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Theme Overview: Higher Education's Roles in Supporting a Rural Renaissance

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A century ago, when one spoke of rural America, one was also speaking simultaneously about agriculture. The two terms were synonyms. Hundreds of thousands of small farms and ranches dotted the landscape. And almost all of the countless small and rural communities scattered across America existed mainly to provide goods and services to the multitudes of nearby farm and ranch families.

Today, agriculture is no longer the mainstay of the rural economy. The initial response of some is to lament this reality, but they typically change their minds and perspectives when it is pointed out there are many places around the globe where agriculture and rural remain synonymous, meaning agriculture is the linchpin of the rural economy. Such places are far too common in third-world countries where thousands of impoverished villages exist solely to provide goods and services to subsistence farmers.

Although efforts are underway across the nation that may enhance the role of agriculture in the rural economy through the establishment of local and regional community food systems that are more sustainable than the current industrial model, agriculture will most likely never return to the dominant position it once held. We are in a different world, with new opportunities and possibilities as well as challenges for rural people and the institutions that have obligations and missions to engage with them. This includes land-grant universities and their extension office and experiment stations.

The research and extension functions of the nation's land-grant universities were instrumental contributors to the process of transforming American agriculture by unlocking the full potential of its natural resource base. But as many critics have noted this process brought with it some troubling economic, environmental, and civic consequences. What if these same land-grant universities and other higher education institutions leveraged their human and intellectual resources to help transform rural America by unlocking the civic agency and full potential of its people and places? This issue of *Choices* is designed to stimulate and inform deliberations around this extremely important question.

The rural communities of yesteryear depended almost entirely on the farm and ranch population. Today, the tables are turned and many farm and ranch families are dependent upon nearby rural communities as a place to secure off-farm employment and employee benefits such as health insurance. Indeed, farm and ranch families may be the greatest beneficiaries of a diversified rural economy that is no longer reliant exclusively upon agriculture. In short, a more diverse rural economy is surely a good thing, especially for farm and ranch families. However, the scope of our

Articles in this Theme:

thinking and investments must go far beyond economic considerations. This broader scope was articulated beautifully by Liberty Hyde Bailey, one of the great visionaries of his day and founder of the New York State College of Agriculture at Cornell University. In 1918, Bailey wrote:

"The ultimate welfare of the community does not depend on the balance-sheets of a few industries, but on the character of the people, the moral issues, the nature of home life, the community pride, the public spirit, the readiness of responses to calls for aid, the opportunities of education and recreation and entertainment and cooperative activity as well as of increased daily work and better wages."

Much of what is articulated in this special issue may seem heretical by today's standards but not by those of Liberty Hyde Bailey. First, Wojan, Fluharty, and Cordes argue in the lead article that "science and education as usual" will not carry the day if higher education is to be a major player in rural and regional innovation. They argue that a very different way of thinking—design thinking—that is commonplace in a few sanctuaries within higher education, such as architecture, matches up extremely well with the complexity of rural renaissance. Because many rural development scholars and practitioners are already comfortable with "learning by building," this provides an opportunity to demonstrate higher education's relevancy and effectiveness. It is hoped leaders and administrators within higher education may be wise enough to recognize the potential of this "prototyping opportunity" and to use it as a way to defuse the concern that today's graduates need to be more innovative and comfortable with the societal challenges ahead of them. While Wojan, Fluharty, and Cordes argue against "science and education as usual", the article by Peters extends this argument to extension. His historic research points out the way extension's early history is most frequently portrayed is largely at odds with yesterday's factual reality. What he refers to as the "comic book version" of history fails to adequately recognize the broad perspective noted above by Liberty Hyde Bailey. Today, much of extension's purpose and work are thought of as consisting of technical assistance directed to agriculture's bottom line. But its origins and early history featured a much broader range of purposes and work. It could, of course, reclaim its roots and be transformed into a multifunctional enterprise that has technical capacity as well as the capacity (and legacy) to explicitly "build community" through active engagement and support of cultural and civic life. Surely, this is essential if a rural renaissance is to occur. Will extension and others in the land-grant system provide the necessary leadership for this to happen?

