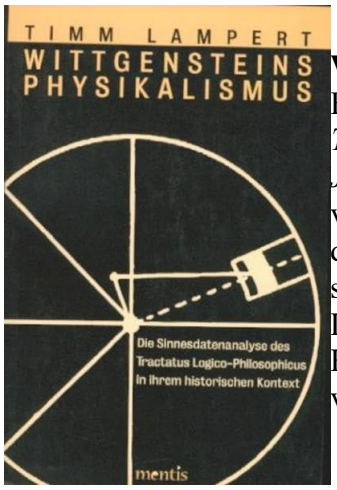
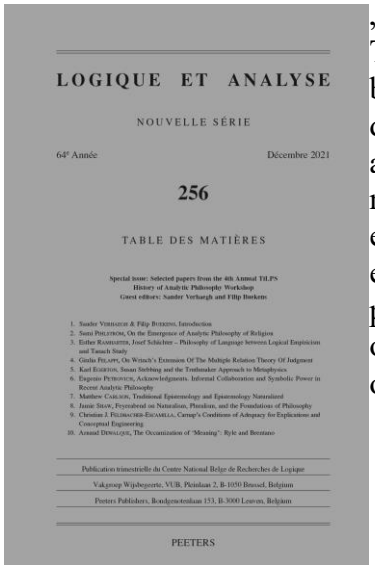


Wittgensteins Physikalismus, Mentis, Paderborn, 2000, 348 Seiten.
Erweiterte Version der Dissertation *Interpretation von Wittgensteins Tractatus auf dem Hintergrund der Sinnesdatenanalyse des beginnenden 20. Jahrhunderts*. Es wird dargelegt, dass Wittgenstein - entgegen der zumeist vertretenen Ansicht - konkrete Auffassungen zur Analyse der Sprache und der Welt hatte, mit den zeitgenössischen Analysekonzepten vertraut war, seine sprachphilosophischen Auffassungen in Theorien zur konkreten Durchführung der Analyse der Sprache begründet sind und seine spätere Kritik der *Abhandlung* sich maßgeblich gegen eine in der *Abhandlung* vorausgesetzte physikalistische Analyse wendet.

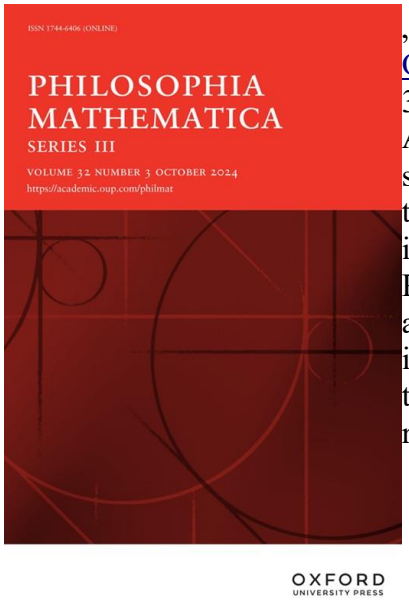
„Newton's Experimental Proof“, T*heoria, An International Journal for Theory, History and Foundations of Science (2021)* 36.2, 261-283.
Newton's claim to provide experimental proofs is often criticized. It is argued that his proofs are based on hypotheses and not inferred from the experiments alone. This criticism, however, applies a hypothetico-deductive analysis to Newton's experimental reasoning. Such an analysis is not consistent with Newton's own understanding of his proof method. The following reconstruction of Newton's proof method is intended to do justice to his understanding by applying the conception of iconic proofs to Newton's proofs by experiment. The main purpose of this analysis is to explain Newton's dictum that the experiment alone serves as the source of evidence from which his theorems are derived. After drawing a general distinction between symbolic and iconic proofs and illustrating this distinction by means of Euclidean proofs and Aristotelian syllogisms, I will apply this distinction to Newton's experimental proofs and analyze Newton's proof of the heterogeneity of sunlight by his experimentum crucis as an iconic proof. Finally, I will show that this experiment and its underlying method remain prominent in Newton's *Opticks*.

