Turchetti leaves little doubt that, behind the public speeches and photo opportunities, environmental concepts such as sustainability and conservation were talking points—"not born to revolutionize the alliance, but to stabilize it, actually" (p. 93). NATO turned a blind eye to its own environmental problems, such as ship- and shore-generated military waste. Further, the scientific work served distinctly military functions of mapping and other kinds of surveillance for operations activities. And, as Turchetti points out, NATO's involvement in certain activities—like tracking oil spills—stemmed from its desire to prevent civilian research groups from gaining data. With *Greening the Alliance*, Turchetti reveals NATO's work in this field to have been disingenuous and self-serving to the point of farce.

Jacob Darwin Hamblin

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Onur Erdur. *Die epistemologischen Jahre: Philosophie und Biologie in Frankreich, 1960–1980.* (Interferenzen, 24.) 391 pp., bibl., illus., index. Zurich: Chronos, 2018. €48 (cloth). ISBN 9783034013826.

With *Die epistemologischen Jahre: Philosophie und Biologie in Frankreich, 1960–1980*, Onur Erdur presents a first encompassing cultural history of the remarkable conjuncture between molecular biology and French epistemology in Paris during the two decades from 1960 to 1980. There is a fair amount of literature on the French variant of molecular biology as it developed after World War II at the Pasteur Institute in Paris around the three Nobel laureates of 1965: François Jacob, André Lwoff, and Jacques Monod. And there is an even more voluminous one on the French variant of historical epistemology as represented by Gaston Bachelard, Georges Canguilhem, Louis Althusser, and Michel Foucault. The merit of this book is to consider these two developments together in their mutual interactions, both in academia and in the wider intellectual and political culture. In doing so, Erdur has made ample use of archival material now accessible at the archives of the Institut Pasteur, the archives of the Fondation Royaumont, the Institut Mémoires de l'Édition Contemporaine (IMEC) in Caen, the Centre d'Archives de Philosophie, d'Histoire et d'Édition des Sciences (CAPHES) in Paris, and a number of other places. The result is a rich and dense historical narrative that understands itself less as a case study in history of science in a narrow sense than as a lesson in what the author calls a history of knowledge (*Wissensgeschichte*).

The book is divided into seven chapters. Chapter 1 presents a concise profile of the "epistemological school of Paris" flourishing in the institutional triangle between the Sorbonne, with its Chair and Institute for the History and Philosophy of Science and Technology, the École Normale Supérieure (ENS), and the Collège de France, with Bachelard as its father figure. In the essential 1960s, it was his successor Canguilhem at the Sorbonne and Althusser at the ENS who acted as the leading spirits of a whole network of young epistemologists. The second chapter highlights the moment when the French trio of molecular geneticists at the Pasteur Institute received the Nobel Prize for their decisive contribution to molecular genetic regulation and consequently moved into the limelight of public attention. Chapter 3 revolves around Canguilhem's epistemological conversion that went along with his reception of the new biology and traces his far-reaching epistemological connections in French academia. Chapter 4 can be seen as the center of the book. On the one hand, it focuses on Althusser's conversion from a structuralist reader of Marx's *Capital* to a philosopher who saw his task as participating in what he called the class struggle in theory. On the other hand, it follows Monod's rise as a philosopher of nature and as a public intellectual, including his political role in the events of May 1968 in Paris. And it details the clash of the two figures that took place in Althusser's Course on Philosophy for Scientists at the ENS in Fall 1967, on the occasion of Monod's inaugural lecture at the Collège de France, which was followed a couple of years later by his *Chance and Necessity* (1970). Chapter 5 revolves again around a philosopher and a scientist. This time it

is Foucault and his efforts to widen historical epistemology in the direction of an archaeology of knowledge, on the one hand, and Jacob's foray into an archaeology of heredity with his bestseller *The Logic of Life* (1970), on the other. Chapter 6 spells out what contemporaries called "La Monod-Culture"—that is, the pervasive influence that Monod's mixture of scientism and ethical existentialism had on the modernization of the French research system, as well as the wider public intellectual scene, in the 1970s. The sociologist Edgar Morin's efforts to establish a new bioanthropology, with its system-theoretical, cybernetic, and countercultural undertones, serves as an example of what appears as a veritable scientifico-cultural amalgam.

The last chapter summarizes this journey through the multifaceted landscape of a remarkable encounter of a revolution in the life sciences with a philosophy of science that saw itself in need of change precisely as a response to epistemological ruptures such as that experienced in the life sciences of the time. The book closes with Michel Serres's castigation of epistemology in the years after Monod's death in 1976. What led this conjuncture to dwindle toward the end of the 1970s, however, remains an open question.

Hans-Jörg Rheinberger

Hans-Jörg Rheinberger studied philosophy and biology in Tübingen and Berlin. Between 1978 and 1996 he worked as a molecular biologist and a historian of biology in Berlin, Lübeck, and Salzburg. In 1997 he became Director at the Max Planck Institute for the History of Science in Berlin, where he is now an emeritus member.

Subrata Dasgupta. *The Second Age of Computer Science: From Algol Genes to Neural Nets.* xxv + 326 pp., bibl., index. Oxford: Oxford University Press, 2018. £28.99 (cloth). ISBN 9780190843861.

If you would like to feel profoundly inadequate, I recommend visiting Wikipedia's page on Subrata Dasgupta. Now Professor Emeritus at the University of Louisiana at Lafayette, he formerly held that institution's Computer Science Trust Fund Eminent Scholar Chair in the School of Computing and Informatics. *And* he directed its Institute of Cognitive Science. *And* he was a professor in its Department of History. *And* he has written eighteen books, including three novels, a memoir, monographs on computer science and the history of computer science, and studies of prominent Bengali intellectuals. Whew.

Dasgupta's new monograph is a sequel to 2014's *It Began with Babbage: The Genesis of Computer Science*, also published by Oxford. That book toured computer science's "first age," ending with the founding of the first computer science departments and the establishment of computer science as a discipline. The current volume examines the "second age" of computer science, from roughly 1970 to 1990, as the field's practitioners turned from solving other people's problems to figuring out what problems they should set for themselves.

As the author's accomplishments should indicate, this is not a conventional history of science monograph. Dasgupta relates to computer science as a historian, a practitioner, and a philosopher; his book is written in all three guises. Unsurprisingly, Dasgupta is heavily influenced by that other great practitioner-historian-philosopher, Thomas Kuhn. That means that the book sometimes goes in directions *Isis* readers will find rather dated. For instance, Dasgupta occasionally pauses to ask whether a turn of events counts as revolutionary or normal science, and he ends with a Kuhnian meditation on progress.

There are other ways in which *The Second Age of Computer Science* resembles Kuhn-inspired internalist histories of science and technology from the 1970s. In particular, it delves into details that I—an occasional historian of computing who's taken a few computer science courses—found daunting. There are many snippets of code and pseudocode; the import of some is obvious, but most demand familiarity with programming languages. Dasgupta also harbors Kuhn's aspiration for philosophical significance. Thus there are occasional detours into the philosophy of creativity, with categories defined and deployed (e.g., H-original versus C-original creativity) that don't particularly advance the historical narrative.

So this isn't a book for everyone. But for many historians of computing it could be rewarding. Dasgupta offers a practitioner's-eye view that few historians can match. He knows the literatures he surveys backward