QUINE AGAINST ESSENTIALISM AND QUANTIFIED MODAL LOGIC*

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I

Quine's criticism of essentialism is well-known. It is a necessary part of his arguments against quantified modal logic and in particular substitution into *de dicto* modal contexts. Therefore he cannot use these arguments and be consistent if it turns out that he himself is committed to essentialism.

He is. My purpose is to prove this.

What commits him is his reparsing thesis. This is the proposal that singular terms can be treated grammatically as predicates. It is found in his views on classical logic, ontology, language, and epistemology. Thus it is central to much of his philosophical position. What I want to establish is that for *every* singular term, in order for Quine to be able to reparse it he must accept essentialism.

I will prove, then, two claims about Quine's reparsing thesis. One is that it requires essentialism. The other is that since it does it follows from his reparsing thesis that his arguments against quantified modal logic fail.

II

Let me begin with my first claim. It is established by every instance in which we are supposed to be able to reparse a singular term. The reason is that according to Quine's thesis in order to reparse any singular term we use a predicate. I will show that it must be a certain type of predicate. It must be one which mentions a property that is essential to the singular term's referent.

To establish this we will use the following interpretation of essentialism. Let us take an essential property of an object to be any necessary property which necessarily only it has. That is, the object is such that both:

> (A) it is impossible for it to exist and not have the property, and
> (B) it is impossible for any other object to have the property.

My purpose in using this particular interpretation is that it will enable me to prove that under *every* interpretation reparsing requires essentialism.

The reason it will is that it is the strongest interpretation. What I mean by this is that any property that (A) and (B) find to be essential, every interpretation must find to be essential. Hence if I can establish that reparsing requires essentialism under (A) and (B), it will follow that it requires it under every interpretation. What I need to prove first, then, is that (A) and (B) constitute the strongest interpretation.

The proof is straightforward. The central point is that a property is essential if it distinguishes one object from all other possible ones. A property distinguishes an object if in every possible case in which the object exists it has the property. And, there is no possible case where another object has the property.

This is true of every property which satisfies (A) and (B). For, (A) implies that the object has the property in every possible case in which it exists. (B) implies that in no possible case does any other object have the property.

Therefore every property which satisfies (A) and (B) distinguished an object from all other possible ones. Any property that distinguishes an object is essential. Hence every property which satisfies (A) and (B) is essential.

This established that (A) and (B) constitute the strongest interpretation of essentialism in the following respect: Any property that (A) and (B) find to be essential every interpretation must find to be essential. So if we can prove that the reparsing thesis requires essentialism under (A) and (B), then it requires essentialism under every interpretation. (¹)

Let me show, then, that reparsing requires essentialism as (A) and (B) define it.

(¹) QUINE's interpretation consists of just (A). See "Three Grades of Modal Involvement", *The Ways of Paradox*, revised and enlarged edition (Cambridge: Harvard University Press, 1976), p. 176. It follows from the proof in the next section that reparsing requires essen-

III

To prove that it does, consider these two components: ([2])

(Q) $\ulcorner \alpha = \urcorner$ can be treated as a simple predicate.

(R) $\ulcorner F\alpha \urcorner$ is equivalent to $\ulcorner (\exists x)\ (\alpha = x.Fx) \urcorner$.

(Q) is supposed to enable us to achieve the desired result of eliminating the singular term in favor of a predicate. Note, though, that it requires a sentence in which the singular term is part of an identity. (R)'s purpose is to provide this sentence when needed. Quine correctly maintains that in order for (Q) and (R) to have reparsed a singular term the resulting sentence must be a "paraphrase" of the original. ([3])

In order to prove that reparsing requires essentialism, first I will establish that (R) is necessary for reparsing. Then I will show that since it is, (Q) requires a certain type of simple predicate. It must be a predicate that mentions a property that satisfies (A) and (B), which we have proven constitute the strongest interpretation of essentialism. This will establish that

tialism under his interpretation. For a proof that deals explicitly with his interpretation see my "Reparsing and Essentialism", *Philosophia*, XVII, (January, 1987), pp. 1-12.

