

BOOKS

Einstein and Soviet Dogma; An Elusive Relationship

Einstein and Soviet Ideology

▶ Alexander Vucinich
Stanford U. Press, Stanford,
Calif., 2001. \$60.00 (291 pp.).
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Reviewed by Alexei Kojevnikov

Alexander Vucinich's *Einstein and Soviet Ideology* is one of those studies that undermine taken-for-granted assumptions, including some held by Vucinich himself. It sets out to explore "one of the most momentous confrontations in the intellectual life of the Soviet Union: the conflict between Einstein's theory of relativity and official Soviet ideology, articulated by dialectical materialism, the Marxist philosophy of nature."

Reading ideological literature is no fun. Where most authors would have supported their generalizations by citing a few particularly outrageous sources, Vucinich—renowned for his exhaustive, encyclopedic style of research—discusses the entire spectrum of Soviet attitudes toward Einstein expressed by a variety of writers: Marxists and non-Marxists, physicists and philosophers, mathematicians and literary critics. The result of his thorough investigation overturns the initial premise. It becomes clear, at least to a reader like myself, that there was hardly much of a conflict between Soviet ideology and Einstein's physics, but there was an exceptionally strong Einstein cult within Soviet society.

The book gives its most complete coverage to the opposition to Einstein's theories. There were several published attacks, although overall

they leave an impression of being rather isolated and relatively insignificant, compared to similar attacks in other countries at that time. Probably the strongest Soviet opponent, A. K. Timiriyaev, of Moscow University, tried to convince colleagues of the validity of the experiments by an American, Dayton Miller, who claimed to have disproved the theory of relativity. Finding little support among physicists, Timiriyaev turned to philosophical arguments and audiences. In 1929, however, a meeting of Soviet philosophers declared Timiriyaev's views not correctly Marxist. Deprived of almost any authority in either physical or philosophical circles, Timiriyaev consoled himself with the company of a sole ally, N. P. Kasterin, who abstained from Marxist argumentation but tried to develop an alternative to relativity on the basis of classical mechanics. Kasterin was as thoroughly anti-Soviet as Timiriyaev was pro-, but the two were united in their stubborn opposition to Einstein, as well as in their virtually complete isolation. Soviet physicists firmly embraced the theory of relativity; expressing any doubts in it was the surest way toward marginalization in their community.

Soviet philosophers had their own debate about Einstein: Although they hardly ever questioned the actual physics of relativity, they were very much concerned about philosophical conclusions that could be derived from it. Some aspects of Einstein's philosophical views appealed to Marxists, others aroused suspicions in them. As Vucinich describes it, their typical choice was between criticizing Einstein's philosophical "mistakes" and developing "dialectico-materialist" interpretations of relativity, translating its philosophy into Marxist language. Most philosophers labored along the latter path, while simultaneously praising Einstein as a great scientist; At least one Marxist, A. A. Maksimov however, stands out as perhaps Einstein's most relentless critic. The highest point of Maksimov's crusade against "physical idealism" came with the publication in 1952 of a volume on the philosophical interpretations of

modern physics (A. A. Maksimov et. al., eds. *Filosofskie voprosy sovremennoi fiziki*, Moscow, 1952), in which a contributor actually dared to suggest that Einstein's erroneous philosophy corrupted the general theory of relativity. The country's top expert on general relativity, V. A. Fock, protested such "ignorant criticism" with a letter to the Central Committee of the Communist Party, and received assurances that the volume and the views it represented did not enjoy the party's support. Around the same time, Maksimov was effectively ostracized and barred from publishing.

As much as they tried, opponents of relativity never came close to representing the official Soviet view. For that view, one has to look at much more authoritative and highly placed authors such as Fock, S. I. Vavilov (president of the USSR Academy of Sciences), and their allies among philosophers. Their position during the years of Stalin's rule can be summarized roughly as follows: Einstein, though personally no Marxist, helped with his great science to reveal the objective dialectics of nature and thus contributed to the progress of the dialectico-materialist worldview. For Vavilov, this line of argument was probably a rhetorical device, but Fock took very seriously the matter of developing the correct Marxist interpretation of relativity. His views on the topic are worthy of a special investigation. They apparently formed the basis of Fock's original approach to general relativity, which led to some of the theory's major mathematical advances, including the solution of the equation of motion for finite bodies.

Vucinich further discusses the shift of the dominant ideological attitudes in the mid-1950s, after Einstein's and Stalin's deaths, to the almost unreserved veneration of the great scientist. To my knowledge, Russian became the first language in which Einstein's collected works were published. They appeared in four volumes in the 1960s, followed by a series of annual Einsteinian collections containing historical and physical commentary. Not that critics like Maksimov suddenly disappeared—

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a theory with such profound philosophical consequences continued and continues to generate some simmering opposition—but their views were not getting into print, even when argued from the position of Marxist ideology. Instead, the official philosophers proclaimed a perfect agreement between dialectical materialism and Einstein's relativity, while in actual practice they were adapting Marxist philosophy of nature to modern science, rather than the reverse. To the extent that Einstein was protected from criticism and received only praise, respectful commentary, and quotations of his work, he effectively became a part of the Soviet ideology.