While Peters challenges extension at the big-picture level, Loveridge, Albrecht, Welborn, and Goetz provide a more detailed blueprint by identifying eight high priority issues in which extension should become heavily involved in supporting a rural renaissance:

- Streamlining local governance
- Balancing labor supply and demand in agriculture
- Improving the stewardship of natural resources
- Revitalizing rural education
- Reviving interest in outdoor recreation
- Improving health outcomes
- Fostering greater rural entrepreneurship
- Reconciling old differences

Again, the same question: Will extension and others in the land-grant system provide the necessary leadership for extension to become heavily engaged in these eight areas?

This special issue concludes with an article in which Lichter and Brown remind us that this is no longer our grandparents' rural America. Today's rural America is an integral part of the U.S. social and economic fabric and never has there been a greater interdependency between rural and urban. Indeed, all Americans have a large and growing stake in the vitality of rural people and places. Social scientists should increase their attention to issues at the rural-urban interface. This may stimulate the development of a spatially-inclusive social science that acknowledges growing rural-urban interdependencies.

Much is included in this special issue but much is also omitted. We see this special issue as a way to "prime the pump" and stimulate additional articles for *Choices* (and other outlets) that can probe in multiple ways on the issue of higher education's roles in supporting a rural renaissance. We lift up three specific areas that are especially ripe for further development and articulation.

First, what new initiatives are currently on the drawing board or are being launched by higher education institutions? For example, the four-campuses of the University of Nebraska have come together in the past two years to launch the very ambitious Rural Futures Institute. One of the many interesting aspects of this initiative is its transdisciplinary nature and the emphasis placed on the arts and culture in community life. As another example, earlier this year Purdue Extension created five new positions (regional educators in economic and community development) that are strategically located across Indiana.

Second, the four articles in this special issue have a decidedly land-grant orientation and from the 1862 component of the land-grant establishment. We do not apologize for that—especially on the 100th anniversary of the Smith-Lever Act. However, it is also severely limiting. For

example, the work and challenges of the 1890 and 1994 land grants and their critical roles in supporting a rural renaissance need to be articulated for all to hear.

Third, we must move past the land-grant mentality. It is our belief that some of the most important and seminal work is going on outside the land-grant system. For example, no set of higher education institutions are likely to be closer to the true heartbeat of rural America than the 600 institutions that form the Rural Community College Alliance. In addition to educating rural students, these institutions often provide much of the civic leadership in rural America. As but one example, much of the credit for the renaissance underway in the Arrowhead region of Minnesota can be traced to the leadership provided by the Northeast Higher Education District.

"Regional universities" are another type of institution that often feel a special affinity and responsibility to support a rural renaissance. It is our observation that in many cases these institutions are more nimble and more adept in supporting rural and regional innovation than are larger research universities. Humboldt State University, Sam Houston State University, Delta State University, Ball State University, the University of Maine at Ft. Kent, the University of Northern Iowa, and Western Illinois University are but some noteworthy examples.

If higher education, broadly defined, can help unlock the full potential of rural people and places, our entire nation benefits. And so does higher education by virtue of demonstrating it has the capacity to address a truly wicked problem, namely, a long, overdue rural renaissance.

For More Information

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Using Rural Innovation Principles for University Renaissance

Timothy R. Wojan, Charles W. Fluharty, and Sam Cordes

JEL Classifications: I23, O18, 035, Q01, R58
Keywords: Cooperative Extension, Land Grant University, Rural Development

For the past 30 years, rural development scholars and practitioners have lamented the huge, unrealized potential of a university-enabled rural renaissance. Cooperative Extension was often center-stage during these conversations. However, this is too limiting, especially when Cooperative Extension is compartmentalized as a distinct component of the university mission, often suffers from disciplinary divisions, and is consistently downsized (McDowell, 2001). More importantly, the full range of higher education's capabilities must be part of the solution, especially the research enterprise and the education of students—undergraduate and graduate students alike—who aspire to work on such an important but complex issue as a rural renaissance.

