▸ LUDOVICA CONTI, *Arbitrary Semantics for Abstraction.*
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In this talk, I aim at providing a semantics inspired to Carnap's proposal of an "indirect and partial" interpretation of the theoretical terms of science, in order to model a non-standard interpretation of abstractionist vocabulary, such as the (epistemically) arbitrary one (cf. Magidor 2012). Preliminarily, I present the arbitrary interpretation of the abstract expressions as a clarification of the indeterminacy that they exhibit as *definienda* of the abstraction principles (AP: $\forall F \forall G(@F = @G \leftrightarrow Eq(F, G))$), traditionally considered as implicit definitions. I briefly discuss the advantages of such an interpretation, particularly focusing on the achievements that it provides in terms of logicality of abstraction (cf. Boccuni Woods 2020).

In the first part of the talk, I present a choice-functional reconstruction of the abstractionist theories (AT), following Carnap's strategy. AT is formulated in a second-order abstraction language $L(T^p, T^a)$, where L is second-order logical language, T^p is countable set of first-order and second-order *primitive* constant and T^a is a countable set of *abstract* terms (@F, for any second-order constant) implicitly defined by AP. The first step consists in the elimination of the theoretical terms in $L(T^p, T^a)$ by means of the ramsification of the theory. Considering the language proposition (A) expressing the theory, we obtain, as Ramsification of A, the proposition RS(A): $\exists_1 ... \exists x_n A(T_1^p, ... T_n^p, x_1, ..., x_n)$. The second step consists in the reintroduction of the abstractionist vocabulary through its explicit definition in L_ϵ, namely the language $L(T^p)$ supplemented by the logical ϵ-operator. A complete transposition of AT in a choice-functional theory will be presented.

In the rest of the talk, a model for this theory will be described. It is constituted by an ordered pair $M =< D, I >$, where D is the domain and I is the interpretation function for non-logical vocabulary. Given this background, ϵ is interpreted relative to a given choice function δ for ϵ-terms ($\delta : P(D) \to D$ s.t. $\forall X \subseteq D \ \delta(X) = x \in X$, if $X \neq \emptyset$; $\delta(X) = x \in D$, if $X = \emptyset$). Then, closed ϵ-terms are interpreted relative to the model M, an assignment function s to variables and the choice function δ on M: $val^{M,\delta,s}(\epsilon x.A(x)) = \delta(val^{M,s}(A(x)) = \delta(\ \{\ d \in D | M, s(x/d) \models A(x)\ \})$ – where A is the set of elements that satisfy AP.

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