CAN THERE BE VAGUE OBJECTS?

By Gareth Evans

IT is sometimes said that the world might itself *be* vague. Rather than vagueness being a deficiency in our mode of describing the world, it would then be a necessary feature of any true description of it. It is also said that amongst the statements which may not have a determinate truth value as a result of their vagueness are identity statements. Combining these two views we would arrive at the idea that the world might contain certain objects about which it is a *fact* that they have fuzzy boundaries. But is this idea coherent?

Let 'a' and 'b' be singular terms such that the sentence '$a=b$' is of indeterminate truth value, and let us allow for the expression of the idea of indeterminacy by the sentential operator '∇'.
Then we have:

(1) $\nabla(a=b)$.

(1) reports a fact about b which we may express by ascribing to it the property '$\hat{x}[\nabla(x=a)]$':

(2) $\hat{x}[\nabla(x=a)]b$.

But we have:

(3) $\sim\nabla(a=a)$

and hence:

(4) $\sim\hat{x}[\nabla(x=a)]a$.

But by Leibniz's Law, we may derive from (2) and (4):

(5) $\sim(a=b)$

contradicting the assumption, with which we began, that the identity statement '$a=b$' is of indeterminate truth value.

If 'Indefinitely' and its dual, 'Definitely' ('$\triangle$') generate a modal logic as strong as S5, (1)—(4) and, presumably, Leibniz's Law, may each be strengthened with a 'Definitely' prefix, enabling us to derive

(5′) $\triangle\sim(a=b)$

which is straightforwardly inconsistent with (1).

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