> To state the case as succinctly as possible: We are convinced that unless our institutions respond to the challenges and opportunities before them they risk being consigned to a sort of academic Jurassic Park—of great historic interest, fascinating places to visit, but increasingly irrelevant in a world that has passed them by.
> —*Kellogg Presidents' Commission 1996*

The current challenges facing higher education may create a fortuitous opening for mobilizing higher education's resources in support of a rural renaissance. There was a time when it was publicly acceptable for higher education to simply keep classes filled and for the silos of disciplinary-based and curiosity-driven science to address narrowly defined or "tame problems." Today, much more is expected from higher education. Society now demands dynamic, warp-speed application of pragmatic, applied knowledge to attack "wicked problems" and to produce graduates who are innovative, comfortable, and adept at working in such a dynamic environment.

What is a Wicked Problem?

Wicked problems are problems 1) that cannot be adequately understood until after a solution to the problem is formulated, 2) characterized by stakeholders having widely different perspectives regarding the very nature of the problem, and 3) whose solutions do not emerge from a straightforward progression but are characterized by failed or aborted attempts that provide opportunities for learning and reorienting interests (Rittel and Webber, 1973).

Obviously a huge shift in the disciplinary-driven culture underpinning most of higher education, especially within major research universities, will be needed. Although the openness and willingness to experiment with a different or parallel approach may exist, it is difficult to do so without a concrete focus.

We argue that a rural renaissance can be thought of as such a focal point in that (a) it represents a wicked problem; and (b) the intellectual pathway or framework for addressing this particular problem already exists, namely, design thinking. By moving forward successfully on this basis, the result will be a convincing "proof of concept" that higher education can, indeed, produce the creative and innovative graduates that the new millennium requires and, simultaneously, help resolve wicked problems. This may help avoid

the amusement park scenario alluded to in the opening quote.

What is Design Thinking?

Leading design schools and innovation exemplars such as Apple, Proctor & Gamble, and the IDEO design consultancy have identified three distinct pillars of design thinking (Luma Institute, 2014):

1) Looking and listening better;
2) Methods for analyzing challenges before you; and
3) Making—envisioning—future possibilities.

At first glance, these pillars are so general as to appear unremarkable. However, reflection reveals that conventional modes of thinking in science and education are heavily dominated by pillar 2. Of course, there are exceptions. For example, two recent winners of the Nobel Prize in Economics (Elinor Ostrom and Daniel Kahneman) place a huge emphasis on pillar 1. Pillar 3 is typically thought of as pure speculation.

"Design thinking starts with divergence, the deliberate attempt to expand the range of options rather than narrow them." (Brown, 2009) However, as a pragmatic discipline, it must eventually winnow unproductive options and must willingly embrace constraints. It is the switching between divergent and convergent thinking through the stages of the design process, and the freedom to revert to earlier stages as new discoveries warrant, that characterizes the entire process, a process of holistic rather than compartmentalized thinking.

Within higher education, this approach has been largely limited to professional education tracks in design and, to some extent, in business administration programs. However, design thinking has been successfully demonstrated in educational settings other than higher education, including K-12, often to stunning effect. This suggests wider applicability is feasible, but it is still curiously limited to date. Previous calls by rural development scholars for a rural renaissance have implicitly appealed to a way of thinking that comports with design thinking.

Design Thinking vis-à-vis Wicked Problems and Innovation

Although design thinking may—or may not—be the framework needed to address ALL wicked problems, it does make immeasurable sense in many cases, including in the case when a rural renaissance is cast as a wicked problem. Batie (2008) makes the case that wicked problems are becoming more prevalent and prominent, that other disciplines are finding ways to tackle such problems, and that applied economics—as a field that exists to inform decision-making—risks irrelevancy if it fails to bring its insights to this multidisciplinary table. Batie (2008) goes on to place wicked problems within the juxtaposition of normal and post-normal science: in contrast to objective truth (read "normal science"), "wicked problems always occur in a social context…with no unique 'correct' view" where "identification of solutions becomes as much a social and political process as it is a scientific endeavor." Engagement, which is deemed essential in post-normal science, has no precursor in normal science. However, design thinking involves more than engagement and should not be thought of as simply an extension of post-normal science. Post-normal science does not specifically include the step of envisioning a better future and the innovative thinking associated with "learning by building" or "learning by making." In essence, design thinking needs to be thought of as complementing both the science and post-science cultures with a third culture that is much more likely to lead to innovation and inroads in resolving wicked problems.

