

Journal of Rural Social Sciences

Volume 29
Issue 1 *Volume 29, Issue 1*

Article 1

7-31-2014

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Recommended Citation

Tanaka, Keiko. 2014. "Presidential Address: Reimagining the Future of Agriculture: Building Knowledge for Sustainability and Resilience." *Journal of Rural Social Sciences*, 29(1): Article 1. Available At: <https://egrove.olemiss.edu/jrss/vol29/iss1/1>

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PRESIDENTIAL ADDRESS

REIMAGINING THE FUTURE OF AGRICULTURE: BUILDING KNOWLEDGE FOR SUSTAINABILITY AND RESILIENCE

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ABSTRACT

The theme of the 2014 SRSA meeting called attention to the interrelationships between *agricultural sustainability* and *community resilience*, which have become interrelated goals in building agriculture and communities that support vibrant local food economies in a rapidly globalizing food economy. In this presidential address, I will start with a story of my aunt, who was a farm wife/woman in Tanba Sasayama, Japan. Then, I will return to William H. Friedland's critique of rural sociology/rural sociologists from 32 years ago to reflect on the impact of an increased importance of these two concepts on transforming the institutional landscape of agricultural sciences. I will ask how agricultural sustainability and community resilience can, as new paradigms, contribute to addressing critical issues that many farm households and rural communities face.

PRELUDE: A STORY ABOUT AUNT TERUKO MATSUMOTO

Aunt Teruko Matsumoto (松本照子), a younger sister of my mother, was beautiful, intelligent, and kind, and, without a doubt, my favorite aunt. When I was about five or so, she got married to a high school biology teacher, who came from a prominent farm family in the rural area where both of my maternal grandparents and my paternal grandmother grew up. Soon their first child—a son—arrived, and then two years later, their daughter. Now with their family complete; they left the urban life in Takarazuka (宝塚市) and moved to “our” ancestral village, Hioki (日置), in Tanba Sasayama (丹波篠山) or Tanba (丹波) for short, Hyogo Prefecture so that the young couple could fulfill their family obligations to help run their family farm.

Tanba Sasayama is an area that spreads across the southeastern edge of Kyoto Prefecture, the southwestern edge of Hyogo Prefecture, and the northeastern edge of Osaka Prefecture. Since the sixth century, Tanba developed as an important rural area for the capital of Kyoto and the port city of Osaka, supplying diverse agricultural produce as part of their tax obligations, as well as for commerce.

By the time Aunt Teruko moved to Tanba in the early 1970s, both the agricultural sector and rural economy in Japan were “in decline.” As rapid

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FIGURE 1. MAP OF JAPAN.

urbanization continued to pull young people out of the rural area, many rural villages and towns amalgamated to become larger municipal entities. For example, between 1889 and 1999, Hioki Village, where my aunt and uncle's family farm is found, went through municipal consolidation four times (City of Sasayama 1999). Because my uncle Hiroshi continued to work at Takarazuka High School, despite a long commute, he could help his parents with farm work only on Sundays. Much of the burden of day-to-day farm work actually fell on my aunt, while she was running the household and raising two children. Like many rural women in Japan, Aunt Teruko became active in her community, helping men and elders in Hioki organize annual festivals. Like many farm women in Japan, Aunt Teruko worked hard on the farm for many years, as her in-laws grew too old to farm; without ever officially being recognized in the Census or through the tax record as the co-manager of the family farm.

Nearly 20 years ago, Aunt Teruko suddenly fell ill. By then, her children had moved out of home; her mother-in-law had passed away; and her husband was about to retire from his teaching position. Within a year, Aunt Teruko was diagnosed

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with lupus. As long as her conditions were manageable, she continued to take care of her father-in-law after he fell ill from tuberculosis. She also worked on the farm until her husband finally retired completely from teaching. Over the years, however, her lupus completely incapacitated her, both physically and psychologically. It was a very slow and painful process to death. When she finally escaped from all the pains, she was 72 years old.

Today, Uncle Hiroshi manages day-to-day farm work. On the weekends, my baby cousin Naoko, who lives not too far from her family home and works full time at Nijyo Castle Museum, helps her aging father. During the busy transplant and harvest seasons, Masahiro, her elder brother who lives in Yokohama, returns home to help not only his father, but other aging farmers in the community with farm work. Unlike their parents' generation, where sons were expected to take over the family farm after they retired from their jobs, my cousin Naoko wishes to bear the family obligation.

