

Rural Sociology 67(3), 2002, pp. 464-470
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Review Essay: Community and Participation in the Creation of Sustainable Agroecosystems

Facilitating Sustainable Agriculture: Participatory Learning and Adaptive Management in Times of Environmental Uncertainty, edited by N.G. Roling and M.A.E. Wagemakers. Cambridge, UK: Cambridge University Press, 1998, 2000. 318 pages. \$20.00 (paperback). ISBN 0-521-58174-5. ISBN 0-521-79481-1.

Interactions Between Agroecosystems and Rural Communities, edited by Cornelia B. Flora. Boca Raton: CRC Press, 2001. 273 pages. \$30.00 (hardcover). ISBN 0-8493-0917-4.

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Both of these books are worth reading; they provide many interesting case studies that could be used for teaching, particularly at the graduate level. The editors have taken care to furnish useful information such as biographies of contributors, indexes, and summaries. Both volumes are obviously inspired by an admirable degree of idealism. In a complex world, where many problems related to the decline of rural communities and the growth of large transnational corporations must be faced, the contributors to both books are struggling to find answers. Anyone who is seriously interested in agroecosystems, sustainable agriculture, rural communities, and participatory learning will want to take a serious look at these volumes.

The books provide a wealth of information about many issues. Moreover, the case study material spans many nation-states around the globe. Both collections are "cosmopolitan": they are not restricted to the United States. Although the Flora volume contains much of value about U.S. problems, it also includes material on Mexico (in chapters by Kooster and by Nock) Argentina (by Bendini), and Europe (by Herzog and Oetmann). The contributions to the Roling and Wagemakers collection contain detailed information about European conditions (in the Netherlands, Germany, Switzerland, and Greece) but also examine Australian and Asian experiences. Both books present emerging new perspectives that have had an important influence on rural studies and that promise to be debated for many years. Both challenge conventional wisdom, and do so in a multidisciplinary manner. At times the level of discourse becomes truly interdisciplinary, especially when the authors cross-reference ideas such as co-learning and sustainability. These books

certainly should be ordered for university libraries and would be useful for reference at research institutions. Even so, they present some problems.

Whenever a social scientist reads a "text" in a specific discipline such as rural sociology, certain "rules of interpretation" apply (Palmer 1969:41). According to one such rule, works should be viewed in the context of disciplinary debates: these are not merely "popular" or "semipopular" works for a general audience. These two volumes, however, show very little direct linkage to "theory" (Levine 1995) or "methodology" (Ragin 2000)¹ within sociology generally or rural sociology in particular.

In part because these works are largely multidisciplinary, they are difficult to evaluate. A number of prominent contributors are involved in the study of rural communities and sustainability, but one can question the degree of success of the attempts at providing theoretical and methodological unity. For example, the citation of Granovetter (1985) and Kloppenborg (1991) by Flora and her colleagues in Chapter 9 is a step in the right direction, but the notions of "strong ties with relatively limited networks," the "embeddedness" of economic behavior, and "mutable immobiles" (failure to adjust agricultural knowledge and practices to very different conditions) are not developed consistently as themes. The building blocks are present, but the theoretical and methodological constructs are not utilized fully in the book as a whole. A similar lack of conceptual rigor limits the Roling and Wagemakers volume.

There is no clear indication that these books were refereed by anyone other than the editors. (For example, no outside referees are acknowledged, with the possible exception of Ann Long in the Roling and Wagemakers collection.) In both books the quality of the chapters varies considerably. Some are highly technical (e.g., within the discipline of agricultural extension or agro-forestry); others are almost folksy. Chapter 17 in Flora's book depicts a fictitious Saturday in late July 2020. People twenty years earlier had been "disconnected from the environment," but in 2020 the bad days are past. This scenario is somewhat too rosy: the substantive chapters do not suggest that the next two decades will increase our "connection" to the biophysical environment. Similarly, Chapter 15 of the

¹The term *methodology* designates the study of the underlying logic of methods, as opposed to the elaboration of techniques of research; the term *methods* is somewhat ambiguous. Many sociologists are "methodists" rather than "methodologists." In rural sociology, techniques often have received more emphasis than underlying epistemological issues.