The act of creating something that did not exist reveals the very nature of most any design problem, including a rural renaissance. Prototypes point to aspects of the problem that were unknown or poorly understood. There is likely to be disagreement over the requisite and desired capabilities, purposes, and uses of the newly created thing. The purported "finalized" design may substantively alter the stakeholders' interests and desires. Since designers have been struggling with these problems for centuries it would follow that they may have developed some protocols that are useful to a variety of fields, including applied economics, that need to come together to focus on rural and regional innovation. Learning by building provides a means for exploring the "adjacent possible." The "adjacent possible" is a key concept best described as "a kind of shadow future, hovering on the edges of the present state of things, a map of all the ways in which the present can reinvent itself." (Johnson, 2010.) Whether referring to the chemical and biological evolution surrounding the origins of life as originally conceived by Stuart Kauffman, or referring to technological or cultural innovation, exploring the adjacent possible is the source of all innovation. Exploration requires divergent thinking or consideration of alternatives that currently do not exist. This contrasts with the default mode of convergent thinking or the selection of the best available option. If universities are to produce literate innovators who break out of the default mode of thinking to explore the adjacent possible, then these methods must be far more widely taught, not merely used by design students.

Design Thinking vis-à-vis a Rural Renaissance

The two most dominant ways of thinking within the university begin from a grounding in either the natural world (scientific thinking) or

human experience (humanistic thinking). In the modern university, each has its own set of norms and values. The primary values in the sciences are "objectivity, rationality, neutrality, and a concern for 'truth'" and in the humanities "subjectivity, imagination, commitment, and a concern for 'justice.'" (Cross, 2006.)

Rural development practice has a much closer affinity to the primary values of design: "practicality, ingenuity, empathy, and a concern for 'appropriateness'" (Cross, 2006.) Indeed, these very elements are embedded or implied in the following statement by Pulver (1997, pp. 111-112), arguably rural development's most celebrated scholar:

"[R]ural policy must exhibit five critical characteristics. *Targeted*… properly address unique concerns found in diverse rural situations… *Flexible*... accomodat[ing] continuing changes in production technology and national and global economic structures …*Accountable*… produc[ing] real results with no overlap or fiscal waste…*Sustainable*… provid[ing] a positive rate of change in the quality of life of both rural and urban people…to be maintained indefinitely…[and] *Politically supportable*…fit[ted] within the framework of a set of broad national, state or local goals (Castle, 1993)."

When aligned against the deepest crises of our nation's most challenged rural areas, these tasks appear nearly impossible. These challenges include the tension between developing enhanced human and social capital, while simultaneously slowing or reversing depopulation; investing in the critical infrastructure necessary for increasing economic opportunity but which is inert as a stand-alone for promoting development; and maintaining a critical mass for the efficient provision of public services despite the concentration of sectors characterized by rapid labor-saving productivity increases. An honest assessment of these compounding challenges makes it clear there are no silver bullets and no universal paths to progress. Instead, the rich diversity of rural contexts and regional aspirations suggest a multifaceted array of design problems best suited to practitioners operating in specific, particular locales.

Herbert Simon's (1969) simple definition of design—devising courses of action aimed at changing current situations into preferred ones—evidences that rural development scholars have struggled tirelessly with a design problem.

Design Thinking in Rural Practice

One of the most concrete demonstrations of design thinking transforming both educational experience and community action needed for a rural renaissance comes from the poorest county in North Carolina (Pilloton, 2012). Bertie County, in the eastern part of the state, has a dispersed population of 20,000 and more buildings vacant or in disrepair than in use on the county seat's main street. Yet a strategy to align education experience and community action to improve a struggling public education system incorporated numerous design perspectives. Design for education focused specifically on improving the learning environment within the school grounds. Design as education reinvented the traditional shop class, enabling students to learn design thinking along with construction and fabrication, skills to satisfy a real community need.

A shop class became the equivalent of a design studio and was set up as a one-year curriculum for high school juniors. Fall and spring semesters were spent applying the three pillars of design thinking to a particular problem. This included ethnographic research and need finding exercises to develop students' abilities for looking and listening better, brainstorming and design visualization methods for analyzing the problem, and prototyping for envisioning the possibilities of the proposed structure. Students were offered jobs in the summer as part of the construction crew that would bring their design to fruition. Projects completed or proposed include an open-air farmers market, bus shelters for the school system, and home improvements for the elderly.

