Charles S. Peirce on Identity: The case of the Existential Graphs

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Abstract

The notion of identity plays a special and almost mysterious role in logic. In this presentation, I examine the ideas on identity as a logical notion developed by Charles S. Peirce in his late diagrammatic logic of the Existential Graphs. Identity was expressed in the Beta Graphs by means of the line of identity. My main claim is that Peirce achieved by the line of identity a rich and useful analysis of existential quantification in the special sense of uniqueness of decomposition, but its function as an icon for identity is problematic. I will show that the line of identity does not correspond to the notion of identity stated later in the standard classical First-Order Logic with identity, but in the context of the Beta Graphs, the line of identity expressed individual identity. I will also show the differences of the formulation of identity in the Beta Graphs with the presentation in the context of the algebra of logic, where identity was regarded as a second-order predicate. Finally, I will argue, more generally, that in the turmoil of ideas at the origins of modern logic, identity was diversely understood, playing different roles.

References

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