

## HINTIKKA'S FREE LOGIC IS NOT FREE

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In his "Existential presuppositions and their elimination",<sup>1</sup> Hintikka uses his Rule of existential instantiation,

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

to prove that

$$(1) E!a \equiv (\exists x)(x = a)$$

Part of this proof goes as follows:

$$\begin{array}{l} (2) (\exists x)(a = x) \in \mu \\ (3) a = b \in \mu \\ (4) E!b \in \mu \end{array} \left\{ \begin{array}{l} \\ \\ \end{array} \right. (C.Eq)$$

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

$$(5) (\exists x)(x = b) \in \mu$$

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

$$(6) E!C \in \mu$$

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

$$(7) E!n \in \mu$$

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.