REVIEWS

Karel Lambert (introduction and editor), *Philosophical Applications of Free Logic*. Oxford: Oxford University Press, 1991. 309 pp.

Reviewed by

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There is a long philosophical tradition concerning the problem of non-existing entities. what status do they have? What do they refer to? Can statements involving non-existing entities have truth-values? Are all non-existing entities the same? If so, does this imply that "Pegasus = Sherlock Holmes" is true? If not, how do we distinguish between non-existing entities, if such is possible? In contemporary philosophy, the problem crops up when one is dealing with, e.g., possible worlds. If these are considered to be fictional entities, how many possible worlds are there? According to some philosophers of mathematics, the nominalists in particular, most mathematical concepts are fictions. If so, how do we deal with them?

Obviously, any answer(s) to this set of problems must first of all deal with the problem of distinguishing between existent and non-existent entities. To a certain extent — and this is the position defended by Karel Lambert in his introduction to this volume *The Nature of Free Logic* — the history of logic can be interpreted as a gradual explicitation of the underlying existence assumptions in formal reasoning. In Aristotelian syllogistic reasoning, the inference from "All *S* are *P*" to "Some *S* are *P*" was considered correct because it was implicitly assumed that a universal statement carried an existential commitment that there is at least one *S* that is *P*. Hence the correctness of the conclusion. In Fregean logic this is no longer the case. It must be explicitly added that there is at least one *S* that is *P* to derive, trivially, the conclusion. But modern logic allows the use of singular terms (or individual constants). If t is such a singular term then it is true that t = t. Apply the rule of existential generalization and one obtains $(\exists x)(x = \mathrm{t})$. Hence, whatever it is that t refers to, it must exist. Obviously, when talking about Pegasus or Sherlock Holmes, I do not wish to commit myself to their existence. A similar move as in the transition from Aristotelian to modern logic is required *vis-à-vis* singular terms. Free logic has set itself