Descriptivism Reloaded?

Comments on Sam Cumming, [#]The Proper (Modal) Treatment of Proper Names" Harvard/MIT graduate conference 2005, 20th March 2005

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Cummings argues that attributions of identity-beliefs like

(1) Dumaine believes that Maria is Katherine.

should, as uttered in a given context c, be analysed as

(2) $\lambda w \forall v(v \text{ is compatible with what } D \text{ believes in } w \to (\iota x(M_c(w,x))) =_v \iota x(K_c(v,x))))$

where both " M_c " and " K_c " denote different non-constant functions in different contexts.

This accounts for the joint consistency of the following:

- (3) Dumaine believes that Maria is Katherine.
- (4) Dumaine fails to believe that Katherine is Maria.
- (5) Dumaine fails to believe that Katherine is Katherine.

but has certain immediate consequences I find counterintuitive:

- (i) (3) is true only if Dumaine believes that Maria has a name and that her name is "Katherine".
- (ii) If the actual world is compatible with what Dumaine believes and (3) is true, then Maria is called "Katherine".
- (iii) If (3) is non-vacuously true in a world where "Maria" and "Katherine" are not coreferential, (5) is also true in that world.
- (iv) (4) is true, or fails to be false, if Dumaine has at least one belief-world and believes that no one or more than one person is called "Maria".

More importantly, to ascribe Dumaine non-contradictory beliefs, we have to make substantive assumptions about *our* naming practices. Suppose the following are true:

- (6) Dumaine believes that Maria is Katherine.
- (7) Dumaine believes that Katherine is Maria.
- (8) Dumaine fails to believe that noone called "Katherine" is also called "Maria".

On Cumming's analysis, <(6), (7),(8)> can be all true only if Maria and Katherine are in fact. one and the same person. For (8) is true only if there is a world v such that $\iota x(K_c(v,x)) =_v \iota x(M_c(v,x))$. By (6) we have $\iota x(M_c(w,x)) =_v \iota x(K_c(v,x))$ and by (7) we have $\iota x(K_c(w,x)) =_v \iota x(M_c(v,x))$. It follows that $\iota x(K_c(w,x)) =_v \iota x(M_c(w,x))$, i.e. the individual called "Maria" and the individual called "Katherine" are one and the same in the world where <(6), (7),(8)> are jointly true.

Even if we grant that there are contexts in which we may truly ascribe identity-beliefs involving a relation that is neither reflexive, nor symmetric, nor transitive, this is certainly not always the case. Sometimes, it seems, we also want to ascribe beliefs that involve the relation of *identity* and in these

contexts,

- (9) Dumaine believes that Hesperus is Venus.
- (10) Dumaine believes that Venus is Phosphorus.

should allow us to infer

(II) Dumaine believes that Hesperus is Phosphorus.

There are two cases to consider: either the descriptions associated with "Venus" and "Hesperus" are true of the same thing or they are not.

If they are, then (II) follows only if Dumaine believes that the description associated with "Phosphorus" is true of the same thing than the description associated with "Venus".

If they are not, (9) and (10) not only fail to imply (11); (10) alone implies its contrary, (12):

(12) Dumaine believes that Hesperus is not Phosphorus.

Suppose that the tallest man in the room did not invent the bifocals. We still do not want to infer (14) from (13):

- (13) Dumaine believes that the inventor of the bifocals is the inventor of the zipper.
- (14) Dumaine believes that the tallest man in the room is not the inventor of the zipper.

To conclude (14) from (13), it is clearly not enough that it is true that the inventor of the bifocals is not the tallest man in the room; it is required that *Dumaine believes* this. But on Cumming's analysis mere truth is sufficient.

In some contexts at least, we would like to make a distinction between

- (15) Dumaine believes that Hesperus phosphorizes.
- (16) Dumaine believes that Phosphorus phosphorizes.

but (15) and (16) come out equivalent on Cumming's analysis (given that both "Hesperus" and "Phosphorus" name the same planet). If they name not the same planet, however, then (15) and (16) cannot be true together – if they were, then, in all of Dumaine's belief worlds, the definite description "...is the unique Phosphorizer" would have to pick out two individuals. Hence, we can ascribe Dumaine the beliefs that Hesperus and Phosphorus both phosphorise only if we assume that they are identical – only to discover that we attributed him the same belief twice over.

But would certainly like the following be consistent:

- (17) Dumaine believes that Phosphorus phosphorizes.
- (18) Hesperus is Phosphorus.
- (19) Dumaine fails to believe that Hesperus phosphorizes.