INTRODUCTION

In 1982, William H. Friedland, one of most influential rural sociologists and mentors for many of us, published a controversial article in *Rural Sociology*, titled "The End of Rural Society and the Future of Rural Sociology." He criticized the irrelevance of rural sociology to general sociology, the land-grant system, academia, and the federal policy making process because rural sociologists had paid little attention to the transformations of agriculture. Consequently, he (1982:597) argued "rural sociology, as a body of knowledge, knows comparatively little about agriculture," despite that many rural sociology departments and rural sociologists were in land-grant institutions, the primary concern of which had historically been farming and agricultural production. Moreover, he (1982:594) pointed out that in highly industrialized and corporatized capitalist agriculture, "[t]he continued focus on rural society makes rural sociology an anachronism in search of a nonexistent social reality."

Contrary to Friedland's claim, the story of my Aunt Teruko above embodies complex challenges that many rural and farming communities in industrialized countries continue to face to survive for the next century. In fact, my childhood memories of farming in Tanba Sasayama as well as of my hometown, which within five years after we moved in 1968 completely suburbanized, gave me ideas for my first paper as a graduate student in rural sociology at MSU (Michigan State University) on part-time farming in Japan.

In the current paper, I will return to Friedland's critique of rural sociology/rural sociologists from 32 years ago to reflect on the impact of an increased importance of *sustainability* and *resilience* on transforming the institutional landscape of the agricultural sciences. I will ask how agricultural sustainability and community resilience can, as new paradigms, contribute to addressing critical issues that farm households like my aunt Teruko and uncle Hiroshi, and rural communities like my ancestral village Hioki, face.

SUSTAINABILITY AND RESILIENCE OF RURAL SOCIOLOGY

Thirty-two years after Friedland's piece, the socioeconomic and institutional landscape surrounding rural sociology has changed. Today, the structure of U.S. agriculture is highly bifurcated between a few very large and large-scale farms which produce more than 50 percent of the economic value and many very small-scale farms that produce very little economic value (MacDonald, Korb, and Hoppe 2013). Our food economy is often described as a globalized, corporatized, and industrialized system in which mass quantities of standardized, highly processed, cheap food are hailed as signs of our economic success and social progress.

Simultaneously, the levels of federal and state support for non-defense programs have steadily dwindled. Land-grant institutions across the United States were hit hard by a series of budget cuts at the federal and state levels. State Cooperative Extension cut some positions; Agricultural Experiment Stations closed field stations and experiment farms. Many land-grant institutions began redefining their land-grant mission to attract new constituents and meet their needs. New paradigms were sought to justify the continued existence of land-grant institutions. I would argue that "*sustainable agriculture*," "*local food economy*," and "*community and ecological resilience*" are among the examples of new paradigms. Departments, centers, and programs were reorganized with new names and revised priorities for research, instructional, and extension activities. Let me use my own experience as an example to illustrate a wider trend within the land-grant system to reorganize rural sociology.

The Demise of Rural Sociology As We Knew It

When I took a graduate seminar on the sociology of agriculture, one of the first reading assignments was another of Friedland's controversial pieces, "Is Rural Sociology Worth Saving?"; published in *The Rural Sociologist* in 1989. In that piece, he repeated his criticism that "[r]ural sociology is not worth saving unless it can return to the fundamental mission of sociology and social science...of social

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criticism" (1989:4). It is ironic that I was hired by the Department of Sociology at the University of Kentucky in 2001 as a rural sociologist in the rural sociology program in the College of Agriculture. Two years later, the rural sociology program was merged with the agricultural education and agricultural communication programs to establish a new department, Community & Leadership Development, with a new interdisciplinary social science master's degree program. In my nearly 13-year tenure at the University of Kentucky, the number of rural sociologists has declined from 11 to 7, replaced with tenure-track positions in agricultural education and agricultural communication. Last summer, our college was formally renamed to the College of Agriculture, Food, and the Environment, CAFE for short.