Other interpretations are discussed in Ruth Marcus, "Essentialism in Modal Logic", *Nous* I, (March, 1967), pp. 91-96; and "Essential Attribution", *The Journal of Philosophy*, LXCIII (April, 1971), pp. 187-202; Terence Parsons, "Grades of Essentialism in Quantified Modal Logic", *Nous*, I (May, 1967), pp. 181-191; and "Essentialism in Quantified Modal Logic", *The Philosophical Review*, LXXVIII (January, 1969), pp. 35-52; and Alvin Plantinga *The Nature of Necessity* (New York: Oxford University Press, 1974), pp. 238-243.

One of the interpretations Marcus and Parsons suggest is the following schema:

$(\exists x)\ \Box Fx.\ (\exists x)\ (Fx.\ \sim \Box Fx).$

Parsons refers to it as a "strong version of essentialism". Marcus speaks of it as "strongly essentialist" and takes it to represent what she calls "individuating essentialism". While she acknowledges that it is "perplexing" ("Essential Attribution", p. 198), neither recognizes that it is impossible for the schema to be an acceptable interpretation of essentialism. The reason it cannot be acceptable is that there are certain essential properties which the schema finds not to be essential. These are the properties that distinguish an object from all other possible ones.

([2]) *Word and Object* (Cambridge: MIT Press, 1960), section 37; and *Philosophy of Logic* (Englewood Cliffs, New Jersey: Prentice-Hall, 1970), p. 25. See *Methods of Logic*, 3rd. ed. (New York: Holt, Rinehart, and Winston, 1972), p. 231 for his interpretation of "simple" predicate.

([3]) "Algebraic Logic and Predicate Functors", *The Ways of Paradox*, p. 305; and *Philosophy of Logic*, p. 25.

under every interpretation reparsing requires essentialism. Let's begin with (R).

The reason it is necessary is that only it can provide us with a sentence which has the two features Quine's thesis requires to reparse any singular term. First the sentence must be one in which the singular term occurs as part of an identity. (Q) requires this. Second this sentence must be equivalent to the original one in which the singular term occurs, viz. $\ulcorner F\alpha\urcorner$. The reason they must be equivalent is so that the sentence obtained from applying (Q) can be a paraphrase of the original.

$\ulcorner(\exists x) (\alpha=x.Fx)\urcorner$ is the sentence with both of these features necessary for reparsing. Only (R) provides it. Therefore we should agree with Quine that (R) is necessary for reparsing. ([4])

Now note what (R) says about any sentence in which a singular term, α, can be reparsed. It is that this sentence always contains a sentence $\ulcorner F\alpha\urcorner$ which implies the existence of the singular term's referent, i.e. $\ulcorner(\exists x) (\alpha=x)\urcorner$.

So not only does reparsing require (R). Furthermore according to (R), $\ulcorner F\alpha\urcorner$ implies $\ulcorner(\exists x) (\alpha=x)\urcorner$. If it does, then any paraphrase of $\ulcorner F\alpha\urcorner$ requires a paraphrase of $\ulcorner(\exists x) (\alpha=x)\urcorner$. According to Quine reparsing requires a paraphrase of $\ulcorner F\alpha\urcorner$. Therefore it follows that reparsing requires a paraphrase of $\ulcorner(\exists x) (\alpha=x)\urcorner$.

What we have shown, then, is this. (R) is necessary for reparsing a singular term. ([5]) According to (R) the sentence we apply it to implies that the singular term's referent exists. Reparsing requires a paraphrase of the sentence (R) is applied to. Hence it requires a paraphrase of the sentence that the singular term's referent exists.

Thus we can draw the following important conclusion: In order for (Q) and (R) to reparse any singular term, they must provide a paraphrase of the sentence that the singular term's referent exists. The reason this conclusion is important is that it accounts for why reparsing requires essen-

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([4]) There are sentences in which a singular term occurs in a context of the form $\ulcorner F\alpha\urcorner$, but the whole sentence is not equivalent to $\ulcorner(\exists x) (\alpha=x.Fx)\urcorner$. In order for these sentences not to be counterexamples to (R), we will take $\ulcorner F\alpha\urcorner$ to be part of these sentences which is equivalent to $\ulcorner(\exists x) (\alpha=x.Fx)\urcorner$. See *Word and Object*, section 37, for Quine's discussion of this point. There he also gives his own argument for why (R) is necessary for reparsing.

([5]) There are cases where (R) is not necessary. In all of them the original sentence either implies that the singular term's reference exists or implies that it does not. In either case reparsing of the singular term would require a paraphrase of the sentence that the singular term's referent exists. So this paraphrase is needed in every instance of reparsing.

tialism. For as the following argument will show, the explanation of why essentialism is required for every instance of reparsing a singular term is that every instance requires a paraphrase of the sentence that the singular term's referent exists.