On Cumming's analysis, however, this triad is inconsistent.

Can Cumming's analysis be generalised to other than identity-beliefs involving (mental equivalents of) proper names? For beliefs concerning other binary relations, it gives bizarre results. If

(20) Dumaine believes that Maria is taller than Katherine.

is analysed, as uttered in a given context c, by

(21) $\lambda w \forall v(v \text{ is compatible with what } D \text{ believes in } w \to (\iota x(M_c(w,x))) >_v \iota x(K_c(v,x)))$

we cannot conclude from (20) that

(22) Dumaine believes that Katherine is shorter than Maria.

unless we assume both that (23) and (24):

- (23) Dumaine believes that Katherine is Katherine.
- (24) Dumaine believes that Maria is Maria.

Hence, someone like Dumaine in the original example, who believes that Katherine is Rosaline (and no one else), could not infer from his belief that Maria is taller than Katherine that Katherine is shorter than Maria.

Another possible extension of Cumming's theory would be to natural kind terms. Consider

(25) Dumaine fails to believe that water is water.

which becomes

(26) $\lambda w \exists v(v \text{ is compatible with what } D \text{ believes in } w \wedge \iota x(WS_c(w,x)) \neq_v \iota x(WS_c(v,x))$

If $\lambda w(\iota x(WS_c(w,x)))$ maps every world on the watery stuff in it, then (26) is true if Twin Earth is compatible with what Dumaine believes. But it certainly sounds odd to say that what Lavoisier learned by discovering H_2O is that water is water. Someone might believe that water is water without learning that watery stuff is H_2O . But I do not see how this is possible on Cumming's analysis.

Another possible extension is to (undisguised) singular descriptions. Cumming's theory explains why both

- (27) Dumaine fails to believe that the author of *Waverley* is the author of *Waverley*.
- (28) Dumaine fails to believe that Scott is the author of *Waverley*.

may be true. But it can only explain the possible truth of

(29) Dumaine fails to believe that the author of *Waverley* is Scott.

if Dumaine, in addition, fails to believe that Scott is called "Scott". Hence

(30) Dumaine believes that the author of Waverley is not Scott.

can only be true if Dumaine believes that Scott has a different name than he actually has. Moreover,

- Oumaine believes that the brightest heavily body on the morning sky is not the brightest heavily body on the evening sky.
- Oumaine believes that the brightest heavily body on the evening sky is the red planet.

should, at least in some contexts, imply the falsity of:

(33) Dumaine believes that the red planet is the brightest heavily body on the morning sky.

Cumming's analysis, however, does not have this consequence. It treats the triad <(31), (32), (33)> as consistent, on the same score as the consistent triad <(34), (35), (36)>:

- (34) Dumaine believes that Maria is not Rosaline.
- (35) Dumaine believes that Rosaline is the Princess.
- (36) Dumaine believes that the Princess is Maria.

Kripke's modal argument is that whether or not

(37) Maria is F.

is possibly true does not depend on what properties we ascribe to Maria. On Cumming's analysis, however, there are circumstances in which the belief we ascribe to Dumaine by

(38) Dumaine believes that Maria is Katherine.

is true, namely if the person who is called "Maria" (or the person who wears Maria's favour) is in fact also the person who is called "Katherine" (or the person who wears Katherine's favour).

Kripke's semantic argument is that if names are abbreviated descriptions, then it should be a priori that the bearer of the name satisfies the description. Given that Dumaine may fail to believe that Katherine is called "Katherine" or that she wears Katherine's favour, this objection needs some fine-tuning. In iterated belief contexts, Cumming says, the descriptions are relativised to the respective belief-worlds:

(39) Boyet thinks that Dumaine thinks that Maria is Katherine.

goes over into

(40) $\lambda w \forall v \forall z (v \text{ is compatible with everything } B \text{ believes in } w \land z \text{ is compatible with everything } D \text{ believes in } v \to (\iota x(M_c(v,x)) =_z \iota x(K_c(z,x)))$

In the case of Dumaine's introspective beliefs, then,

(41) Dumaine thinks that he thinks that Katherine is Katherine.

reduces to

(42) $\lambda w \forall v(v \text{ is compatible with everything } D \text{ believes in } w \to (\iota x(K_c(v,x))) =_v \iota x(K_c(v,x)))$

Even if Dumaine may fail to believe that Katherine is Katherine, he cannot fail to believe that he believes it.

Conclusion: belief contexts are not Shakespearean after all.