As we all know too well, in the last decade, several rural sociology programs across the nation have been similarly reorganized. Washington State University eliminated its rural sociology department. I believe that Cornell's Development Sociology and University of Wisconsin Madison's Community & Environmental Sociology are the only two stand-alone rural sociology departments. Neither uses "rural sociology" in their name. One might affirm that Friedland's warning (1982, 1989) was correct: rural sociology's position as an institution has been eroded within the land-grant system.

The good news is that many younger generations of rural sociologists did embrace Friedland's call to shift the core subject of rural sociological studies from rural society to agriculture. In the last three decades, the sociological study of agriculture has seen an intellectually rich and productive proliferation of sociological theories and methodologies. Today, the sociology of food and agriculture is one of the largest, if not the single largest, research interest groups in the Rural Sociological Society (RSS). The scholarship from this group has become a critical component of rural sociology as a body of knowledge.

Certainly, the land-grant system continues to shape much of what rural sociologists do as instructors, researchers, and extension specialists; many RSS members continue to either work at, or obtain their doctoral degrees from, land-grant institutions.

One of the most notable intellectual developments surrounding rural sociology within the last 10 years has been a rise in food studies and sustainability studies at non-land-grant universities and liberal arts colleges. In these programs, "general" sociologists usually teach courses on the sociology of food, agriculture, environment and natural resources, and rural communities. More important, our colleagues—whether from "general" or "rural" sociology—who study agriculture,

food, environment, and rural society are *practicing sociology* by actively engaging in a community to address a particular public issue or social problem.

I would argue, therefore, that rural sociology as a body of knowledge is thriving although the institutional environment for rural sociology scholarship may have changed. A more cautionary note should be added that the cultural turn within the sociology of food and agriculture has shifted our attention away from *rurality* to *cosmopolitanism* of the social reality and from *production* to *consumption* of the economic and sociocultural values associated with agriculture, food, and rurality. To understand these shifts, we need to critically examine both sustainability and resilience in our scholarship as theoretical concepts and empirical phenomena. Let me briefly talk about each concept.

Sustainability

Since the late 1980s, “sustainability” has become, as Mooney and Hunt (2009) pointed out, a “master frame,” in which very little or no disagreement exists among diverse stakeholders on its value. Agricultural sustainability is viewed as a positive goal and vision toward which we, despite our role in the agrifood system, are to strive. Yet, the shift from production-oriented, so-called “conventional” agriculture, to “sustainable” agriculture has been a slow process. The establishment of the Sustainable Agriculture Research & Education system in 1988 under the Agriculture Productivity Act was critical in facilitating the process (see the SARE website). SARE-funded projects have made significant contributions to not only building the body of knowledge about agricultural sustainability, but also training new generations of agricultural scientists and educators, including many of us, who went through graduate training in the 1990s and onward.

The 1990 Farm Bill, revised in 2007, officially defined “sustainable agriculture” as (U.S. Code Title 7, Section 3103) an integrated system of plant and animal production practices having a site-specific application that will over the long-term:

1. satisfy human food and fiber needs;
2. enhance environmental quality and the natural resource base upon which the agricultural economy depends;
3. make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls;
4. sustain the economic viability of farm operations; and
5. enhance the quality of life for farmers and society as a whole.

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For the time being, let us forget the history behind how this definition came about, and focus on the five criteria listed as the key dimensions of agricultural sustainability. The first criterion, “satisfy[ing] human food and fiber needs,” is considered the bottom line requirement or mandate. Then, the next four make integral parts of “three pillars of sustainability” –environmental stewardship (numbers 2 and 3), economic viability (number 4), and the quality of life (number 5).

Sustainability is a nebulous and highly contested concept. The term often incites emotional, even hostile, responses from our colleagues. This is because no agricultural scientists wish their lifetime work to be defined as the science of “unsustainable agriculture,” and excluded from their university or college’s efforts toward agricultural sustainability.

As a framing device, the above definition allows the existing infrastructure of the land-grant system to remain intact by operationalizing the idea of *sustainability* as something measurable and achievable using the existing tools of agricultural sciences. Fundamentally, the paradigm of sustainable agriculture has not altered, and will not alter, the productionist orientation of agricultural sciences. What have changed are recommendations regarding how to reach our productionist mandate of “satisfy[ing] human food and fiber needs,” and what to measure to assess whether we are doing a good job or not.

