

ARE MODAL CONTEXTS REFERENTIALLY OPAQUE?

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Quine has endeavored to prove that modal propositions cannot be successfully quantified.¹ His strategy consists of two parts. First, he attempts to show that modal contexts are "referentially opaque". Second, he tries to demonstrate that quantification into a referentially opaque context results in either an unintended sense or in nonsense. This latter claim I will not dispute. I will, however, attempt to show in this paper that modal contexts are not referentially opaque.

What exactly does Quine mean by referential opacity? His answer is that a context is referentially opaque if a word or phrase appearing in that context is not being used strictly referentially.² The most common example of a referentially opaque context is when a word or phrase is placed in single quotes. Quine gives as an example the proposition "'Cicero' contains six letters," the referential opacity of which is obvious. Since the context of single quotes is only one of several which Quine believes to be referentially opaque, he provides a test for determining which contexts are referentially opaque based on the principle of identity. Any term, A , is said to be in a referentially opaque context if the identity statement $A = B$ is true and if the substitution of B for A in the context in question results in changing a true proposition into a false one.³ This test does show that "'Cicero' contains six letters" is referentially opaque since Cicero = Tully, and the substitution of 'Tully' for 'Cicero' results in the false proposition "'Tully' contains six letters".

Yet another referentially opaque context is "believes that". Quine gives the following example: Suppose that "Phillip believes that Tegucigalpa is in Nicaragua" is true. Since Tegucigalpa is identical with the capital of

1. W. V. O. Quine, "Reference and modality," in *From a Logical Point of View*, Harvard University Press, Cambridge, Massachusetts (1953), pp. 139-159.

2. *Ibid.*, p. 142.

3. *Ibid.*, p. 140.