Book Reviews

Soviet Marxism and Natural Science, 1917–1932. David Joravsky. Columbia University Press, New York, 1961. xiv + 433 pp. $7.50.

Foreign observers have always been puzzled by many things in Russia and the Soviet Union, but the state of Soviet science and its place in Soviet society are now more puzzling than ever. That a vigorous and imaginative scientific activity flourishes in the Soviet Union is attested by thrilling scientific spectaculars, and even better by incontrovertible technological achievements. Yet, at the same time, a clique of charlatans and careerists palm off prescientific superstition in place of the science of genetics. The temptation is hard to resist to explain these flagrant inconsistencies as the ingredients of one vast and incredibly clever plot, wherein lesser things are sacrificed for the sake of greater aims. Several foreign observers have contended that genetics is incompatible with Marxist philosophy, whereas an oversimplified version of Lamarckism is essential to the communist creed, so essential that it has to be adhered to even at the cost of the destruction of a science which is basic to scientific agriculture and to much else besides.

David Joravsky shows how erroneous are such "magisterial judgments on the basis of insufficient evidence." He chose a harder but in the end safer path, by carefully assembling and critically evaluating a lot of scattered and frequently contradictory data. To do this is more laborious than to editorialize, another temptation which he eschewed. More than a quarter of the book is comprised of footnotes and bibliographies. Many of the sources referred to are accessible only with difficulty, even to those familiar with the Russian language. Joravsky is likely to be the only person in the United States who is acquainted with some of the original documents. The study covers only the first 15 years of the Revolution (1917 to 1932), and the reader is warned that he will not find "a full history of science and higher education in the Soviet Union during the period under review." The book "grew out of an interest in the intellectual history of the Russian Revolution, out of a desire to understand the modern analogues to Marat and Lavoisier in an earlier revolution, or to Calvin and Servetus in another."

"Partyness" versus Objectivity

The first five chapters are devoted to a review of Marxist conceptions of science and of the vagaries of what is known as "partisanship." Nothing makes sense in the history of Soviet philosophy or science unless the principle of partisanship is understood (*partiinost*, rendered, perhaps a bit pedantically, as "partyness"). Lenin, then aged 25, stated the principle mildly: "Materialism includes, so to speak, partisanship, enjoining one in any judgment of an event to take directly and openly the standpoint of a definite social group." Objectivity, dispassionate adherence to facts, willingness to listen to counterarguments are things in which bourgeois scientists and philosophers take pride but which are scorned by their communist counterparts.

Lenin being, Joravsky writes, "Absolutely sure that he and his Party knew the way through the capitalist present of blind necessity to the socialist future of conscious freedom, he believed that his Party enhanced freedom by extending its control wherever refractory forces blocked that way." By 1930, this came to mean (in the words of Mitin): "The philosophy of dialectical materialism is the official point of view, the world view of the Communist Party. Hence it follows that the partisanship of the philosophy of Marxism-Leninism in general, in the conditions of the contemporary stage in particular, signifies and must signify above all its politically efficacious character." In practice this meant "that the resolutions of Party Congresses, the decrees of the Central Committee, and the speeches of Stalin were to be the chief source for the elaboration of dialectical materialist philosophy."

Yet this wise and efficacious philosophy has made some extraordinary zigzags. From 1917 to about the mid-1920's, the philosophy was a mechanistic, reductionistic, and positivistic materialism of a rather crude sort (chapters 6 to 10). Its high priests sat mainly in the Institute for the Study and Propaganda of Natural Science from the Point of View of Dialectical Materialism (Timiriazev Institute, or Timirin for short) and in the Communist Academy in Moscow. Learning this philosophy was compulsory for students, and it was highly recommended to, though not yet demanded of their nonphilosophical professors, a part of the theory being that any good scientist is a practicing materialist, whether he knows it or not. Scientific theories were nevertheless tested by their agreement with the reigning philosophy. Einstein's relativity was on the suspect list, and A. K. Timiriazev, a son of the physiologist, was its chief examiner and prosecutor. In biology Lamarckism, or rather a belief in the heritability of acquired traits, was the preferred view, although genetics was at just that time making rapid strides in the Soviet Union.

Morganism versus Lamarckism

A new tempest started in the Institute of Red Professorship in Moscow, where A. M. Deborin and his students discovered a considerably more sophisticated brand of dialectical materialism. This was to be the only true philosophy, irrefutable because it "is the result of the entire accumulation of human knowledge." Acceptance of this philosophy rapidly became obligatory (chapters 11 to 15). Lamarckism, as a part of mechanistic materialisms, turned suspect, while genetics ("Morganism") agreed with the true faith. How far things went can be seen from this event: in 1928 the geneticist I. I. Agol (himself later executed as a deviationist) demanded not only acceptance of Morganism but also suppression of Lamarckism. The authorities were not ready to go quite so far, but for a time it looked as if genetics was to become a part of the official creed; and, alas, some geneticists were ready to accept the posts of scientific bosses. In 1929 an extraordinary event took place—Deborin's philosophy was officially endorsed by Party authorities and thus became compulsory. The significance of this event was not lost on at

least one Party chief, Miliutin, who stated: "We are adopting—for the first time in history, I dare say—a philosophical resolution. It will be, so to speak, a definite platform in regard to dialectical materialism and a formulation of all the work that will be done in this field."