In fact, an unspoken goal of sustainable agriculture is sustaining agricultural sciences under the land-grant framework. This is particularly evident in how the so-called three pillars of agricultural sustainability are practiced in sustainable agriculture research, instruction, and outreach. The idea of three pillars emphasizes the equal importance of all three domains of agricultural production – the ecological system, the economic system, and the social system. In reality, the third domain, which is the subject of rural sociology, agricultural communication, and agricultural education, is underemphasized. I argue that this is the challenge we must face.

For example, based on the evaluation of the research and education projects funded by the Southern SARE between 1988 and 2003, Victoria Bhavsar (2008) and I showed that the Southern SARE funded the least number of projects concerning “the quality of life,” (in relation to the other goals of sustainability) and that those funded projects struggled to define and measure “social sustainability.”

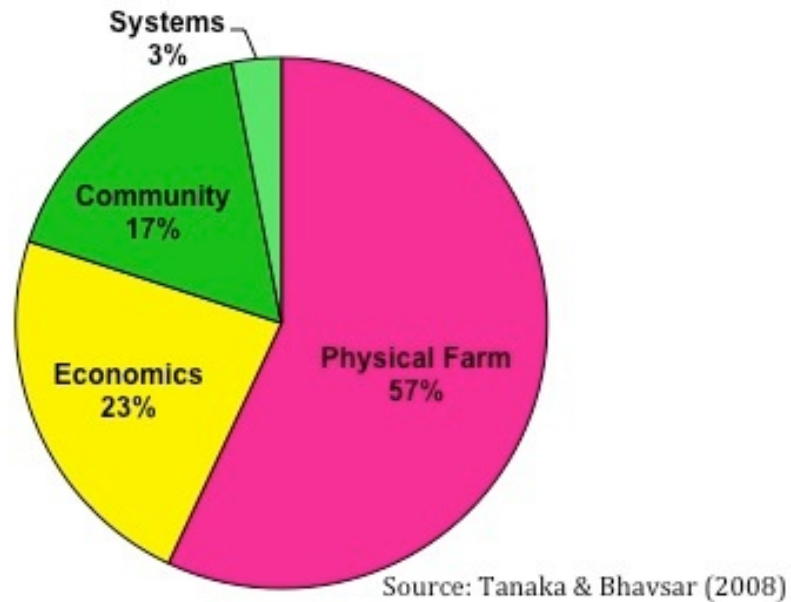


FIGURE 2. SOUTHERN SARE PROJECTS BY CATEGORY, 1988-2003.

This lack of federal and state funding on research, extension, and education on the social dimension of sustainability has contributed to continued marginalization of rural sociology, rural anthropology, and other social sciences. For example, *Toward Sustainable Agricultural Systems in the 21st Century*, published by the National Research Council (NRC) in 2010, is considered one of the most comprehensive books on sustainable agriculture. Of nine chapters, two are dedicated to summarizing the state of current knowledge about agricultural sustainability. While the chapter titled “Improving Productivity and Environmental Sustainability...,” written largely by “hard” scientists, is 106 pages long, the chapter on the economic and social dimensions of sustainability is a mere 31 pages long.

In an era when U.S. agricultural productivity has probably reached its limit, the concept of sustainability has helped the USDA reframe the purpose of Agriculture and Food Research Initiative (AFRI) Competitive Grant Program. As shown from the 2014 allocation of USDA AFRI funding, however, the USDA continues to favor research, extension, and education projects that emphasize the productivity and competitiveness of U.S. agriculture (USDA-NIFA 2013). In this capitalist, productionist perspective, I argue that the actual goal of agricultural sustainability is not necessarily *sustainable production*, but *sustainable commodification* and

