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Weyl's appropriation of Husserl's and Poincaré's thought. (English) Zbl 1015.03504
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Summary: This article locates Weyl's philosophy of mathematics and its relationship to his philosophy of science within the epistemological and ontological framework of Husserl's phenomenology as expressed in the "Logical investigations" and "Ideas". This interpretation permits a unified reading of Weyl's scattered philosophical comments in "The continuum" and "Space – time – matter". But the article also indicates that Weyl employed Poincaré's predicativist concerns to modify Husserl's semantics and trim Husserl's ontology. Using Poincaré's razor to shave Husserl's beard leads to limitations on the least upper bound theorem in the foundations of analysis and Dirichlet's principle in the foundations of physics. Finally, the article opens the possibility of reading Weyl as a systematic thinker, that he follows Husserl's so-called transcendental turn in the "Ideas". This permits an even more unified reading of Weyl's scattered philosophical comments.

MSC:

03A05 Philosophical and critical aspects of logic and foundations
00A30 Philosophy of mathematics
03-03 History of mathematical logic and foundations
01A60 History of mathematics in the 20th century

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