

NEOLIBERALISM AND THE PRIVATIZED SCIENCE REGIME

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Philip Mirowski. *Science-Mart: Privatizing American Science*. Cambridge, Massachusetts: Harvard University Press, 2011. 349 pp. Notes, bibliography, and index. \$39.95.

Viridiana Jones is a fictional academic scientist. Intelligent and politically liberal, “in the awkward American sense” [of the term], she is increasingly disillusioned with the global, privatized funding regime that has come to shape her experiences as a teacher and researcher (p. 3). Endowed with what the author clearly believes are laudable instincts and motives—for example, “she knows that money has always been needed to make science, but whoever anticipated that her colleagues would come to take it as axiomatic that science was just another way to make money?” (p. 2)—Viridiana serves as a vehicle for structuring an extended critical examination of the current state of academic science. But much more than a guidebook and primer for concerned, if economically and politically naïve, researchers like Viridiana, Philip Mirowski’s *Science-Mart* provides even well-read historians (and, it might be hoped, receptive social scientists, economists, and science policy experts) with an extremely pointed and closely argued account of the agents and forces responsible for the current state of affairs, as well as the disquieting implications of the transformations that have taken place over the past thirty-some years in the legal framework, the funding mechanisms, and the institutions within which scientific research and education are conducted in the United States (and increasingly throughout the world).

Engaging a wide range of scholarly and polemical writing on the economics, philosophy, sociology, politics, and history of twentieth-century science, *Science-Mart* is a challenging and important book. And while activists and more policy-oriented readers may be disappointed that, even in his concluding remarks, the author consciously refrains from suggesting a specific list of corrective actions or an “ambitious program of reforms” (p. 315), at least the ideologically open may welcome, as a first step, this attempt “to enumerate the relevant range of economic and social phenomena that should factor into any assessment of the modern politics of knowledge. . . .” (p. 7).

Mirowski's most withering criticism is directed to what he sees as the now dominant, but morally and empirically suspect, vision that considers science (and disciplined research more broadly) as just another commercial undertaking—one that, like all other forms of information processing, can be usefully directed and efficiently regulated only within a corporate-dominated “marketplace of ideas.” He later writes: “The dogma that no one would think, or at least be bothered to convey their thoughts to others unless they somehow receive market recompense for their labors is a tremendous slander on the history of science and culture, but nevertheless it has carried the day to become folk wisdom in the modern academic order” (p. 33).

In the text, notes, and extraordinary useful bibliography, the author provides an overview of a large sampling of economic and political arguments about science that he finds erroneous, misguided, or worse. And on an only slightly more positive note (don't look here, if a silver lining is your primary interest), he cites some promising critical commentary and scholarship as well as references to much of his own prolific twenty-plus-year output of articles, chapters, and edited volumes, for which this book can serve as a useful guide.

Science-Mart is organized into seven chapters, divided into an introduction and three major sections. (Although, as will be evident from the following summary, the narrative tends to weave in and out, with numerous jumps and cross-references.) Historical analysis is presented in the introduction and the first two sections, which will receive the bulk of this review's attention. Commentary on what Mirowski views as the severely degraded state of the supporting structure for the socially useful production of new knowledge is in section three.

Chapter one introduces us to Viridiana, preparing her [and us] for what follows, first by identifying six trends that Mirowski sees as central context for the emergence of the present commercialized science regime. First and foremost among the identified trends is the currently much-discussed decline in the West of its industrial/manufacturing economy and “the putative emergence of a ‘new knowledge economy’” as its substitute (p. 7). The rapid and marked erosion of the manufacturing base, in addition to the more widely recognized drag on the living standards of workers lacking either a college degree or entrepreneurial inclinations, has also had a profound impact on the American university system. Given the centrality of industrial corporations in the development and rapid expansion of the American system of higher education (as patrons, as research consumers, and as employers of the scientists produced within), this is an extremely important point that is well supported throughout the volume.