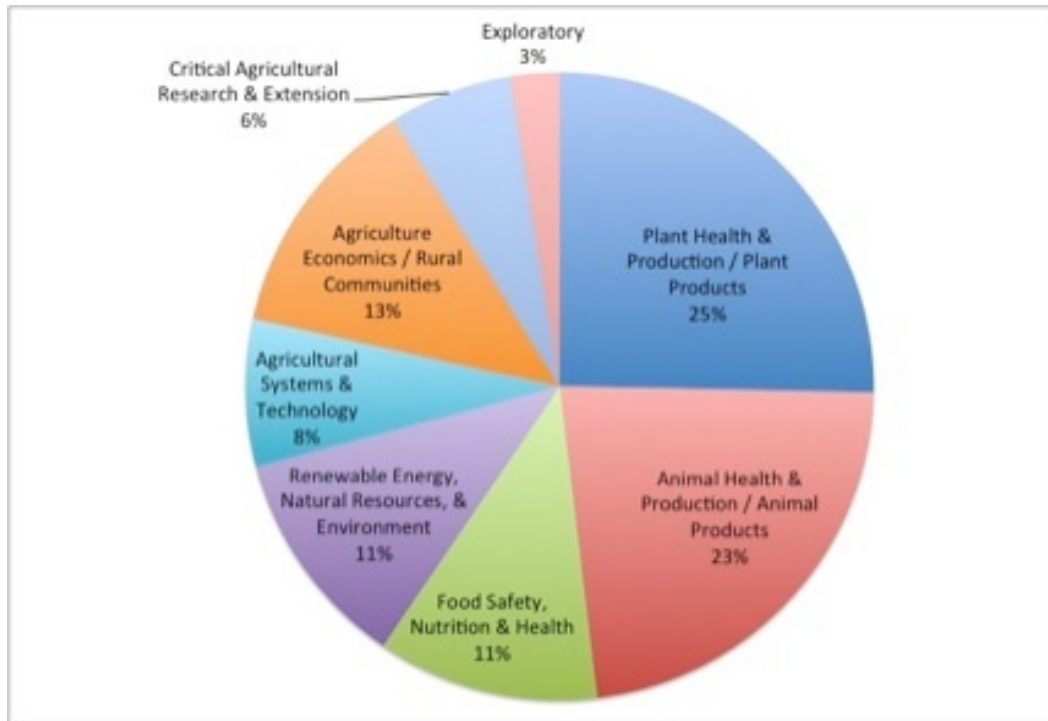


FIGURE 3. USDA-AFRI BUDGET 2014 BY PROGRAM.

consumption of natural resources and the rural in the process of global food and fiber production (Hess 2013).

Resilience

The concept of *resilience* is often used as a key indicator of agricultural sustainability. As shown in Table 1, the idea of resilience has been used as both a theoretical concept and an empirical variable in a variety of ways (MacKinnon and Derickson 2013:256). As a normative concept, resilience is about flexibility and adaptability to maintain stability in a given system—whether ecological, social, or economic—over a long period. Regardless of scientific disciplines and fields, *resilience* is a spatial, both in terms of physical space and time, concept that emphasizes a systems perspective to examine a capacity for adaptability and flexibility with the goal of returning to an essentially stable state (Adger 2000; Holling 1973; Perrings 2006).

Within the social sciences, the concept of resilience finds its origin in the literature on sustainable development and political ecology, starting from the late 1980s through the 1990s. *Social resilience* is linked to other concepts related to

TABLE 1. DIVERSE DEFINITIONS OF RESILIENCE

Author, date	Discipline	Level of analysis	Definition
Gordon, 1978	Physics	Physical system	The ability to store energy and deflect elasticity under a load without breaking or being deformed
Holling, 1973	Ecology	Ecological system	The persistence of relationships within a system, the ability of systems to absorb change and still persist
Resilience Alliance, u.d.	Ecology	Ecological system	The capacity to tolerate disturbance without collapsing into a qualitatively different state
Egeland et al., 1993	Psychology	Individual	The capacity for successful adaptation and functioning despite high risk, stress, or trauma
Adger, 2000	Geography	Community	The ability of communities to withstand external shocks to their social infrastructure
Katz, 2004	Geography	Community	Ways in which people adapt to changing circumstances to get by and “make do” through the exercising of autonomous initiative
Hill et al., 2008	Regional Development	Region	The ability of a region to recover successfully from shocks to its economy

Source: MacKinnon and Derickson, 2013

the environment-society interaction or human-nature coevolution (Norgaard 1994) which are used to observe and understand the processes in which communities with highly vulnerable populations manage and overcome negative impacts of neoliberal policies and programs on their ecological and sociocultural systems. In more recent years, *community resilience* is often used in public policy fields, including rural community development and regional planning, to emphasize the importance of community empowerment and self-reliance in addressing local issues (see RAND Corporation 2014).