Design proved to be an inspired vehicle for education and design-imbued education, in turn, proved to be an inspired vehicle for community development. Most fundamentally, the process resulted in progress that was real and visible. And while "small wins" may be seen as crucial for sustaining momentum of an effort over time, the small win here was foundational: instilling a sense of self-efficacy in the community that now recognized youth as the critical resource for imagining a better future.

Design Thinking in Rural Innovation

The Bertie County enterprise married design-infused learning experiences and community action to enrich and enhance both. We are not suggesting this one example offers universal applicability of any kind. But an example such as this offers insight regarding the university's adjacent possible. University initiatives such as Minnesota's Center for Rural Design and Auburn's Rural Studio provide concrete examples of design thinking applied to rural problems in the built environment. Engagement, problem-solving, and knowledge creation by these initiatives illuminate how design thinking might be explicitly incorporated into a rural and regional innovation venue.

In fact, we would argue that some of the most innovative adjacent possible thinking, acting, and evaluating are occurring within the space historically known as rural development, now more commonly referred to as rural and regional innovation. This

innovation, while much more difficult in a rural setting, is also more necessary and, therefore, more aspirational, generative, and exploratory than analogues in an urban setting.

For example, place-based, asset-based, and arts and culture centered innovations are flourishing across today's rural landscape, as is growing interest in new ways of thinking about entrepreneurship development. New considerations of security, resiliency, and equity within these frameworks are forging new approaches to our understanding and assessment methods regarding rural and regional wealth and prosperity. This is what defines the practice of rural and regional innovation. Innovation is not merely about technology; rather, it is about a change in human behavior.

Mainstreaming the principles of design thinking in university education does not necessitate the building or making of physical things. The "things" of interest are not farmers markets or bus shelters but constructs, ideas, potentialities, or emergent phenomena. This means the cultural shift of applying design thinking in a more deliberate fashion to rural and regional innovation will require new tools for learning by building. The tools of "generative social science" represent such an approach of linking design thinking to the array of possibilities associated with a rural renaissance, especially in the digital age. Such tools are often dismissed by "normal science" as too subjective to provide reliable predictions (Epstein, 2006). But that misses the point in that the goal is not prediction but a deeper understanding.

When design thinking is combined with generative social science it becomes much easier to open up and integrate the traditional social science silos and also link them to other areas of study. The ability for rapid prototyping encourages consideration of alternatives, does not privilege one alternative over others, and thus provides a powerful tool for interdisciplinary learning by building. This prescription will not seem radical to current and future students who become interested in learning about rural and regional innovation because they are likely to be adherents of *Minecraft, Simcity* or other role-playing or simulation digital games. For this generation of students, the proposition is quite simple. For example, if you want to understand the economy or a "new rural," build it!

The Missing Legacy: Innovation

Innovation is not merely about technology. It is about a change in human behavior. As policymakers and rural development practitioners have embraced regional innovation as a central component of their work, the field is mirroring the innovative systems thinking that also needs to become reflected in the university's engagement with this wicked problem.

The historical terms of reference of the university—to expand scientific knowledge and humanistic understanding—do not present a very hospitable environment for assimilating design thinking. But to remain relevant in the 21st century those terms may need to be expanded to include tackling society's wicked problems and producing graduates with the skills needed for exploring the adjacent possible. And, university-based rural development scholars, especially extension personnel, have a demonstrated affinity for this mode of thinking. After all, the pragmatic terms of reference of Cooperative Extension—to aid constituents in finding solutions to local problems—have reinforced practices that comport with design thinking.

Community assessment, community economic analysis, strategic planning, and community visioning have their parallels in the three pillars of design thinking. The cross-fertilization of ideas from fields that emphasize the processes of origination, such as architecture and industrial design, has already begun (Thorbeck, 2012). The wicked problem of fostering a rural renaissance can provide an enviable proof of concept for the broader application of design thinking within higher education. And the quip that "rural innovation" is an oxymoron bolsters the demonstration: if the university can help promote innovation there, it can surely help promote innovation anywhere. But an even more difficult challenge may be the willingness of higher education to first engage in its own institutional innovation. Failure to do so means we are now 18 years closer to the Jurassic Park scenario envisioned by the Kellogg President's Commission in 1996.

