IN DEFENCE OF EPISTEMIC TRANSPARENCY

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My article 'Epistemic Opacity' (1) must have been very opaque indeed if it failed to convince Alex Blum (2) that Quine's proof that some epistemic contexts must be construed opaquely (3) is invalid. I shall try to rectify this, and defend total epistemic transparency, in the present note.

Blum starts his reconstruction of Quine's argument by making the following assumption ('Bt' here is short for 'Tom believes'):

1. Bt a sentence represented by 'p' *iff* Bt a sentence represented by '$\hat{x}(x = x \,.\, p) = \hat{x}(x = x)$'.

But in the said article I have tried to argue that (1) is false. The implication, I believe, goes indeed from left to right, i.e.

2. *If* Bt a sentence represented by 'p', *then* Bt a sentence represented by '$\hat{x}(x = x \,.\, p) = \hat{x}(x = x)$'

is true; but the implication does not go in the other direction. I.e.,

3. *If* Bt a sentence represented by '$\hat{x}(x = x \,.\, p) = \hat{x}(x = x)$' *then* Bt a sentence represented by 'p'

is not true.

The reason for this disparity lies in the fact that the singular terms '$\hat{x}(x = x \,.\, p)$' and '$\hat{x}(x = x)$' are used, in (1), (2), and (3), by *us* and not by Tom. Tom may believe various

(1) «Epistemic Opacity». *Logique et Analyse* 56 (1971): 803-810.
(2) «On Epistemic Opacity». *Logique et Analyse* 63-64 (1973): 379-380.
(3) *Word and Object* (MIT press, Cambridge, 1960), pp. 148-149.

things as concerning the object which I refer to by '$\hat{x}$ (x = x . p)'; e.g., Tom may only be able to refer to it as 'that object, whatever it is, that Zemach talks about'. Again, Tom may refer to $\hat{x}$ (x = x) as 'the object Blum talks about', and he need not know which object it is. Now Tom may say that the object Zemach talks about is the same one Blum talks about (Tom may believe, e.g., that Zemach and Blum always talk about the same thing). In this case Tom believes, as concerning the object $\hat{x}$ (x = x . p) that it is identical with the object $\hat{x}$ (x = x). But of course he need not believe the sentence represented by 'p'. Hence (3) is false. On the other hand, if we assume, as Quine requires, that Tom has «logical acumen», that he knows how to use the concept of a class and knows that for every x, x = x, then we can safely say that (2) is true.

The same point can be made by observing that «Tom believes the sentence represented by 'p'» implies, with respect to certain ideas, i.e., those expressed by the sentence represented by 'p', that Tom espouses them. On the other hand, «Tom believes ... the object represented by 'o'» does not imply, with respect to any idea, that Tom espouses it. Hence (2) is true and (3) is false. But if (3) is false so is (1). Hence, of Blum's three arguments against my position, the first and the third, which rely on (1), are logically invalid.

Blum's second argument, however, does not rely on the mistaken assumption (1); it can be reconstructed by assuming (2) only. It deserves, therefore, a separate examination. Let us assume that 'q' is true, 'r' is false, Bt(q), Bt(r), q ≡ s, and r ≡ t. Now, by (2), it follows that

(4) $Bt\ [\hat{x}\,(x = x)\,.\,q] = [\hat{x}\,(x = x)]$
(5) $Bt\ [\hat{x}\,(x = x)\,.\,r] = [\hat{x}\,(x = x)]$

and these imply, by our previous assumptions,

(6) $Bt\ [\hat{x}\,(x = x)\,.\,s] = [\hat{x}\,(x = x)]$
(7) $Bt\ [\hat{x}\,(x = x)\,.\,t] = [\hat{x}\,(x = x)]$.

As Blum correctly notes, I accept both (6) and (7) and find them completely harmless because, if we do not adopt (3), we cannot derive from them the objectionable

(8) Bt(s) . Bt(t).

I.e., we do not get the result that Tom believes all sentences equivalent with 'q' and 'r'.

Blum complains, however, that the soundness of (6) and (7) is «sufficient to show that some epistemic contexts are opaque», because if (6) and (7) are true «then the set of sentences that Tom believes are logically equivalent to the set of all sentences». That is, Blum holds that since

(9) $[\hat{x}(x = x . p) = \hat{x}(x = x)] \equiv p$

is logically true, then

(10) $Bt[\hat{x}(x = x . p) = \hat{x}(x = x)] \equiv [Bt(p)]$.

That is, Blum holds that since «logically equivalent sentences express the same proposition»,

(11) $[N(p \equiv q)] \equiv [Bt(p) \equiv Bt(q)]$.

But (11) is notoriously false. If it were true, any one who believes that $2 + 2 = 4$ believes all mathematical truths (including those not yet discovered). I do not think Blum would like to subscribe to this conclusion, and certainly there is no reason for him to hold that I should endorse it. (The assumption (11) can be made non-paradoxical if we take 'p' and 'q' to be names of states of affairs, or of the objects Truth or Falsity. But surely we do not have to make this move when we discuss Epistemic Logic.)

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