On the one hand, *sustainability* is conceptualized as something extrinsic, that is, someone must decide what to sustain and then act to build and maintain it. Moreover, sustainability is a goal and process to which individual or collective actors or elements strive. On the other hand, *resilience* suggests an intrinsic property or characteristic of a system and of consisting elements of that system (e.g., individuals, households, community). In relation to agricultural sustainability, the concept of resilience is frequently used as both an indicator of ecological sustainability and a necessary condition for social sustainability. According to the Committee on Twenty-first Century Systems Agriculture (National Resource Council (NRC) 2010:26), “[a]t the landscape and community levels, resilience depends heavily on the diversity and types of farms and of their markets, as well as biodiversity.”

On the surface, like *agricultural sustainability*, *community resilience* sounds like an uplifting and forward-looking paradigm of the 21st century upon which rural sociologists *should* ground their scholarship to pave future paths of agriculture, food systems, and/or rural and urban communities. For example, the proliferation of farmers’ markets, CSAs (community-supported agriculture), farm-to-table, food hubs, and/or other local food system initiatives can be used to measure both a degree of community resilience and the social dimension of agricultural sustainability.

In the literature on community development, which includes work by academics, practitioners, and activists, community resilience is generally conceptualized in terms of three types of capitals generated in a community, namely, *economic*, *social*, and *environmental capital* (Putnam 2000; Steiner and Markantoni 2013). Necessary elements for building resilience and generating capital in a community include: creative minds of talented individuals, empowering processes of decision-making, common values and shared future visions, and entrepreneurship and leadership skills. Residents in a community must feel willing and empowered to come together to: (a) recognize their common values and develop a future vision for their

community; and (b) rely upon their own skills and talents, as well as the community's existing assets to address their own challenges. To become resilient, communities should not expect any additional external resources, but should find ways to identify and cultivate untapped resources from within the community.

Community visioning, asset mapping, strategic planning, SWOT analysis, and leadership/entrepreneurship skill development are among frequently used approaches to facilitating such a community decision-making process. The community's reliance on its *existing* assets to generate *future* capitals/resources is an inevitable consequence of fiscal crisis of the state and devolution of fiscal power, in which both the federal and state governments have increasingly retrenched their roles in redistributing the wealth and resources among communities.

As MacKinnon and Derickson (2013:261-262) have argued, the idea of resilience in community development takes "capitalism for granted as an immutable external force akin to the forces of nature while...normaliz[ing] the uneven effects of neoliberal governance and invigorat[ing] the trope of individual responsibility with a renewed 'community' twist." By facilitating community efforts to build their resilience, community development extension and outreach programs under the land-grant system, whether explicitly or implicitly, aim to improve the capacity of these communities to survive and flourish in the increasingly globalized neoliberal capitalist system, rather than challenge it.

Not only do both agricultural sustainability and community resilience justify the existing global, neoliberal capitalist paradigm, but these concepts shift the target audience/beneficiaries of our research, outreach/extension, and education work to individual farmers, entrepreneurs, and community leaders. Furthermore, the expected output of our scholarship becomes skill development programs, rather than public policy. The rise of leadership studies and entrepreneurship/leadership development programs within the social sciences under the College of Agriculture and the Cooperative Extension System, including my own department, is a testament to this shift. If this is the case, are we, rural sociologists, back to the position that Friedland criticized? Have we completely abandoned an attempt for social criticism?

BUILDING THE KNOWLEDGE OF SUSTAINABILITY AND RESILIENCE

In the last 13 years, I have been in a peculiar position as a rural sociologist where I share my appointment between liberal arts sociology and land-grant rural sociology. I have been simultaneously both a general and a rural sociologist, and neither of them. To some degree, this position allows me to observe and reflect on

the boundary-making process within rural sociology as both the scholarship and social activism on agricultural sustainability and localization of food *econo-culture*¹¹ has begun moving beyond the familiar terrain of rural community and agrifood sociologists. I am convinced that the value of rural sociology as a body of knowledge under the new paradigm of sustainability and resilience rests in our capacity to contribute to two types of institutional change.