The big change came with Mikhail Gorbachev's perestroika. The new freedom of the press permitted Einstein's detractors to publish their views. At the same time, the collapsing Communist regime began to be accused not only of its real past crimes, but of virtually all bad things, including opposition to Einstein's relativity. In the new ideological climate, it became almost impossible to see or say that such good scientists as Vavilov and Fock had formulated the official Soviet position on Einstein; their role, according to the conceptual logic of anticommunism, could only be conceived as resisting the evil regime. On the other hand, the motley band of critics of Einstein were retrospectively assigned bogeyman status, as representatives of the "official Stalinist orthodoxy," despite their actual relatively minor roles in Soviet society.

The story was thus recast in the familiar terms of evil ideology oppressing good science, an idiom so appealing and so often repeated that it generates strong belief, despite all the contradictory factual evidence. Even Vucinich, otherwise a critical and thoughtful scholar, was partially taken in by this powerful myth and accepted it as the main interpretive frame for his book. Fortunately, his study also contains a wealth of other information about Soviet scientists' actual contributions, including perhaps the greatest development ever added to Einstein's general theory of relativity—A. A. Friedmann's concept of the nonstationary universe and its path to receiving general recognition as the foundation of modern cosmology. There, in the works of Fock, Friedmann, and Vavilov, rather than in those of a few marginal opponents, one finds the really important Soviet engagement with Einstein's physics and philosophy.

The Einstein File: J. Edgar Hoover's Secret War Against the World's Most Famous Scientist

▶ Fred Jerome
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It is not surprising that Albert Einstein's outspoken political views earned him the enmity of FBI Director J. Edgar Hoover. The documentary record may be found in Einstein's 1800-page FBI file, now available to the public in largely unexpurgated form. In *The Einstein File*, science writer Fred Jerome has undertaken to interpret this file and put it in the context of its times.

Jerome is explicit about the baggage he brings to this project. He is a so-called "red-diaper baby," the son of one of the American Communist leaders imprisoned under the Smith Act in the 1940s. In the interest of fairness, I should disclose that I share a similar background.

This book has two declared goals. The first is to discredit Hoover and the FBI. The second is to show that, in the political arena, Einstein was far from the "otherworldly sage" of popular myth, but a committed exponent of carefully considered political and social beliefs. He also had a good sense of when to husband and when to spend the political capital derived from his scientific reputation and his widespread celebrity.

Einstein harbored no illusions about the nature of the Soviet regime, but this did not lead him to renounce his own positions just because they were supported by Communists. He did take pains to avoid association with organizations he regarded as under Communist control.

The first entry in the file predates Einstein's emigration to the United States. It is a lengthy document prepared by the "Woman Patriot Corporation," an organization of eastern establishment "bluebloods." It offers a litany of Einstein's subversive ideas, including the theory of relativity itself, which it claims was deliberately constructed to leave "... the laws of nature and the principles of science in confusion and disorder."

Much of the material in the file from the 1930s and 1940s is of similar character: unsupported allegations of dubious provenance. The rest

is a recital of meetings attended and causes supported, from civil rights to aid for Spanish loyalists and pleas to admit more refugees from Europe. The meetings and causes were, of course, all perfectly legal and above-board, but they proved sufficient to lead the US Army to deny Einstein clearance to work on the Manhattan Project. The navy, given the same information, did clear him and used him as a wartime consultant.

The information was used in Hoover's characteristic manner, through summaries leaked to favored political and media figures under strict conditions of nonattribution. Hoover, a consummate bureaucrat, was not about to risk public denunciation of a popular public figure. Less prominent individuals could be subject to more direct harassment.

The situation changed in 1950, in the wake of the public hysteria over Soviet nuclear espionage. For the five remaining years of his life, Einstein was subjected to a full-dress FBI campaign, complete with wiretaps and "bugs" intended somehow to connect him with espionage.

An attempt to show that atom spy, Klaus Fuchs, had obtained his position at Los Alamos National Laboratory through Einstein's influence foundered on multiple errors of fact. Einstein was in no position to exert such influence, and the basis for Fuchs's posting to Los Alamos as a member of the British contingent was well understood. The source for the Einstein-Fuchs allegation, Fuchs's sister Kristall, was at that time confined to a mental institution in an advanced delusional state and would hardly have made a credible witness.

An even more far-fetched allegation was that, in the early 1930s, Einstein had allowed the use of his personal Berlin cable address as a "drop" for Soviet spies in the Far East. Extensive FBI field work failed to disclose any evidence for this. A bit of spade work by Jerome reveals that, in fact, Einstein never had a private cable address in Berlin. That misinformation is but one of many examples that cast doubt on the competence of the FBI.

The feeble onslaught notwithstanding, Einstein died in 1955 with his reputation intact. The book adds little to the already well-documented story of his life. But it may serve as another timely reminder of the outrages to our liberties that can arise in a period of paranoia over national security.

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