Mirowski casts a much wider net, however. Deindustrialization and the rise of the so-called knowledge economy were, in Mirowski's account, coincident and intertwined with other trends, each also in some way supportive

of the increased privatization and commercialization of research. These are: the invention and spread of the internet with the associated alteration in the means and costs of reproducing and communicating information; the unprecedented attention—both domestically and internationally—to the extension and strengthening of intellectual property rights; the explosion of corporate outsourcing of research and development to low-cost providers; and, finally, the precipitous withdrawal of the state from both its role as “patron and manager” of American scientific research and as the primary provider of education for its citizens.

All of these trends are examined carefully and in detail later in the book. In the introduction (chapter one), Mirowski shows simply and clearly, with graphs and data, that each was initiated or has gathered substantial momentum within a relatively narrow time frame beginning in the 1970s. And he notes that it is these trends, in combination, that begin to make comprehensible the depth and extent of the transformations that have occurred during the last thirty-odd years in the processes, the venues, and—to be sure—even the products of scientific research.

Next, and most important, all this leads Mirowski to ask the question: What do all of these trends have in common? The answer he provides forms the book’s central thesis. All of the trends, according to Mirowski, are closely tied to “neoliberal” ideology and its rise from the backwater of economic and political thought in the 1930s to an ascendancy that has been insufficiently recognized, or at least widely misunderstood, in contemporary scholarship as well as in public discourse.

For anyone unfamiliar with Mirowski’s previous writing on the subject of “Neoliberalism” (especially *The Road from Mont Pe’lerin: The Making of the Neoliberal Thought Collective*, which he edited with Dieter Plehwe [2009]), *Science-Mart* provides description and a condensed historical summary, including, of course, an account of the key roles played by Frederick Hayek, Milton Friedman, the Mont Pelerin Society, and the Chicago School of Economics. Needless to say, one can’t count Mirowski among those who share neoliberal faith in markets as always intrinsically superior to the organizational and managerial efforts of human beings, no matter what experience, training, or intelligence those human beings might possess. His considered judgment is that “the Achilles heel of neoliberalism is that it gets the functions of markets in society all wrong: markets are not only limited and intermittently unreliable information processors; they can equally well be deployed to produce *ignorance*” (p. 318).

Uncontroversial is the observation that in the years before 1950, the formulation of ideas favoring “free-market” regulation of wages and prices were inseparable from the politics and economics of the 1930s and ‘40s, or, indeed, that they were “developed as part of a concerted effort to counteract the rise

of planning and other market-skeptical movements that grew out of the Great Depression and the experience of World War II" (p. 25). More contentious, but vigorously argued, is the suggestion that the roots of the ideas that form the foundation for modern neoliberalism, especially its veneration of markets as unsurpassable information processors, lie much more in politics than in consistent social, psychological, or economic theory. Beginning in the 1970s, unintended consequences of ambitious social programs of the 1960s and the economic downturn that followed the oil shocks of that decade bolstered neoliberals' insistence on the superiority of markets as processors of information and as midwives of ideas and innovation. By the 1980s, neoliberals, according to Mirowski, settled upon a list of doctrines, which—with the help of politically conservative think tanks, institutes, media outlets, and political action committees, all devoted to promoting market-values and eliminating governmental interference with corporate behavior—have influenced Western economics, culture, and politics to a degree that is not yet fully appreciated.

After presenting his formulation of ten such neoliberal doctrines, beginning with "*The Market is an artifact, but it is an ideal processor of information*"—and including, "*Neoliberalism starts with a critique of state reason*"; "*Corporations can do no wrong. Competition always prevails*"; and "*The market (suitably reengineered and promoted) can always provide solutions to problems seemingly caused by markets in the first place*" (pp. 29–30, italics his)—Mirowski suggests that Viridiana [and we] are finally in a position to begin analyzing what has actually happened. There has been implemented, he claims, a remarkably effective "transnational program for the spread of the neoliberal marketplace of ideas in every nook and cranny of human intellectual discourse—or, at least, to every area that holds at least some prospect of making a buck" (p. 36). The program is manifest in "climate science, evolutionary biology, pollution ecology, health policy, clinical pharmacology, and any other hot button area of the natural sciences."