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Extension Reconsidered

Scott J. Peters

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A few decades ago, Ernest Boyer (1990) argued that the dominant view of scholarship—original "discovery" research that is published in peer-reviewed academic journals—was too narrow. He believed that there were good reasons why we should reconsider it, particularly in relation to the challenge of improving higher education's contributions to the work of understanding and addressing a host of urgent public problems. To communicate his argument and ideas, he wrote a book he titled *Scholarship Reconsidered*.

Following Boyer's lead, in this article I argue that that the dominant view of extension—the dissemination, application, and transfer of scientific information and technologies for economic ends—is too narrow. We need to reconsider it, and the time is ripe for doing so. May 8, 2014, marks the centennial of the Smith-Lever Act, which institutionalized and provided permanent government funding for what became known as "agricultural" or "cooperative" extension. The word "cooperative" signals extension's organizational structure as a formal partnership between the U.S. Department of Agriculture (USDA), land-grant colleges and universities, and state and county governments.

Since it was created, extension has grown into a large and highly complex organization—or more accurately, a set of loosely coupled organizations. It is administered separately in each state by land-grant institutions, usually by a faculty member who is appointed as director. Its budget in fiscal year 2013 is almost $2 billion. This figure includes over $450 million from the federal government, over $650 million from state governments, over $400 million from county governments, and more than $450 million from other sources. It has a staff of over 2,000 campus-based academic professionals and more than 8,000 community-based educators who work at approximately 2,900 county and regional offices. (Data provided by the Cooperative Extension Measuring Excellence in Extension Implementation Team, Joe Zublena, Chair, North Carolina State University, November 20, 2013, based on reports from 37 institutions that obtained land-grant university status in 1862.)

The official description of extension on USDA's website says that extension staff pursue work in the following six areas: 4-H Youth Development; Agriculture; Leadership Development; Natural Resources; Family and Consumer Sciences; and Community and Economic Development. Despite this broad range and scope of work, many people hold a narrow and, in my judgment, overly instrumental view not only of what extension has been, is, and should be, but also of what it's for and why it matters. Consequently, as we make decisions about its future at a critical moment in history, we're at risk of missing extension's wider meaning, significance, and promise.

It's not the first time this has been so. And it's not the first time that people have argued for the need to reconsider extension. A little history will help put the present moment into perspective.

Reconsideration in the 1980s

In 1981, the General Accounting Office (GAO) released a report titled "Cooperative Extension Service's Mission and Federal Role Need Congressional Clarification." There were two main motivations for drafting the report: ideological views about the "proper" role and size of the federal government, and complaints from agricultural interest

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groups that extension had drifted away from its original mission and purpose. The report described extension's original purpose as "providing farmers with information from agricultural research and to encourage them to adopt improved farming methods [that contribute] to the growth in productivity and efficiency of U.S. agriculture." In their conclusion, the authors of the GAO report used a mildly scolding tone of voice that reinforced critics' claims of mission drift. And they implied that the federal government would not provide funding for anything that ranged beyond a narrow view of extension's original focus and purpose. "In contrast to its original focus on agriculture and home economics programs in primarily rural areas," they wrote,

> the Cooperative Extension Service has expanded and is now active in rural, urban, and suburban communities and offers programs in social and economic problems and cultural, recreational, and leisure-time activities. Program changes, many of which have come about in the last 20 years, have resulted in differing opinions among the Extension Service's clientele, and even within the Extension Service itself, about the scope of the Extension Service's mission. GAO believes the Cooperative Extension Service's mission needs to be reviewed and clarified, particularly in the current atmosphere of budget tightening (GAO, 1981, p. IV).

