A correction to **Embedding the Elementary Ontology of Stanisław Leśniewski into the Monadic Second-Order Calculus of Predicates**, this journal 42 (1983), pp. 197–207.

In the above mentioned paper of mine I state the theorem to the effect that the mapping φ defined by the following four conditions:

(1) $\varphi(S\varepsilon P) = \exists ! x Sx \wedge \forall x (Sx \to Px)$,

(2) $\varphi(\alpha \circ \beta) = \varphi(\alpha) \circ \varphi(\beta)$, where $\circ = \to, \wedge, \vee, \leftrightarrow$,

(3) $\varphi(\neg \alpha) = \neg \varphi(\alpha)$,

(4) $\varphi(⅄ SA) = ⅄ S \varphi(A)$, where $⅄ = \forall, \exists$,

embeds Leśniewski's elementary ontology, ***EO***, into second order monadic predicate calculus, ***LS***.

Unfortunately, as it has been pointed out to me by J. Cyrulis (September, 84), M. Takano (April, 85) and V. Bočarov (May, 85) the theorem is not correct. Although the formula $\exists S(S\varepsilon S)$ is not provable in the elementary ontology, its translation under φ is provable in ***LS***.

There are two ways to correct the theorem. First, as it has been suggested to me both by J. Cyrulis and M. Takano, we may enlarge ***EO*** by adding to it $\exists S(S\varepsilon S)$ as a new axiom thus transforming ***EO*** into a new calculus ***EOA***, the latter being embeddable in ***LS*** by φ. It should be noticed that in this case one has to modify the function ψ from ***LS*** into ***EOA*** applied in the proof of the theorem so that to have

$$\psi(\forall x A) = \forall x (x\varepsilon x \to \psi(A))$$

$$\psi(\exists x A) = \exists x (x\varepsilon x \wedge \psi(A)).$$

Second, one may replace ***LS*** by ***LS***$^-$, where ***LS***$^-$ is the second order monadic calculus valid in all domains, the empty one including. One may prove that with ***LS*** replaced by ***LS***$^-$ the theorem stated in the paper in question becomes valid, i.e. φ embeds ***EO*** in ***LS***$^-$.

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