What shows that this is the explanation is that in order to paraphrase this sentence we must use a certain type of predicate. It is one which satisfies both (I) and (II). That is, the singular term's referent is such that:

>   (I) it is impossible for it to exist and the predicate not be true of it, and
>
>   (II) it is impossible for the predicate to be true of any other object.

We can see why the predicate must satisfy (I) and (II) if we remember that the paraphrase is of the sentence that the singular term's referent exists. Hence it is necessary that the predicate used in the paraphrase always be true of the referent and never of anything else. So the reason for (I) is to eliminate the possibility of the referent existing but the predicate not being true of it. And the reason for (II) is to eliminate the possibility of the predicate being true of some object other than the referent.

Our claim, then, is that both of these possibilities must be eliminated in order to arrive at a paraphrase of the sentence that the singular term's referent exists. This is not in conflict with Quine's view of what is a paraphrase. ([6]) For, the paraphrase which uses a predicate which satisfies (I) and (II) need not be synonymous with the sentence that the singular term's referent exists. Furthermore this sentence does not have any of the problems which are supposed to justify differences in truth-conditions between the original sentence and the paraphrase, e.g. the need to resolve ambiguities, make references explicit, and close truth-value gaps. ([7])

What Quine says about paraphrase, then, is consistent with our conclusion that a predicate which satisfies (I) and (II) is necessary to paraphrase the sentence that the singular term's referent exists. We have shown that reparsing requires this paraphrase. Therefore it follows that the type of predicate reparsing requires is one which satisfies (I) and (II).

Let me summarize my argument so far. Quine is correct that (R) is necessary for reparsing. It follows from (R) that the sentence resulting from applying (Q) must imply a paraphrase of the sentence that the

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([6]) *Word and Object*, pp. 159f., 182f., 250, and 258f.
([7]) Ibid., pp. 159, 160, and 182.

singular term's referent exists. This requires that the predicate used in reparsing the singular term must always be true of the singular term's referent, i.e. (I), and of only this referent, i.e. (II).

Our last step is to consider the property this predicate mentions. This is the property an object has if and only if the predicate is true of the object. If we look at (I) and (II) we can see that there are two respects in which this property is related to the singular term's referent. It follows from (I) that it is impossible for the singular term's referent to exist and it not have the property. It follows from (II) that it is impossible for any other object to have the property.

Keeping these points in mind, look again at (A) and (B). As suggested in the preceding paragraph, since the predicate satisfies (I) the property satisfies (A). And since the predicate satisfies (II) the property satisfies (B). Earlier we proved that any property which satisfies (A) and (B) is essential. It follows, then, that this property is essential to the singular term's referent. This establishes that any property which satisfies (I) and (II) mentions an essential property.

We have shown that reparsing requires a predicate which satisfies (I) and (II). Hence it requires a predicate that mentions a property which satisfies (A) and (B). We proved that (A) and (B) constitute the strongest interpretation of essentialism. Therefore we have established our claim that under every interpretation Quine's reparsing thesis requires essentialism.

IV

Let me illustrate the preceding argument. Take the sentence "Betty is short", i.e. (1):

(1) Sb.

(R) implies that it is equivalent to (2):

(2) ($\exists$x) (b=x.Sx).

Hence according to (R) (1), as well as (2), implies (3) the claim that Betty exists:

(3) ($\exists$x) (b=x).

Reparsing requires a paraphrase of (1) and (2). According to (R), (1) and (2) imply (3). Thus reparsing requires a paraphrase of (3). We can conclude, then, that in order for (Q) to reparse "b" successfully in (1) and (2), it must result in a paraphrase of "Betty exists".

In order to obtain this paraphrase apply (Q) to (3). Use any simple predicate, say "H". (4) is the result:

(4) (∃x)Hx.

Now consider what is necessary for (4) to be a paraphrase of (3). It is that "H" always be true of Betty and of only her. That is, "H" must have characteristics (I) and (II).

We have shown that the property mentioned by any predicate with these two characteristics is essential. Consequently in order for "H" to result in (4) being a paraphrase of (3) the property it mentions must be essential to Betty. It is necessary that (4) be a paraphrase of (3) in order for us to be able to use "H" to reparse "b". Therefore "H" can reparse "b" only if it mentions an essential property.

