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## Review of “Reconsidering Logical Positivism”

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## Book Review

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*Reconsidering Logical Positivism*. Michael Friedman. Cambridge University Press, 1999. xix+252 pages. \$19.95 paperback, \$54.95 hardback. ISBN 0-521-62476-2.

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Those who have read Richard Brautigan's *Trout Fishing in America* will understand and sympathize with remarks from both *The Viking Press* ("I gather from the reports that it was not about trout fishing.") and from *Fly Fisherman* ("Reading *Trout Fishing in America* won't help you catch more fish, but it does have something to do with trout fishing.") Sometimes we are surprised, pleasantly surprised, to be sure, but still surprised (such as the time I was asked if I liked to eat geoduck; thinking it was fowl, I said, "Sure."). Michael Friedman's *Reconsidering Logical Positivism* was such a pleasant surprise. For me the surprise was not so much that someone actually would ask us to reconsider logical positivism. Such reconsideration is long overdue. Rather, the surprise was the specifics of this reconsideration that Friedman offers. I was expecting a sophisticated, spirited defense of doctrines or methods or overall stances of Carnap, Schlick, et al.; if not an outright defense of them, then at least a good chastising of the whipping-boy caricatures that almost always pass for logical positivists. (As we all know, within academia the label "positivist" is now used as a derogatory put-down, intended to be, and often sufficient as, a demonstration that some claim or position is false, retrograde, and – if worthy of any consideration at all – abhorrent.) Friedman's book is less a general defense and more a corrective reinterpretation of the overarching goal of the logical positivists, especially Carnap.

The book consists of nine previously-published essays, some with slight modifications or addenda) Part One ("Geometry, Relativity, and Convention") contains four of these nine and focuses on several points. First, the logical positivists were not concerned primarily with establishing a radical empiricist foundation for knowledge. In fact, much of their efforts went to establishing arguments contrary to foundationalism and even to empiricism. Second, what they were concerned with was wrestling with the philosophical significance of new discoveries in geometry (e.g., Riemann) and physics (e.g., Einstein), particularly how they related to a fuller understanding of aprioricity. Given the apparent relativizing advances in geometry and physics, the logical positivists were concerned with articulating relativized apriori principles (i.e., principles to explicate how scientific knowledge is possible).

The first essay ("Morris Schlick's *Philosophical Papers*") gives a detailed review of Schlick's transition from an early stance as a neo-Kantian critical realist, concerned with the form/content distinction and rejecting a coherence theory of truth, to a later drift toward holism, verifiability, and formalism regarding judgment and meaning. In the second essay ("Carnap and Weyl on the Foundations of Geometry and Relativity Theory") Friedman argues that both Carnap and Weyl

reacted to the new general theory of relativity by adopting a Kantian view of spatial intuition, filtered through Husserl's notion of an immediate grasping of essences.

The third essay ("Geometry, Convention, and the Relativized A Priori: Reichenback, Schlick, and Carnap") reinforces this theme that, for all three philosophers, the concern was to demonstrate that the question of whether space is Euclidean or not is, while not synthetic a priori, not answerable empirically. So, while various (perhaps competing) theories can each be associated with an invariance group of transformations, each with a range of possible descriptions of nature, the choice of theories is not determined a posteriori. As Friedman notes, they held with disdain Gauss's reported attempt to determine the curvature of space by measuring angles of a terrestrial triangle determined by three mountaintops. The fourth of the initial group of essays ("Poincare's Conventionalism and the Logical Positivists") enunciates how Poincare's geometrical conventionalism, along with Einstein's general relativity theory, was understood by the logical positivists.

Part Two ("Der Logische Aufbau der Welt") consists of two essays providing a reinterpretation of Carnap's fundamental work. The first of these essays ("Carnap's *Aufbau* Reconsidered") argues for a new understanding of Carnap's overall project, including his concerns about phenomenalism, foundations, a unified science, holism, verifiability, etc., while the second of these essays ("Epistemology in the *Aufbau*") focuses on reinterpreting Carnap's project not as one of a foundationalist empiricism, but as a neo-Kantian one "with a concern for depicting how the cognitive process transforms inherently private and subjective sensations into fully objective experience capable of validity and truth, and with the corresponding problem of carrying out this project in an essentially 'logical' – that is, nonmetaphysical and nonpsychological – fashion" [p. 141]. Taken as a pair, these essays force a serious re-evaluation of Carnap in particular and of logical positivism as it is associated with him and his projects. Friedman argues persuasively that Carnap was not advocating a reductionistic phenomenalism in the *Aufbau*. Much of this logical construction takes place, for Carnap, within the domain of private sense experience but much of the subsequent constructional system is physical, not phenomenalistic. While Carnap does hope to explicate a phenomenalistic system, his larger aim is to show the possibility of translating all scientific statements into statements within a constructional system. But a phenomenalistic system is neither necessary nor primary nor forced. This is not only consistent with the Carnapian concerns laid out in Friedman's earlier essays, but also with the later Carnapian suggestion of internal and external frameworks, viz., the choice of systems is relativized. Given that a basic phenomenalistic system is not Carnap's fundamental goal, what is? It is the articulation and defense of a radically new conception of objectivity, one that allows for and makes sense of a unified science while being holistic and formalistic. Metaphysical neutrality, not radical empiricism, is the background.