Roling and Wagemakers volume is devoted to the "Nature Policy Plan" adopted in the Netherlands after 1990. The case study material is disappointing: an environmental organization in the southern part of the Netherlands is mentioned briefly, but the empirical research seems to involve two years of observing the cooperative and conducting some interviews. The conclusion that the outcome is "promising, but fragile" (p. 279) is not supported by any specific examples from the results of the qualitative research. The authors do not provide enough information about the details of two specific meetings, which apparently were crucial.

Both volumes make many worthwhile contributions but reflect quite different orientations. One is very European; the other, very American. They make an interesting contrast in that the Roling and Wagemakers collection includes only two Americans in 25 authors (John Fisk, a crop scientist, and Thomas Thorburn, an adult educationist, both affiliated with the Kellogg Foundation). Flora includes at least 14 Americans out of approximately 36 authors. Among all of the authors in both books, however (about 61 authors), only one is a rural sociologist. The only way an outsider would know that Cornelia B. Flora is associated with rural sociology as a discipline is by reading her biographical statement, which mentions that she is a past president of the Rural Sociological Society. Occasionally she mentions papers she has published in *Rural Sociology*, although she does not necessarily cite these articles in the chapter itself.

What, then, would interest a rural sociologist about these two edited volumes? Rural sociologists are not featured in the literature reviews, and no specifically rural sociology theory or methodology is employed. The general answer would have to be that rural sociologists might be interested in the substantive content itself or in the fresh insights that might be obtained by becoming better acquainted with other disciplinary approaches. In the first major chapter (Chapter 2: "Shifting Agroecosystems and Communities") Flora lists her own paper, "Rural Peoples in a Global Economy" (Flora 1990) and cites a few other recognized rural sociologists, but the theoretical framework emphasizes "market," "state," and "civil society" as three "institutional spheres," with citations of Tester (1992) and Zijderveld (1999). Neither of the volumes is clearly identified with rural sociological theorizing about rural communities. Flora identifies four "forms of capital": human, social, financial/built, and natural, a typology developed by Cortner and Moote (1999).

Chapter 9, however, a case study of Piatt County, Illinois, does not

use the theoretical frameworks employed by Tester, Zijderveld, or Cortner and Moote. Although Flora cites another of her *Rural Sociology* contributions ("Social Capital and Communities of Place"; Flora 1998), it seems less central to the argument than a paper published in the *Annals of the American Academy of Political Social Science* (Flora and Flora 1993). Because the discipline of rural sociology does not figure prominently in Cornelia Flora's own case study (written with McIsaac, Gasteyer, and Kroma); it is not surprising that none of the other chapters in her edited collection emphasize the literature of rural sociology explicitly. The implicit links to theory and methods in rural sociology would escape the attention of most sociologists, geographers, and political scientists. The one link with the Roling and Wagemakers book is found in Chapter 10 ("A Learning Approach to Community Agroecosystem Management"), which has 13 authors.

This link becomes clearer with a careful reading of Chapter 16 in the Roling and Wagemakers volume: "The Ecological Knowledge System," by Niels Roling and Janice Jiggins. The conceptualization of the ecological knowledge system (EKS) consists of five components: policies, institutions, facilitation, learning, and ecologically sound practices (Figure 16.1 and Box 16.1). The EKS is contrasted with a knowledge system that supports conventional agriculture, which could be labeled a conventional knowledge system (CKS). Conventional agriculture is the villain because it "has emphasized the introduction and widespread adoption of uniform technologies" (p. 288) and in general is based on "reductionist, positivist approaches" (p. 289). In conventional agriculture, we are told, "facilitation of learning is often equated with extension, and more specifically with transfer of technology. This is a simplification." The "simplification" involves lack of attention to the complex nature of "sophisticated agricultural industries" (pp. 293-94); thus a Copernican revolution (p. 289) is required. The ideal model is the Food and Agriculture Organization (FAO) integrated pest management (IPM) program, which makes the shift from a "technical" to an "informal" approach.