First, our sociological imagination allows us to situate challenges of agricultural sustainability and community resilience in the macro economic and political trends in a particular time and place. As I recently told several individuals about “food deserts” in Lexington, we cannot solve the problem of food insecurity in our community without understanding why certain neighborhoods have come to lack food access. Without an understanding of the history of racial tensions, gender discrimination, and class inequality in the community, as well as the macro economic and political factors such as recession and federal budget cuts, capacity building or leadership training of a small group of community members will simply result in reproducing a class of local elites, rather than addressing the challenge of food insecurity.

Approaches to address common challenges across the globe such as food insecurity, agricultural sustainability, and rural depopulation must be grounded in a specific community at a specific time to be appropriate. With interdisciplinary perspectives and diverse research tools, rural sociology can offer the analysis of a given challenge at different scales, from the individual to the societal level, to do that.

Second, rural sociology scholarship must focus on creating and maintaining institutional mechanisms in the community of our concern that build skills and knowledge for attaining agricultural sustainability and community resilience. Although designing and implementing an extension/outreach program for sustainability and resilience is important, without concrete institutional transformations, such programs targeting individual members will not induce the chain of systematic, permanent change necessary for sustainability and resilience. The development of a high school and/or undergraduate curriculum is one attempt to achieve such an institutional transformation.

¹¹By the term “econo-culture,” I try to capture the recent “cultural-turn” of commodity fetishism in food consumption. I believe much of the current local/alternative food movements explicitly aim to build food systems that have economic benefits and enrich the food “culture” of the community.

For example, my own department has recently revised the undergraduate curriculum in community and leadership development (CLD) with very innovative pedagogical approaches of community-based learning. By removed the classroom walls and moving to a community, CLD majors are required to work with residents and leaders of that community. These students are expected to acquire skills and knowledge to examine both the concepts of and approaches to community resilience and resourcefulness. This approach can be used at rural and urban high schools as part of the social studies curriculum. The key to success is to push students to see the unobvious, question the inevitable, and engage in the debate. In other words, we need residents, citizens, farmers, and consumers who are capable of questioning and challenge the existing political and economic institutions of the increasingly globalized neoliberal capitalist system as obstacles for building agricultural sustainability and community resilience.

CONCLUSION

Let me return to the story of my aunt Teruko. My aunt Teruko's hardship as a farm wife cannot be understood without the examination of the sociocultural history of my aunt's community, behind rapid depopulation, aging, and feminization in rural Japan since the 1950s (Tsutumi 2010). Like many rural communities in industrialized countries, Tanba Sasayama has been pushing programs for "multifunctionality" of agriculture—promoting sustainable farming of heirloom rice and beans, and regional vegetables and mushrooms; restoring heritage houses and buildings in the downtown area; and attracting tourists from neighboring cities—Kobe, Kyoto, and Osaka—to experience the farming, rurality, and traditions. Yet, with the lack of financial and human resources, the entire district continues to struggle to manage natural resources, particularly forests, and maintain the infrastructure. Indeed, many rural communities away from the metro area are literally dying as their population dwindles to almost nonexistence. What can rural sociology offer in addressing these types of challenges that many rural, farming communities in industrialized countries face?

My focus within rural sociology has been the structure of agriculture and the food economy. Until now, I have paid little attention to rurality. In the last decade, I have had many opportunities to visit diverse types of rural communities in different parts of Japan to observe innovative, successful examples of "civic agriculture" (Lyson 2004). This gave me an opportunity to contemplate the spatial factors (both time and physical) of rurality that affect how residents in a given

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community conceptualize agricultural sustainability and community resilience as both common goals and measures of their success for the next century.

As my cousin Naoko takes over the family farm as the next chapter of her life, I plan to return to the examination of the intersection between farming and rurality. Twenty-four years after my paper on part-time farmers in Japan, I am finally convinced that, without an understanding of the social reality of rural society, I cannot quite build the knowledge necessary for agricultural sustainability and social resilience of rural communities.

AUTHOR BIOGRAPHY

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