„Wittgenstein's Elimination of Identity“ (with Markus Säbel), *Review of Symbolic Logic* (2021) 14.1, 1-21.
One of the central logical ideas in Wittgenstein’s Tractatus logico-philosophicus is the elimination of the identity sign in favor of the so-called “exclusive interpretation” of names and quantifiers requiring different names to refer to different objects and (roughly) different variables to take different values. In this paper, we examine a recent development of these ideas in papers by Kai Wehmeier. We diagnose two main problems of Wehmeier’s account, the first concerning the treatment of individual constants, the second concerning so-called “pseudo-propositions” (Scheinsätze) of classical logic such as $a=a$ or $a=b \,\&\, b = c \rightarrow a=c$. We argue that overcoming these problems requires two fairly drastic departures from Wehmeier’s account: (1) Not every formula of classical first-order logic will be translatable into a single formula of Wittgenstein’s exclusive notation. Instead, there will often be a multiplicity of possible translations, revealing the original “inclusive” formulas to be ambiguous. (2) Certain formulas of first-order logic such $a=a$ as will not be translatable into Wittgenstein’s notation

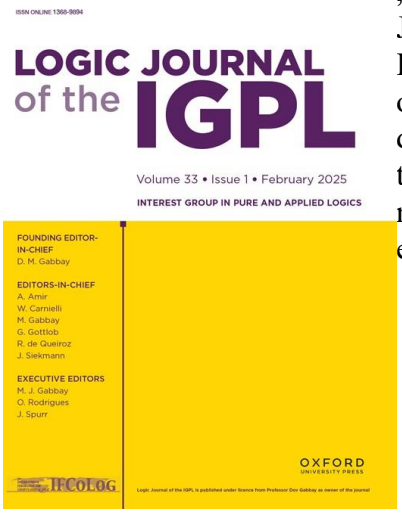
at all, being thereby revealed as nonsensical pseudo-propositions which should be excluded from a "correct" conceptual notation. We provide translation procedures from inclusive quantifier-free logic into the exclusive notation that take these modifications into account and define a notion of logical equivalence suitable for assessing these translations.



„Decidability and Notation", *Logique et Analyse (2020)* 251, 365-386.
This paper first defines the concept of an iconic notation for a property P by a notation providing decision criteria for P . This definition distinguishes an iconic notation from a symbolic notation. The notion of an iconic proof is then de#ned by an algorithmic translation of a symbolic notation into an iconic notation. The defined concepts are illustrated by examples from mathematics and monadic logic. The definitions and examples then serve as a background for a discussion of the decision problem that asks for the possibility of an algorithmic translation of first-order formulas into a proper iconic notation for the whole realm of first-order logic.



„Wittgenstein and Gödel - An Attempt to Make `Wittgenstein's Objection' Reasonable", *Philosophia Mathematica (2018)* 25.3, 324-345.
According to some scholars, such as Rodych and Steiner, Wittgenstein objects to Gödel's undecidability proof of his formula G, arguing that given a proof of G, one could relinquish the meta-mathematical interpretation of G instead of relinquishing the assumption that Principia Mathematica (PM) is correct (or ω-consistent). Most scholars agree that such an objection, be it Wittgenstein's or not, rests on an inadequate understanding of Gödel's proof. In this paper, I argue that there is a possible reading of such an objection that is, in fact, reasonable and related to Gödel's proof.



„Minimizing Disjunctive Normal Forms of First-Order Logic“, Logic Journal of the IGPL (2017) 25.3, 325-347.

In contrast to Hintikka’s enormously complex distributive normal forms of first-order logic, this paper shows how to generate minimized disjunctive normal forms of first-order logic. An effective algorithm for this purpose is outlined, and the benefits of using minimized disjunctive normal forms to explain the truth conditions of propo-sitions expressible within pure first-order logic are presented.