not substantial. He gives the following scenario:

[(i)] Mathematicians may conceivably be said to be necessarily rational and not necessarily two-legged; and cyclists necessarily two-legged and not necessarily rational.

[(ii)] But what of an individual who counts among his eccentricities both mathematics and cycling? In this concrete individual necessarily rational and contingently two-legged or vice versa? Just insofar as we are talking referentially of the object, with no special bias toward a background grouping of mathematicians as against cyclists or vice versa, there is no semblance of sense in rating some of his attributes as necessary and others as contingent. Some of his attributes count as important and others as unimportant, yes; some as enduring and others as fleeting; but none as necessary or contingent.

First I will formalize (i) in different ways:

$$\forall x : \text{Mathematician}(x) \rightarrow \Box \text{rational}(x) \quad (1)$$

$$\forall x : \text{Mathematician}(x) \rightarrow \neg \Box \text{two-legged}(x) \quad (2)$$

$$\forall x : \text{Cyclist}(x) \rightarrow \neg \Box \text{rational}(x) \quad (3)$$

$$\forall x : \text{Cyclist}(x) \rightarrow \Box \text{two-legged}(x) \quad (4)$$

For any c for which we know $\text{Mathematician}(c) \wedge \text{Cyclist}(c)$ we have as a consequence from (1), (3), (4) and (2) the following

$$\Box \text{rational}(c) \wedge \neg \Box \text{rational}(c) \wedge \Box \text{two-legged}(c) \wedge \neg \Box \text{two-legged}(c) \quad (5)$$

This is contradictory. Maybe there is a way out with formalizing (i) in a different way:

$$\forall x : \Box (\text{Mathematician}(x) \rightarrow \text{rational}(x)) \quad (6)$$

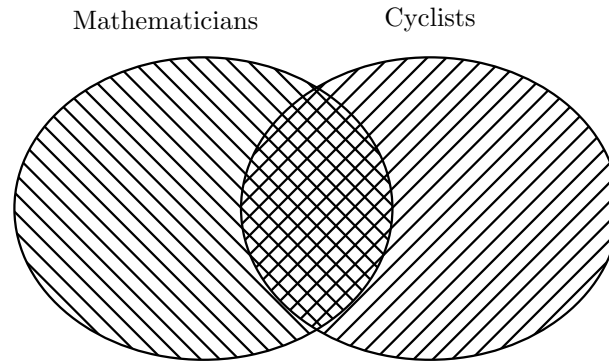
$$\forall x : \neg \Box (\text{Cyclist}(x) \rightarrow \text{rational}(x)) \quad (7)$$

This way we are safe from contradictions as we deduce now for our c :

$$\Box (\text{Mathematician}(c) \rightarrow \text{rational}(c)) \wedge \neg \Box (\text{Cyclist}(c) \rightarrow \text{rational}(c)) \quad (8)$$

But can (6) and (7) still be interpreted *de re*? If we speak about *de re* modality we do not want the concept of being e.g. mathematician be responsible for the necessity of being rational, but the reason should lay in each particular individual in the extension of the predicate "... is a mathematician." Formally expressed, what we need is in our case: $\Box\text{rational}(c)$. (6) and (7) could be still interpreted as providing *de re* modality for the implication, but this is not the way we conceptualize usually *de re* modality, t.i. as necessity or possibility of single properties of individuals. So if we want to take Quine's critique serious, we are not allowed to change the formalization offered in (1) to (4).

The only way to debunk Quine's argument as not substantial is to take his presumptions (1) to (4) under critical examination. Let me first illustrate the extensions of our predicates "... is mathematician" and "... is cyclist" like follows: Let's concede (1) and think about (2). If we take an arbitrary member



m of the extensions of "... is mathematician", we cannot say with certainty if m will have two legs or not, or if she is cyclist or not. This Quine takes as a reason to say, that it is contingent for m to have two legs. That is where he is mistaken!

Quine takes the heteronomy of the extension of "... is mathematician" according to the property of being two-legged as a reason to apply *de re* contingency to each individual in the extension. That is counter-intuitive: everything we can say in this case is, that from being a mathematician follows nothing according to the property of being two-legged. Although we cannot say that mathematician have in general the property of being two-legged we have to look at each single individual m being mathematician separately to be able to see if for m it is contingent or necessary to be two-legged.

Thus we have to conclude that Quine did not succeed with his *reductio ad absurdum* of *de re* modality.