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RESCHER ON 'E!'

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In [4] N. Rescher rejected the definition of 'E!' given by H. S. Leonard in [3]. Leonard's definition was essentially

(L) $$\text{E!}x \text{ iff } (\exists\phi)(\phi x \,.\, \Diamond \sim \phi x)$$

In other words, a thing, x, exists if and only if x has some contingent property. Rescher's definition was essentially

(R1) $$\text{E!}x \text{ iff } (\exists\phi)(\phi x \,.\, \Diamond(\exists y) \sim \phi y)$$

In other words, x exists if and only if it has some nontrivial property. Later, in [5], Rescher provided a new definition

(R2) $$\text{E!}x \text{ iff } (\exists P)(Px \,.\, (\exists y) \sim Py)$$

In other words, x exists if and only if it has some nonuniversal property. In (R2) 'P' must range over only "qualitative properties". Such a property is one "denoted by a predicate which either (1) is a primative predicate of the language, or (2) is definable in terms of primative predicates by means of alternation and conjunction (only), in terms of these alone, and thus without negation and without any reference to particular individuals."

In this note I will first briefly show that Rescher's reason for rejecting (L) is unsatisfactory. Then I will show that (R2) must be rejected. Finally, I will make some remarks about the general attempt to formalize a definition of existence.

Rescher's rejection of (L) is based on the argument that such a definition denies existence to abstract mathematical objects, such as numbers, sets, etc., since "such objects necessarily have each of those properties which they do have." Thus, for abstract object X,

(R3) $$(\forall\phi)(\phi X \supset \Box\phi X)$$

Of course, given (R3), (L) must be rejected. But should we accept (R3)? It seems to me that there are clearly properties of numbers, etc. which are merely contingent. The number of coins in my pocket is two. It need not be. It is simply a matter of accident that two has the property of being

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