

NON-FREGEAN APPROACH TO V. A. SMIRNOV'S COMBINED LOGICS

VLADIMIR L. VASYUKOV

Department of Logic
 Institute of Philosophy RAS
 Volkhonka 14, 119842 Moscow
 Russia
 e-mail: logic@sovam.com

In his paper "Internal and External Logics" [1988] V. A. Smirnov considers systems of two-levelled logic in which the extrinsic level (external logic) would be a propositional logic while the intrinsic level (internal logic) would be an algebra of events (the latter are the terms). By extending the system **CM** (De Morgan's logic with the classical external one) at the expense of assertions concerning the identity of events, Smirnov introduces the rule $\frac{\theta a \leftrightarrow \theta b}{a = b}$ which he, in accordance with R. Suszko's ideas, calls the *Frege principle*. It denotes that an algebra of events might be modified within wide ranges.

As is generally known, non-fregean logics suppose an abolition of Frege's principle which results in introducing a new identity connective into the syntax and impels the use of so-called situational semantics. Following again Suszko's ideas let us replace Frege's principle with the rule $\frac{a = b}{\theta a \leftrightarrow \theta b}$, which in turn would be called *Suszko's principle*. For such a system of combined logic we can yield the R. Wójcicki-type situational semantics [Wójcicki 1986] in case of acceptance of the conception of events as the collection of situations instead of possible worlds, to wit, treating an identity of events as to be determined by the identity of situations in which those are occurring. And if in the case of accepting Frege's principle we conclude from an assertion act to the state of affairs, then in the case of