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# *De Re* and *De Dicto*

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It is widely recognized that the modal sentence 'Necessarily, Socrates is wise' can be interpreted in two different ways. Under the first interpretation, the *de re* interpretation, it is understood as saying that Socrates has the property of being wise essentially; i.e., that Socrates has the property of being wise in every possible world in which Socrates exists. Under the second interpretation, the *de dicto* interpretation, it is understood as saying that the proposition *Socrates is wise* is true in every possible world. In [3] and [4] Plantinga has suggested a way of understanding the notion of necessity using the concept of *essence*: a property $E$ which is exemplified in some possible world and is such that, in every possible world, for every $x$, if $x$ has $E$ then: (a) $x$ has $E$ essentially and (b) in no world does anything distinct from $x$ have $E$. Using this notion of essence, an applied semantics can be introduced for both *de re* and *de dicto* necessity which satisfies the doctrine of *serious actualism*, that, necessarily, there are no objects that do not exist and objects can have properties only in worlds in which they do exist. For a first-order modal language $L$, a corresponding formal semantics for *de re* necessity (and denial) and *de dicto* necessity (and denial) can be introduced (the systems $A$ and $A^*$ of [2]). Because $L$ contains a single necessity operator and a single denial operator, it does not allow for the simultaneous treatment of both kinds of interpretations. In this paper the language $L$ is extended by introducing a new class of operators; the result is a language rich enough to support a semantics treating *de re* and *de dicto* notions simultaneously. The formal semantics introduced is characterized axiomatically.

Initially one might think that the problem of formally representing the two senses of necessity simultaneously can be solved by introducing two necessity operators, $\Box_1$ and $\Box_2$, so that

(1) $\Box_1$ (Socrates is wise)

is interpreted as *Socrates is essentially wise*, and

(2) $\Box_2$ (Socrates is wise)

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