Partly in response to the GAO report, Paul Warner and James Christenson, two rural sociologists who were then based at the University of Kentucky, conducted a comprehensive national assessment of extension. Published in 1984, their study centered on the question of what extension's role should be in the "information society of the 21st century." In their concluding chapter, the authors asked the following question: "Can an organization conceived in 1914 as a way to get farmers to adopt improved agricultural practices continue to be relevant when it celebrates its 100th birthday?" They wrote that, in their view, it could not. But, perhaps, they suggested, part of the problem of imagining extension's future is tied to a problem with how people imagine its origins and early history. Responding to critics who were calling for extension "to return to its original purpose of serving farmers," and to people who disapproved of the expanded mission and clientele the GAO report had described, Warner and Christenson (1984, p. 126) wrote:

> Society, including agriculture, has changed, and one cannot merely "turn back the clock" to the agency's early days. Furthermore, it could be argued that Extension's early history was not at all as it is now being portrayed. Extension played a key role in improving agricultural production, but it also stressed improved utilization of resources within the family, personal development, improved quality of life, and the improvement of the total community . . .

Rather than merely speculating about what "could be argued" about extension's early history, I want to actually make an argument. The way extension's early history has been and is most frequently portrayed—not only in various literatures but also and, more importantly, in daily institutional discourse—is too narrow and instrumental. All too often people express what I would call a comic-book version of extension's history. A history that is overly simplistic and celebratory, without any sense of ambiguity, contradiction, or failure. A history that leaves a lot out. And what it leaves out matters. It has led us to miss extension's wider cultural and civic meaning, significance, and promise—inspiring as well as troubling, and relevant not just in some distant past, but in the present as well.

I'm not just expressing my opinion. I'm offering my judgment as a scholar. I'm reporting a finding from my research.

Drawn from discoveries I've made in my historical research, I turn now to earlier reconsiderations of extension. They show how some women and men during the first 50 years of extension's existence articulated broad views of what extension is, what it's for, and why it matters, in ways that pushed back against dominant narrow, instrumental perspectives.

Earlier Reconsiderations

In 1927, the Association of Land-Grant Colleges and Universities asked the Federal Office of Education, then located in the Department of the Interior, to conduct a survey of land-grant colleges and universities. The U.S. Government Printing Office published the results of the survey in 1930 in two large volumes totaling almost 2,000 pages (Klein, 1930). In his letter of transmittal, Commissioner of Education William John Cooper noted the growth in importance of land-grant colleges as "vital factors in the agricultural, industrial, and educational progress of the Nation." But he wrote that the transformation of the nation during the time since land-grant institutions were established had made it necessary "to make a critical study of the achievements of these schools and to reappraise on a scientific basis their objectives and functions."

Extension received such a reappraisal in a section titled "Extension Services" that was included in the second volume of the survey. The following passage appears near the beginning of this section:

> The Smith-Lever Act in establishing cooperative agricultural extension work emphasized the vocational training of farm people by stating that its purpose was "to aid in diffusing among the people of the United States *useful* and *practical* information on subjects relating to agriculture and home economics and to encourage

the application of the same." Obviously the basis of argument used by those who urged the passage of this Federal act was largely that of the great need of increasing the earning capacity of farmers through more efficient production and distribution of their products. This was the economic motive.

Accompanying this appeal, and usually used to strengthen it, was the underlying reason for desiring greater economic returns, namely, the need of changing the "standards of rural living" by providing those essentials of physical and mental satisfactions that make for richer life.

In other words, the ultimate objective was not more and better food, clothing, and housing. These were merely means and conditions prerequisite to improvement of human relationships, of intellectual and spiritual outlook. Apparent preoccupation with economic interests must be interpreted in terms of the purposes that material welfare is intended to serve. (Klein, 1930, p. 440)

Two pages later, this passage appears:

Broad viewpoints concerning Smith-Lever extension need special emphasis because of the practical nature of the educational "services" rendered the historical development and growth of the system, and the character of educational training and experience of many of the staff who have manned the various State extension organizations. The close relation of extension projects to the many agencies shaping the life and habits of rural people and the pressures resulting from some of these relationships make necessary adherence to sound and definite ideals, to long-time objectives, and to procedures determined by such ideals and objectives. *The fundamental function of Smith-Lever extension education is the development of rural people themselves.* This is accomplished by fostering attitudes of mind and capacities that will enable them better to meet the individual and civic problems with which they are confronted. Unless economic attainment and independence are regarded chiefly as means for advancing the social and cultural life of those living in the open country, the most important purpose of extension education will not be achieved. (p. 442)

Before I interpret and comment on what we see in these two passages, I want to show passages from five other works published during the same general time period. Read together, they reveal key elements of a remarkably consistent argument.