Chapter 9, co-authored by Roling and Elske van de Fliert, details the introduction of IPM in Indonesia. Between May 1989 and October 1995, the program had trained an estimated 229,000 farmers in season-long field schools. The Indonesian case study is perceived as a key illustration of the EKS as opposed to the conventional approach. Yet the details presented in the chapter do not necessarily support any kind of Copernican revolution in the method of con-

ducting extension activity. Part of the success of the IPM was due to policy measures that came from the top. A 1986 decree by President Suharto ended "the threat to food security from massive brown planthopper resurgence, induced by the destruction of biological control agents. . . . During two seasons, an estimated 275,000 hectares of rice were destroyed by the brown planthopper" (p. 157). Thus the president acted quickly through a decree; the successes of 1986 had nothing to do with EKS. The revised IPM did not begin until 1989; the first pilot phase, "run by both expatriate and local experts and located within BAPPENAS, the planning agency," continued until 1992. The nonformal education (NFE) aspect began in earnest in July 1989 (p. 165): an IPM trainer cadre of about 46 people was formed over a 15-month period. The authors also mention field schools in central and east Java, but they offer no details of activities in the 11 other provinces of Indonesia where the NFE approach was used. They give no information whatever about the evaluation of the success of the newer approach as of 1998, when the book was first published. (The preface is dated 1996.)

Much has changed in Indonesia since 1998. One would have expected that this key study, the central empirical test of the whole approach, would have been updated for the paperback reissue of the book. The financial crisis faced by Indonesia today, due in part to the remarkable political changes that have taken place since 1998, would suggest that the success of the FAO's IPM program (and its NFE component) must be reexamined in light of changed conditions. If it is still expanding and continues to be successful, that would indicate the strength of the EKS approach, at least when applied to pest management.

Unfortunately the Flora volume does not mention, much less emphasize, the FAO or alternatives to conventional extension. The "learning approach" advocated by Roling and Wagemakers is discussed in Chapter 10 of Flora's book, but that topic is not addressed in other chapters. (There is no case study material about Indonesia.) Instead the centerpiece of Flora's model is the relationship between the "agroecosystem" and the human "community." Flora cites a 1999 report by the President's Council on Sustainable Development (PCSD). (The website no longer seems to be operating.) According to the general thesis, "Healthy agroecosystems with multiple community benefits are more likely to be sustainable than agro-ecosystems which enhance only one of the capitals" (p. 11). In other words, the agroecosystem should enhance financial, social, human, and natural "capital." This is a tall order. It

is no clearer in Flora's case study chapters that her general model is supported empirically than in Roling's case study chapter on Indonesia.

Chapter 4, which deals with hog production in Oklahoma, is an example. We are told, "Corporate America has little attachment to the land and its roots" (p. 43). Two corporations involved in pork processing are mentioned; one is better and the other is worse. Yet we see little indication that either corporation was seeking a systematic enhancement of natural, social, and human capital in addition to merely financial capital. The dilemma of the family farm versus the corporate farm apparently has repeated itself in Oklahoma, as it has in at least half the states of the union. Concentrated animal feeding operations (CAFOs) have not generally been matched carefully to agroecosystem concerns. Even when regional differences within Oklahoma are taken into account, the Flora model (whereby four types of capital are matched carefully to agroecosystem concerns) does not seem to be fundamental to understanding the conditions facing residents of western and eastern Oklahoma communities in the late 1990s.

Overall these books represent a wide array of intriguing studies. Anyone who is seriously interested in sustainability and the environment can draw on the case study material for useful illustrations of social processes and organizational dilemmas. Yet despite their importance for the study of rural communities, neither volume is entirely convincing in integrating the theoretical speculation with the case study material.

Perhaps one clue might be a deeper appreciation of Jurgen Habermas's (1984, 1987) seminal theory of communicative action. Roling and Jiggins cite Habermas in their concluding chapter: "People are intentional sense-makers," and not merely "objects" (p. 285). Both books deliver a clear message of hope that is based on faith in the extent to which individual human beings living in a "relatively decent society" can cooperate to accomplish worthwhile goals. Such goals include integrating biophysical environmental concerns with community priorities. Various thinkers have criticized Habermas for being "too idealistic" and somewhat naive: for example, they have pointed out that social class often makes "undistorted communication" a utopian ideal. Habermas, however, is situated in a tradition of social science that emphasizes the constructed nature of human societies. This tradition stresses the importance of research that respects the "intentionality" exhibited by individuals and groups who attempt to make a difference.

In general, both volumes under review share that orientation. Although one can quibble about the precise way in which the significant social issues under consideration have been handled theoretically and methodologically, this should not imply that the general goals should be lost from sight. Our intellectual horizons as rural sociologists should include productive multidisciplinary attempts to deepen our awareness of agroecological issues, participatory learning, and sustainability. Hence these two volumes, insofar as they stimulate further debate and research, will serve a very useful purpose.

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