Quine on de re modality

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Last time we discussed Quine's arguments against the idea that all necessary truths are true by convention. But this, of course, doesn't say anything about *which* truths are necessary and/or a priori; it just rules out one explanation of this category of truths.

Quine's aim in the paper we read today is different: he's trying to show that a certain class of claims about necessity — *de re* modal claims — don't make any sense.

1. QUOTATION & SUBSTITUTIVITY

Quine begins the article by discussing cases in which a certain sort of principle of substitution fails:

> (1)   Giorgione = Barbarelli,
>
> (2)   Giorgione was so-called because of his size
>
> are true; however, replacement of the name 'Giorgione' by the name 'Barbarelli' turns (2) into the falsehood:
>
>   Barbarelli was so-called because of his size.
>
> Furthermore, the statements:
>
> (3)   Cicero = Tully,
>
> (4)   'Cicero' contains six letters
>
> are true, but replacement of the first name by the second turns (4) false. Yet the basis of the principle of substitutivity appears quite solid; whatever can be said about the person Cicero (or Giorgione) should be equally true of the person Tully (or Barbarelli), this being the same person.

Where substitution fails in this sense, Quine says that we have an occurrence of a word which is not *purely referential*; in such cases we have, as he says, *referential opacity*. (This

is variously referred to as the distinction between referential and non-referential contexts, and between transparent and opaque contexts.)

As Quine says, the explanation of the failures of substitutivity exemplified by (1)-(4) seems pretty straightforward; contrary, perhaps, to initial appearances, these sentences are not just about Cicero, or Giorgione, but about their *names*.

And, indeed, this seems like a pretty plausible general moral to draw: whenever we have an instance of referential opacity involving a name, the truth of the sentence depends on *something* other than the referent of the name; so, in at least one clear sense, it must be *about* something other than the referent of the name. In the above cases, this "something else" is the name used; there may be other candidates when we consider cases of referential opacity other than quotational contexts.

2. NECESSITY AND SUBSTITUTIVITY

As Quine points out, one such source of referential opacity is talk about necessity and possibility:

> It will next be shown that referential opacity afflicts also the so-called *modal* contexts 'Necessarily . . .' and 'Possibly . . .', at least when those are given the sense of *strict* necessity and possibility as in Lewis's modal logic.[3] According to the strict sense of 'necessarily' and 'possibly', these statements would be regarded as true:
>
> (15)   9 is necessarily greater than 7,
>
> (16)   Necessarily if there is life on the Evening Star then there is life on the Evening Star,
>
> (17)   The number of planets is possibly less than 7,
>
> and these as false:
>
> (18)   The number of planets is necessarily greater than 7,
>
> (19)   Necessarily if there is life on the Evening Star then there is life on the Morning Star,
>
> (20)   9 is possibly less than 7.

It's obvious how the opaque contexts generated by quotation are to be explained; what we need to figure out is what the opacity generated by modal contexts mean. Quine approaches this question in part via the question of the relationship between referential opacity and quantification.

3. Opacity and quantification

Ordinarily, sentences involving names imply the corresponding existential claim; so, for example,

Bob talks

implies

∃x x talks

This is the rule of universal generalization. Quine first asks what would happen if we tried to apply the rule of existential generalization to occurrences of names in quotational contexts:

Applied to the occurrence of the personal name in (4), existential generalization would lead us to:

(26) $(\exists x)(‘x’$ contains six letters),

that is:

(27) There is something such that ‘it’ contains six letters,

or perhaps:

(28) ‘Something’ contains six letters.

Now the expression:

‘x’ contains six letters

means simply:

The 24th letter of the alphabet contains six letters.

In (26) the occurrence of the letter within the context of quotes is as irrelevant to the quantifier that precedes it as is the occurrence of the same letter in the context ‘six’. (26) consists merely of a falsehood preceded by an irrelevant quantifier. (27) is similar; its part:

‘it’ contains six letters

is false, and the prefix ‘there is something such that’ is irrelevant. (28), again, is false—if by ‘contains six’ we mean ‘contains exactly six’.

We get similar failures of the rule of existential generalization in the case of modal contexts:

Now the difficulty involved in the apparent consequence (29) of (9) recurs when we try to apply existential generalization to modal statements. The apparent consequences:

(30) $(\exists x)(x$ is necessarily greater than 7$)$,

(31) $(\exists x)($necessarily if there is life on the Evening Star then there is life on $x)$

of (15) and (16) raise the same questions as did (29). What is this number which, according to (30), is necessarily greater than 7? According to (15), from which (30) was inferred, it was 9, that is, the number of planets; but to suppose this would conflict with the fact that (18) is false. In a word, to be necessarily greater than 7 is not a trait of a number, but depends on the manner of referring to the number. Again, what is the thing x whose existence is affirmed in (31)? According to (16), from which (31) was inferred, it was the Evening Star, that is, the Morning Star; but to suppose this would conflict with the fact that (19) is false. Being necessarily or possibly thus and so is in general not a trait of the object concerned, but depends on the manner of referring to the object.

Quine sums up the moral of his discussion as follows:

> if to a referentially opaque context of a variable we apply a quantifier, with the intention that it govern that variable from outside the referentially opaque context, then what we commonly end up with is unintended sense or nonsense of the type (26)–(31). In a word, we cannot in general properly *quantify into* referentially opaque contexts.

But if there can be no quantification into modal contexts, there can be no such thing as de re modality; and, if there's no such thing as de re modality, essentialist claims make no sense.

Two readings of Quine's argument: as an argument against essentialism, and as an argument that de re modality requires something which Quine takes to be akin to essentialism — a distinction between those singular terms which do, and those which do not, support existential generalization in modal contexts.

The distinction between modal semantical predicates, statement operators, and sentence operators, and the question of what sorts of modal notions can survive Quine's discussion. The relationship to the idea that necessity is analyticity.

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