Agroecology in Action—Extending Alternative Agriculture through Social Networks


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Worldwide, societies are struggling to come to terms with challenges in environmental management that are complex, contingent, and controversial. Certainly, the development of agriculture now presents such a challenge. What is to be done? One promising development is the so-called ‘learning turn’—a widely-shared perception that society must now create a collective capacity to learn across lines of difference that lie between disciplines, professions, and stakeholders.

In Agroecology in Action, the rural sociologist Keith Douglass Warner has examined the learning turn in one sector of U.S. agriculture, focusing on social networks that have formed as farmers and other stakeholders strive to develop alternative production modes. He works through a series of case studies, with major emphasis on the development of integrated pest management methods for California horticultural crops. These case studies are especially rich because they exemplify the recent ‘complexification’ of agricultural development that results when new stakeholders begin to make strong claims on agriculture. In California, these new claims have produced intense conflicts about agricultural land use, as high-value agriculture and high-value residential development have come into intimate contact and fierce battles have erupted about pesticide use and other practices.

Warner particularly focuses on the notion of ‘agroecological partnership,’ i.e., an interactive network comprised of farmers and actors in other sectors (e.g., research, regulation, or marketing). In Warner’s account, agroecological partnerships have a number of emergent properties: shared understanding of complex challenges, joint and interactive experimentation, the development of innovative practices that reduce harmful environmental effects of agriculture, and influence on research priorities and policy formation. One emergent
property is especially striking, the ability to create knowledge more rapidly than the conventional agricultural R&D system based on scientific research and technology-transfer. In this light, agroecological partnerships can be seen as an adaptation by farmers and other stakeholders to rapid flux in agriculture, so as to create usable knowledge in situations where conventional R&D simply cannot keep up with the pace of change.

He begins with an insightful summary of the debate over the environmental performance of U.S. agriculture that began with publication of Rachel Carson’s book, *Silent Spring*, and the dynamics by which research into alternative modes of agriculture, such as IPM, gathered momentum and support among farmers, researchers, regulators, and marketers. He then develops the science-studies scholar Bruno Latour’s heuristic notion of a ‘circulatory system of scientific knowledge’ as the basic conceptual model for agroecological partnerships. Analysis of agroecological partnerships in California, Washington, and Wisconsin follows. A series of chapters profiles partnership participants, documents their innovative practices, and elucidates structural and functional attributes of effective partnerships. The focus is on California, where Warner surveys developments among some 32 partnerships in 16 production systems. These illustrate some notable successes, e.g., reducing the conflict that has arisen as California winegrape production has rapidly expanded in recent decades, bringing vineyards in close proximity with new residential areas.

One message of the book has particular import for contemporary agriculture. Warner shows that agroecological partnerships can create the localized and site-specific ‘knowledge systems’ that appear essential to creating more multifunctional agroecosystems. In these systems, commodity production is combined with the production of ecological goods and services, such as biodiversity conservation, amenity values, or carbon storage. Multifunctional systems are the most promising strategy for satisfying the new claims, noted above, that are being made on the environmental, social, and economic performance of agriculture. However, efforts to develop multifunctional systems show that the devil is truly in the details. Warner shows that learning partnerships that bring farmers, crop consultants, and technical conservation agencies into effective interplay with researchers are crucial to creating the localized knowledge needed to balance production of commodities and ecological services and thus enhance the multifunctionality of agriculture.

Warner does not fail to highlight the considerable challenges that agroecological partnerships face. These include the lack of individuals and institutions that can play organizing and facilitating roles that are sine qua non for partnerships, and the difficulty in extending networks along a ‘vertical’ dimension to influence legislatures and research institutions, public policy, and research. Warner identifies a set of sensible policy initiatives, including more federal funding for the initiatives of partnerships and far more serious attention to partnerships in land-grant universities. In that vein, *Agroecology in Action* also provides a provocative challenge in the extension services of these universities. Extension services have suffered intense retrenchment in recent years, and arguably are searching for new roles to play in contemporary agriculture. Warner’s book makes a case that extension services should greatly increase their capacities to play the organizing and facilitating roles that are critically needed to expand the scope and effectiveness of agroecological partnerships. Methods such as the knowledge-intensive IPM that Warner describes are ill-suited to the ‘technology-transfer’ approach that works well for pesticides. Rather, facilitation of learning in interactive, cross-sector groups is of the essence. Certainly, many observers have suggested that extension services should increase capacity to offer this facilitation; Warner’s work provides a new base of evidence that powerfully supports this idea.

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7/25/2008
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