AN APPROACH TO BI-LOGIC BY MODALITIES

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Bi-logic (Matte Blanco, 1975) has two opposite "modes": a "symmetric" and a "bivalent" one. The logical characterization of the last is the separation of the two opposite truth values, whereas the symmetric mode cannot perform the separation, since it identifies the part with the whole thing. Following Matte Blanco, this means that the unconscious can treat infinite sets only: namely, the symmetric mode is due to an original infinite mode of thinking.
We find that both the theoretical and clinical research (Lauro Grotto, 2014) would acquire a great advantage if a formal approach could better clarify how the collapse of the infinite into the bivalent mode takes place. To this aim, our proposal is to adopt a logical language including modalities, in order to clarify the different value of assertions in different contexts. We consider a quantum logical model (Battilotti, 2014), where quantum states corresponds to sets termed "infinite singletons" and where one can read by "symmetry" what is usually considered as "duality" in logic. The model shows also how duality is recovered by separation. Our infinite singletons are domains of quantifiers, which we introduce by suitable equations. An abstraction from our definition of quantifier allows to eliminate the specific domain and to obtain the modality of S4 (Battilotti 2016). Then the modality can describe symmetry and duality together. The modality of S4 can be read as a way to add "an infinite view" to classical propositional logic. The definability of the modality in the quantum model depends on the fact that the spin is a two-valued observable, consistently with the Kochen-Specker theorem of quantum theory. In our view this can be read as implying that 'finite means bivalent'.
From the point of view of psychoanalytic theory the complete formalization of the theory in logical terms would provide a new perspective within the long-lasting debate on the epistemic foundations of psychoanalysis (Lauro Grotto, 2014b). In particular we are here interested in exploring a possible interpretation of the formal introduction of the modal system S4 in relation to two theoretical points: first, the shift from the First to the Second Topic description in Freudian Psychoanalysis, and second, the consideration of transitional dynamics and the role of external reality in the Object Relations approach.

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