Soviet Marxism vis-à-vis Natural Science

Deborin's was, however, a Pyrrhic victory (chapters 16 to 19). The year 1929 was the year of the "Great Break," of the start of collectivization of agriculture and of the Five Year Plans. The non-Party scientists and philosophers were to be replaced with all haste by Party men or to be reduced to abject submission. Heads soon began to fall, metaphorically and literally. In 1930 Deborin was declared heretic, together with all those who only a short time before had accepted his officially endorsed true philosophy. His successor, Mitin, declared it was not the academic philosophy but the "masterful application of dialectics that our Party carries out enters into the development of philosophical communist thought as the most important component element." And thus, says Joravsky, "A new phase of the interaction of Soviet Marxism and natural science had begun. . . . now only Stalin and his compliant Central Committee had the requisite world-sweeping vision; lesser philosophers would wait to be told when experience required the Marxist Weltanschauung to be developed further."

Yet not all science was consumed in the revolutionary conflagration. Physics, for example, revived and prospered; much of biology, especially genetics, succumbed. But this story belongs to the period after 1932, and one hopes that Joravsky will extend his study to that period. He hints at an answer in the following lines: "If Lenin had not set the precedent of sharply dividing the scientific from the epistemological in his study of the 'crisis' in physics; if physics had been a less ancient and solidly established science, less rigorous and less prolific in theoretical and practical triumphs; if, accordingly, there had been significant blocks of physicists strongly opposed to each other on basic scientific issues; if, eyeing such a turmoil within physics and anxious for the ideological condition of scientists, the Bolshevik authorities had become involved in a crisis of production so desperate as to nurture feverish dreams of rescue by scientific miracles—then the Soviet Marxist discussions of the twenties and early thirties might well have produced a genuine crisis in physics rather than talk of a crisis on its ideological outskirts. But then, physics would have been biology."

Soviet Science and the Communist Party

Far from having followed consistently some cunning master plan, the relationships between the Communist Party and science in the Soviet Union have involved many capricious turns and have been punctuated by blunders. Joravsky may well write still another book, to discover why science nevertheless developed there as well as it did. I know of nobody better qualified to undertake the task. Having been a witness to some of the events described in this book, I can only admire Joravsky's accuracy and his unbiased presentation. Although any book dealing with Soviet affairs is likely to elicit conflicting opinions, Joravsky's will do so perhaps less than any other. Being a product of sound scholarship, it contains an abundance of documentation which speaks for itself and which absolves the author from inculpation of bias.

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The Rickettsial Diseases. P. F. Zdrodovskii and H. M. Golinevich. Translated from the Russian by B. Haigh. Pergamon, New York, 1960 (ed. 2, Moscow, 1956). xii + 629 pp. Illus. $17.50.

A valuable characteristic of this book, which makes available in English a great deal of Russian literature and experience, is the authors' willingness to augment published material with discussions of their own investigations. While there are observations with which others may disagree, it is reassuring to know the authors are drawing from firsthand experience based on laboratory work.

The book is divided into general and special sections. The first deals with classification, general characteristics of rickettsiae, the rickettsioses, characteristics of experimental infections in animals, variation, serology, and laboratory methods. The special section consists of a complete presentation of each disease group. Clinical features, epidemiology, immunology, diagnosis, prophylaxis, and treatment are dealt with. Valuable guidance is provided throughout for those working with rickettsiae in the laboratory. The comparison of pathology and other characteristics among the different rickettsioses is very complete. However, this attempt at completeness results in some repetition.

The authors' proposed compromise classification for rickettsiae and the accompanying discussion constitute one of the worst sections in the book. They state: "At the present time we cannot speak of a complete and generally accepted classification of the rickettsiae and rickettsial diseases, since it is far from complete, particularly in foreign countries, in the study of the antigenic structure of the rickettsiae, a knowledge of which is fundamental for their qualitative differentiation and rational subdivision." This would have been a good point at which to drop the subject. However, they continue to use obsolete names and propose ill-considered new ones. This serves only to cast a cloud over our present ignorance.

In contrast to the preceding, the following proposed grouping of rickettsial diseases serves a useful purpose. I: Typhus fever group. II: Tick-borne spotted fever group; (a) New World subgroup; (b) Old World subgroup; (c) Subgroup of gamasid rickettsioses. III: Mite-borne fever group. IV: Pneumotropic group of rickettsioses. V: Paroxysmal group of rickettsioses. VI: Group of rickettsiae and rickettsial diseases of domestic animals. Although North Asian tick rickettsiosis may belong in IIa rather than in IIb and North Australian tick typhus may fall into IIc rather than IIb, the general plan is sound.

There has been a need for this translation and this book, for rickettsial diseases, too often treated as exotic conditions in books on viruses, here achieve full stature. In our own experience, the discussion of allergic diagnosis in Q fever makes a point. During 1959 we applied intradermal tests in epidemiological investigations of Q fever. Some of the observations of Russian workers from 1951 to 1954 recorded here may have been unnecessarily repeated. Although this book may be essential for the experienced worker, it isn't particularly recommended for the beginner because insight is required to evaluate properly some of the Russian claims.

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