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Review: Cultivating Science, Harvesting Power: Science and Industrial Agriculture in California

By Christopher R. Henke

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Henke, Christopher R. *Cultivating Science, Harvesting Power: Science and Industrial Agriculture in California*. Cambridge, MA: MIT Press, 2008. 226 pgs. ISBN 9780262083737. US\$32.00, cloth.

This volume offers a critical addition to the archive of scholarly work on the science and politics of agriculture and the contentious state of the science-agriculture interface in California's Salinas Valley. Amid a string of chapters Christopher Henke executes his mission of exposing "the interface of commodities, knowledge, and power" (p.19) within California's agricultural sector, a sector that has been informed by a long history of state-sponsored farm advising, the development of land-grant universities and cooperative extension services, and other offshoots of Progressive Era politics.

Of particular import is Henke's development and incorporation of a theory of "repair" to analyze the intentionality of cooperative extension scientists and the farmworkers they engage. He argues that we need to understand agricultural "repair" by engaging a theory of repair anchored by power-knowledge struggles and debates. While Henke is clearly an environmental sociologist incorporating science and technology studies, he avoids overloading the book with theoretical debates, instead choosing to place ethnographic findings at the center of his story as he follows and attempts to understand the "practice" of cooperative extension advisors and growers. This focus on practice separates him from risk society scholars like Ulrich Beck who are critical of ecological modernization theory—the preferred framework guiding Henke's focus on "the ecological relationships between place, practice, institutions, and power" (p.180). Ecological modernization theory, as Henke points out, "places science and technology at the center of attempts to create a 'green' modernity, presuming that scientists and other experts will, in concert with vast changes to the regulatory state, be a vanguard of environmental change... And yet, despite these divergent perspectives on the ability of science and technology to address environmental problems, there has been very little empirical research on the role of experts in environmental conflicts" (p.145). For Henke's work, filling this epistemic vacancy is perhaps the strongest of its multiple strengths.

A particularly intriguing chapter titled "Making a Place for Science: The Field Trial" explores the role of agricultural field trials which turn farms into spaces of scientific experimentation or laboratories of control. Henke finds that during these field research trials, advisors and growers get caught up in a situation of contentious cooperation whereby "each group attempts to control the other's activities" (p.122). While knowledge sharing and the development of new efficacious growing techniques are some of the positive outcomes, in the act of cooperation risks are created for both groups. For advisors, it is costly and for growers there is the risk that experimental agricultural techniques and treatments (e.g., new pesticides) can damage fields and taint the marketability of the crop. These practices expose issues of class or income status, because only financially secure growers are able to take the risk of cooperating in these field trials. Most growers know that "control"—a prerequisite for attaining a level of knowledge that can be labeled 'scientific'—is unnatural in an environment like the Salinas Valley where agriculture has transformed the landscape. And yet, control is a highly valued focus of these field trial scientists. Agriculture, for growers, implies flexibility, adaptability, and accepted slippage, not consistency and stability, which seem to drive the hopes and desires of the scientists working in these places. The "control" goals of field trial science are, in this way, to some extent fictitious and out-of-touch with the grounded knowledge and practice of growers, even if a field trial results in newer and more efficacious agricultural technologies and treatments. Henke's research showcases the reality that "controlling agricultural ecologies" (p.10) ought not imply outright 'control'.

The themes of “cultivating science” and “harvesting power” stand out in this important book. One of the most exciting findings was the way in which “farmworkers help standardize the collection of data. At the same time, their skills make the trial seem relevant to the current standards and practices of the local farm industry. In this way, “the work and skill of farmworkers are at the center of the production of knowledge for many field trials, just as they are for the production of commodities” (p.127).

The Salinas Valley, the epicenter of U.S. vegetable production, as this book shows, is much more than the location of a multibillion-dollar agricultural industry; it is the location of an “ecology of power” (p.6) where agricultural scientists and growers are entangled in contentious yet critical cooperation. This book will be exciting reading for scholars of social and environmental critique, no matter what the discipline, and for people curious about the history, present condition, and future prospects of U.S. agriculture and the politics of agricultural science.

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