This proves that in order to reparse any instance of "b" ("Betty") or of any other singular term, we must use an essentialistic predicate. Thus in order for Quine to be able to reparse any singular term, he must accept essentialism.

V

We have established the type of predicate which is necessary to reparse a singular term. The property it mentions must be essential. Compare this with Quine's suggestion.

It is that the predicate be true solely of the singular term's referent. (⁸) The preceding discussion shows that this is not enough for reparsing. What is needed is that the predicate be true solely of the singular term's referent *necessarily*.

The reason is that though the type of precidate Quine suggests may be true of a singular term's referent, it is possible for it not to be and

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(⁸) *Word and Object*, p. 179; "The Scope and Language of Science", *The Ways of Paradox*, pp. 237 and 238; "Algebraic Logic and Predicate Functors", p. 305; and *Philosophy of Logic*, p. 25.

the referent exist. Furthermore it is possible for the predicate to be true of some object other than the referent. Thus this type of predicate cannot result in a paraphrase of the sentence that the singular term's referent exists. We have shown that this paraphrase is necessary to reparse any singular term. Consequently the type of predicate Quine suggests cannot result in any singular term being reparsed.

The example in the preceding section illustrates this. For suppose we followed Quine and took "H" to be true of just Betty, however not necessarily. (I) and (II), then, would be false. Consequently, for instance, it would be possible for Betty to exist, be short, and yet "H" not be true of her. In which case (1), (2), and (3) would be true but (4) would be false. Hence if "H" were Quine's type of predicate, then (4) could not be part of any paraphrase of either (1), (2), or (3). We have established that it must be in order for "H" to result in "b" being reparsed. This shows that the kind of predicate Quine suggests is not sufficient for reparsing.

So his proposal should not have been simply that the reparsing predicate be true solely of the singular term's referent. But that it be impossible for it not to be and the singular term's referent exist, i.e. (I). And that it be impossible for the predicate to be true of any other object, i.e. (II).

Since Quine is a critic of essentialism it is understandable why he did not suggest this. For, it would have committed him to essentialism. What he has not recognized is that without essentialism he cannot reparse singular terms.

VI

In summary, Quine claims that we can reparse a singular term by replacing it with a predicate. We have established that in every instance of reparsing any singular term the predicate used must be a certain type. It must be one in which *necessarily* the predicate is true of the singular term's referent and of only this referent. Hence the property the predicate mentions must be essential to the singular term's referent. It follows, then, that every instance of reparsing requires essentialism.

In light of this conclusion, I would like to consider Quine's three arguments against quantified modal logic. They are that it requires essentialism, that *de dicto* modal substitution in particular requires essentialism, and that quantification into *de dicto* modal contexts results in the elimina-

tion of modal distinctions. I will show that since his reparsing thesis implies essentialism it also implies that each of his arguments fails.

VII

Let's begin with the familiar argument against quantified modal logic. It requires the claim that essentialism is not acceptable. (^{9}) We have established that reparsing implies that it is. Therefore it follows from Quine's reparsing thesis that his first argument against quantified modal logic is unacceptable.

Now consider his second. It is directed towards *de dicto* modal substitution. Here Quine is concerned with a certain type of singular term. It is one for which (5) is true: (^{10})

(5) $(\exists x) \square(\alpha = x)$

This is what Kripke calls a "rigid designator" and Føllesdal a "genuine name". It is supposed to be any singular term for which it is impossible for it to have a different referent. A feature of this type of singular term is that it is supposed to be substitutable into *de dicto* modal contexts.

Quine rejects the claim that any singular term is substitutable into such a context. His reason is that this kind of substitution requires essentialism, and essentialism is unacceptable.

Note, however, that he maintains that this type of singular term can be reparsed. What Quine has not recognized is that this is inconsistent with his argument against the claim that this type of singular term can be substituted into *de dicto* modal contexts. Our preceding discussion establishes the reason he is inconsistent. It is that in order to reparse this type of singular term (as well as any other) essentialism is required.

Any singular term for which (5) is true shows this. Take "nine", for instance. (6), then, is true:

(6) $(\exists x) \square(nine = x)$.

The point here is that in order to reparse "nine", we need a predicate that mentions an essential property of nine.

(^{9}) Of the works mentioned, see *Word and Object*, section 41; *The Ways of Paradox*, pp. 158-184; and *Philosophy of Logic*, p. 33.