Metaphysical neutrality might be the background, but what is the epistemological program of the *Aufbau*? Not, as just mentioned, radical empiricism. As Friedman points out, Carnap actually says very little here about the external world and even less about certainty, justification, and doubt. Rather, his interest is to demonstrate that all scientific assertions can be translated into assertions within a constitutional system. Not only is this aim not an empirically reductionistic one, but on the contrary, "as parts of a unified presentation of the results of the empirical sciences, all objects of the constitutional system necessarily have the same (tentative and empirical) epistemic value" [p. 120]." Granted, Carnap begins with private sensations, but the point of proceeding from them to full-

blown scientific knowledge is not to transfer the epistemic status of the former to the latter, but “to embed the data of sense in an objective logico-mathematical structure so that they themselves first become objective [p. 129].”

The third and final part of the book (“Logico-Mathematical Truth”) consists of three essays. The first of these three (“Analytic Truth in Carnap’s *Logical Syntax of Language*”) focuses on the centrality for Carnap of the Kantian question of how mathematics is possible. In his search to crystallize a secure conception of analytic truth, Carnap drew upon Frege’s efforts to construct a purely analytic arithmetic (contra Kant) and early Wittgenstein’s efforts to then demonstrate that this could be built into any representational system that we would want to call a language. Carnap interpreted these efforts in terms of providing a formal syntax and give a philosophical grounding to mathematics (i.e., show how mathematics is possible). That this project ultimately failed, compliments of Gödel, is a story we all know too well.

The penultimate essay (“Carnap and Wittgenstein’s *Tractatus*”) contains Friedman’s account of the influence of Wittgenstein, both positive and negative, on Carnap. The positive influence was that Carnap derived the essential nonfactual, tautological, character of analytic truth from Wittgenstein. The negative influence, that is, what Carnap rejected and clarified as an alternative, was Wittgenstein’s notion of the ineffability of logic (what cannot be said must be shown). As opposed to Wittgenstein, Carnap saw logical syntax, and the analysis of logical syntax, not as meaningless, but as a theoretical science itself, though it says nothing directly about the empirical world. This message is continued in the final essay (“Tolerance and Analyticity in Carnap’s Philosophy of Mathematics”). Here Friedman argues that Carnap’s well-known principle of tolerance (as stated early in *The Logical Syntax of Language*: “we do not wish to set up prohibitions, but rather to stipulate conventions” and later in “Empiricism, Semantics, and Ontology:” Let us be cautious in making assertions and critical in examining them, but tolerant in permitting linguistic forms.”) flows from this enunciation of a logical syntax that is neutral with respect to metaphysical commitments. As Friedman says, “...once we have made the choice of a particular formal-logical system, there is then a specific notion of logical ‘correctness’ fixed by the rules in question, a notion of logical ‘correctness’ *relative* to the formal rules (and their syntactic consequences) to which we have committed ourselves. For the choice of one such formal system over another, however, there is and can be no notion of ‘correctness.’ Here we are faced with a purely pragmatic or conventional question of suitability and/or convenience relative to one or another given purpose [p. 200].”

As I remarked above, Friedman’s book came as a surprise to me. I expected a well-crafted, full-fledged defense of numerous theses that usually get associated with logical positivism, a plea for some version of verifiability, an argument for methodological and/or ontological reductionism, perhaps a case made for a form of emotivist or at least noncognitivist axiology. This is definitely not an introduction to logical positivism or simply a competent, thoughtful overview of its leading tenets and advocates. Instead, Friedman gives a very fine-tuned, historically-backed, detailed, substantive, and persuasive case for a serious reinterpretation of Carnap in particular and logical positivists in general. Given this level of scholarship and close argumentation, one hopes (at least, I hope!) that in the future Friedman will give us a re-assessment of these theses that are – rightly or wrongly – associated with logical positivism.

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Logical positivism (later referred to as logical empiricism, rational empiricism, or neo-positivism) is a school of philosophy that combines positivism—which states that the only authentic knowledge is scientific knowledge—with some kind of logical analysis, which is similar, but not the same as logicism. Logical positivism denied the soundness of metaphysics and large swathes of traditional philosophy, and affirmed that statements about metaphysics, religion and some claims of ethics are devoid of 1. What is logical positivism? Who are its key thinkers? Are there different types of logical positivism? 2. Why is it bashed a lot? What are the reasons for it frequently being considered philosophically unsound? Logical positivism is essentially the view that statements that are neither empirically verifiable nor logically verifiable are non-truth apt ("cognitively meaningless"). This is often formulated into a single proposition called the "verification principle." Overall, logical positivism was essentially empiricism mixed with early-Wittgenstein's philosophy of language. By empiricism, we mean the view that all a priori knowledge is analytic. There is no such thing as the synthetic a priori. Logical positivism, later called logical empiricism, and both of which together are also known as neopositivism, was a movement in Western philosophy whose central thesis was the verification principle (also known as the verifiability criterion of meaning). This theory of knowledge asserted that only statements verifiable through direct observation or logical proof are meaningful in terms of conveying truth value, information or factual content. Starting in the late 1920s, groups of philosophers Michael Friedman. In this collection of essays one of the preeminent philosophers of science writing offers a reinterpretation of the enduring significance of logical positivism, the revolutionary philosophical movement centered around the Vienna Circle in the 1920s and 30s. Michael Friedman argues that the logical positivists were radicals not by presenting a new version of empiricism but rather by offering a new conception of a priori knowledge and its role in empirical knowledge. This collection will be mandatory reading for any philosopher or historian of science interested in the history Logical positivism, a philosophical movement that arose in Vienna in the 1920s and was characterized by the view that scientific knowledge is the only kind of factual knowledge and that all traditional metaphysical doctrines are to be rejected as meaningless. A brief treatment of logical positivism. Our editors will review what you've submitted and determine whether to revise the article. Join Britannica's Publishing Partner Program and our community of experts to gain a global audience for your work! External Websites. Stanford Encyclopedia of Philosophy - Logical Empiricism. WRITTEN BY. The Editors of Encyclopaedia Britannica.