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HINTIKKA'S FREE LOGIC IS NOT FREE

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In his "Existential presuppositions and their elimination",[1] Hintikka uses his Rule of existential instantiation,

(C.Eq) if $(\mathrm{E}x)p \in \mu$, then $p(a/x) \in \mu$ and $\mathrm{E}!a \in \mu$ for at least one free individual symbol a

to prove that

(1) $\mathrm{E}!a \equiv (\mathrm{E}x)(x = a)$

Part of this proof goes as follows:

(2) $(\mathrm{E}x)(a = x) \in \mu$
(3) $a = b \in \mu$ } (C.Eq)
(4) $\mathrm{E}!b \in \mu$ }

Now from (3) and (4) you may infer, quite uncontroversially I think,

(5) $(\mathrm{E}x)(x = b) \in \mu$

By (C.Eq), following the same steps as (2)-(4), you may infer from (5)

(6) $\mathrm{E}!\mathrm{C} \in \mu$

Going on this way, you may prove that for any term n of your syntax it is true that

(7) $\mathrm{E}!n \in \mu$

The rule of identity used assures that "whenever a and b are identical and a exists, b exists too" (p. 32). Thus it appears that for any given universe of discourse there exists at most one self-identical individual.

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1. *Models for Modalities*, Reidel, Dordrecht (1969), pp. 23-44.

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