To the degree that neoliberal ideas now shape the world we live in, Viridiana can, as Mirowski puts it, "come to appreciate that all her [and our] beliefs about science being conducted 'for the public good'; education as existing to shape moral, civic, and intellectual character; and knowledge as the embodiment of intrinsic virtue as part of its constitution, are all hopelessly passé" (p. 31). Substituting for these beliefs is "the marketplace of ideas" and all of the aspects of global, privatized, commercial science that seemed problematic to Viridiana in the first place.

In his historical reconstruction of how this has come about, Mirowski provides a well-crafted and useful discussion of the advent and triumph of the well-known "linear model" for the relationship of science to technological innovation and economic growth, its replacement first by a "public good" and then by an "economic growth" model among economists seeking to rationalize existing mechanisms for the support of science.

Although the bulk of Mirowski's criticisms are directed to the practitioners of economics, he also rejects the conclusions of science studies' scholars who assert that science has always been commercialized. To demonstrate the profound differences between the current situation and what has existed before, he adopts and expands upon a periodization that recognizes two precursor "regimes" of scientific organization and support that have arisen, matured, and passed away, all within the past century: the pre-World War II "Captains of Erudition Regime" of large industrial laboratories and Carnegie, Ford, and Rockefeller Foundation efforts to enhance elite science at the nation's most prominent universities; and the now almost completely dismantled "Cold War Regime," with its National Security-justification of broad government-support of American science and education. Mirowski notes that, in both of the earlier regimes, the levels of authority and autonomy provided to research disciplines, as in the current regime, were not so much necessary consequences of technological, cultural, or economic imperatives, as they were engineered into existence by specific interests and political action. But, until now, he suggests, special status has always been afforded knowledge that was based on discipline-sanctioned research by credentialed experts, independent of any direct measure of commercial or market value.

These historical accounts are filled with insights and suggestions well worth consideration and further elaboration. They are followed by a closely constructed case study of the "biotech model" of pharmacological research that has matured during the current regime. The biotech model, in this narrative, stands as both an exemplar and a bellwether for what has occurred and what, barring another major transformation, is the likely fate of other specializations.

The concluding section of *Science-Mart* contains an exploration of several indications that, notwithstanding ideologically suspect claims to the contrary, the current regime is in fact performing poorly by any reasonable measure of scientific productivity, and an exploration of the decidedly negative consequences such poor performance is having for both the production of knowledge and for the performance of the world's advanced economies. Among the pathologies he identifies are the extension of ghost authorship of scientific papers (p. 244), "junk science" (p. 297), the degradation of the quality of patent applications (p. 305), and—most disturbingly—the growing tendency of economic interests to manufacture public ignorance as a strategy in the marketplace of ideas (p. 322).

Given the power of the neoliberal political agenda, as he describes it, Mirowski poses a stark challenge to his academic readers. He rejects the conclusion that the spread of neoliberal thought can be accounted for simply as "due to omnipotent puppet masters pulling the strings," although he certainly has little doubt that strings have constantly been pulled. Early in the volume, he cites as high among other circumstances that have led to the institutional,

legal, political, and cultural advance of such ideas is the contemporaneous and self-conscious abdication by academic and professional philosophers, economists, scientists, science policy experts, and historians of any disciplinary responsibility to provide a competing narrative remotely capable of rendering “the totality of academic life coherent” (p. 7).

At one point (citing work by Paul Nightingale and others), Mirowski does make favorable comments about some recent attempts to develop an economics of science that recognizes the value of a publicly supported “science base” defined as “an interlocking set of institutions that meld research, education, development, politics, publication, and recruitment” (pp. 81–82). But direct support for that proposal is not the purpose of this book. “Wouldn’t there be some merit,” Mirowski asks near the end, “in drawing up the systematic bill of indictments of the present regime of science management, just as part of an attempt to get clearer on the warning signs, in preparation for what promises to be big changes coming down the pike?” (p. 316)

Science-Mart largely succeeds in suggesting that, without an alternative framework (to one that presumes that the only motivations that really count in our political economy are individual self-interest and corporate profits, and that markets are able to harness those better than any possible alternative), it is difficult to imagine how a more humane, effective, socially responsible, and forward-looking science regime might emerge in the years to come.

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