(^{10}) See "Intensions Revisited", *Midwest Studies in Philosophy*, vol. II (1977), pp. 5-11.

For apply (Q) to "nine=" in (6). Using for instance the predicate "J", (7) is the result:

(7) (∃x) □Jx.

(7) is supposed to be a paraphrase of (6). This requires that "J" be true of nine and of only nine necessarily. Hence the property "J" mentions must be essential to nine. This shows that essentialism is necessary to reparse any singular term for which (5) is true.

Consequently Quine's argument against substitution into *de dicto* modal contexts is inconsistent with his reparsing thesis. The reason is that this argument requires the claim that essentialism is not acceptable. Yet his reparsing thesis requires that it is.

Quine's third argument against quantified modal logic is that in order to be able to quantify into *de dicto* modal contexts the result is that we cannot distinguish between contingent and necessary truths, which is supposed to be unacceptable for quantified modal logic. He attempts to establish this result by claiming that in order to provide for *de dicto* modal quantification we should postulate the restriction that "whenever each of two open sentences uniquely determine one and the same object, x, the sentences are equivalent by necessity". [11] However he argues that for any true sentence, from this restriction we can derive that the sentence is necessarily true, i.e. "p ≡ □p". Hence, he concludes, the restriction leads to the elimination of modal distinctions. [12]

In response to this argument, Føllesdal has established a further restriction which blocks Quine's conclusion. He shows that we can prevent the collapse of modal distinctions if we require that in order for any description ⌜(ιx) φx⌝ to quantify as a singular term its predicate must satisfy (8): [13]

(8) (∃x) □(y) (φy ≡.y=x).

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[11] *Word and Object*, p. 197.

[12] *Word and Object*, p. 198.

[13] "Referential Opacity and Modal Logic" (Oslo: Universitetsforlaget, 1966), sections 16 and 17 and p. 121f. Føllesdal has argued that epistemic and causal logic also require a restriction involving (8). "□", though, is replaced by "K" and "c". See his "Knowledge, Identity, and Existence", *Theoria* 33 (1967), pp. 31-37; and "Quantification into Causal Contexts", *Boston Studies in the Philosophy of Science*, vol. II, Cohen and Wartofsky, eds. (New York: Humanities Press, 1965), pp. 263-274.

Furthermore, if we follow the reparsing thesis and take all other singular terms to be replaceable with predicates, then Føllesdal's proposal for preventing the collapse of modal distinctions is this: For each singular term there must be a predicate which satisfies (8).

So replacing singular terms with predicates which satisfy (8) prevents the collapse of modal distinctions. Now consider the conjunction of (I) and (II). (8) is the schema which expresses this conjunction. Thus all and only those predicates which satisfy (I) and (II) satisfy (8).

We have established that for every singular term, the reparsing thesis implies that there is a predicate which satisfies (I) and (II). Hence it implies that there is one which satisfies (8). Føllesdal has shown that there being for every singular term a predicate which satisfies (8) implies that modal distinctions do not collapse. Therefore it follows that the reparsing thesis implies that modal distinctions do not collapse.

Føllesdal also maintains that the reparsing thesis prevents the collapse of modal distinctions. However his reason is that it eliminates those descriptions which do not satisfy (8). ([14]) He fails to realize the important point that even with these descriptions, in order for the reparsing thesis to eliminate them (8) must be satisfied by the predicates which replace them.

In summary, Quine's third criticism of quantified modal logic requires that modal distinctions collapse. We have shown that the reparsing thesis implies that they do not. It follows, then, that Quine's reparsing thesis is inconsistent with his criticism of quantified modal logic.

VIII

We have established our two claims about Quine's thesis that singular terms can be reparsed as predicates. One is that it requires essentialism. The other is that it implies that his arguments against quantified modal logic fail. ([15])

([14]) "Referential Opacity and Modal Logic", p. 98.

([15]) While the reparsing thesis negates Quine's arguments against quantified modal logic, interestingly enough the thesis itself provides an argument. For, another point Quine has failed to recognize is that reparsing and quantified modal logic are inconsistent. This is established in section II of "Reparsing and Essentialism".

Therefore it follows that in order to be consistent Quine must choose between two alternatives. He must either reject his reparsing thesis. Or, he must accept essentialism and thus reject his arguments against quantified modal logic.

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