The first passage is from an article published in 1922 by M.C. Burritt, who served as director of extension at Cornell University from 1916-1924:

Extension work in agriculture is a social and welfare movement. It is based on the idea that we are here founding a democracy; and democracy is not a form of government, but the expression of the souls of men and women….Extension work is not intended primarily to make better crops and animals, but better men and women (Burritt, 1922).

The second passage is the opening paragraph from a book entitled *The Agricultural Extension System*, authored by two national extension leaders and published during the same year the Federal Office of Education's survey was published:

There is a new leaven at work in rural America. It is stimulating to better endeavor in farming and home making, bringing rural people together in groups for social intercourse and study, solving community and neighborhood problems, fostering better relations and common endeavor between town and country, bringing recreation, debate, pageantry, the drama and art into the rural community, developing cooperation and enriching the life and broadening the vision of rural men and women. This new leaven is the cooperative extension work of the state agricultural colleges and the federal Department of Agriculture, which is being carried on in cooperation with the counties and rural people throughout the United States (Smith and Wilson, 1930, p. 1).

The third passage is drawn from an article by R.J. Baldwin, director of extension in Michigan that was published in 1934 in extension's national journal, the *Extension Service Review*:

The program of extension work in agriculture and home economics for 20 years has been based on the policy of personal participation on the part of farm people in the analysis of economic, social, and other problems, and in the carrying out of the solutions of them. Through these experiences they have discovered and developed their own capacities for learning and leadership. Studying, thinking and acting together has stimulated growth, nourished initiative and inspired self-dependence. Out of their achievements in farm, home, community, State, and national programs have come much confidence, courage, and understanding. This development of people themselves, through their own efforts, I believe is the Extension Service's most valuable contribution to society (Baldwin, 1934, pp. 89, 95).

The fourth passage comes from a speech C.B. Smith, who served as chief of the Office of Extension Work at USDA during the 1920s and 30s, delivered at the University of Minnesota in 1939:

Probably the biggest thing that adult Agricultural Extension and 4-H club work are doing for individuals and the Nation is not so much the growing of better crops or the rearing of better livestock or the making of better kitchens, but rather the giving of actual experience in the practice of democracy. And it has done so not by telling people about democracy or preaching about it, but by actually practicing democracy in all phases of its work and developing

its Extension program down to the smallest community and individual farm through democratic processes. And this practice of democracy in Extension since 1914 has come about because democratic processes from the outset were in the minds and hearts of those State and Federal officers administering the law and native to them (Smith, 1939, p. 2).

The final passage comes from *The People's Colleges*, Ruby Green Smith's history of Cornell University's extension work that was originally published in 1949, and republished in a new edition in 2013:

Extension workers need to have faith in spiritual values and to recognize the human relationships that contribute to what the ancient Greeks called 'the good life.' They should believe that in the kind of homes, farms, and industries which are the goals of extension service 'man cannot live by bread alone'; that it is not enough for people to have food, shelter, and clothing—that they aspire also to find appreciation, respect for individuality and human dignity, affection, ideals, and opportunities. These are the satisfactions that belong to democratic living. (Smith, 1949/2013, p. 544)

Wider Meaning, Significance, and Promise

In my judgment, these voices and passages are not just historical curiosities. They express enduring ideals and truths that should inform and inspire efforts to reconsider extension at the moment of its centennial. As previously mentioned, they also reveal elements of a strikingly consistent argument. In essence, the argument goes like this:

You might think that extension is a mechanism for the diffusion and application of information, methods, and technologies for economic or material ends. It is partly that. But not only, and not mainly. It's also—and most importantly—a leaven that stimulates and organizes the pursuit and practice of cultural and civic values, ideals and ends, including democracy. Not democracy as a form of government, but democracy as a way of life, as something ordinary people do in everyday places. Therefore, the most important measure to use in assessing and considering the meaning, significance, and promise of extension work isn't statistical or numerical, expressed in dollars and cents or bushels or pounds. It's intangible and non-numerical, expressed in living demonstrations of leadership and growth, and in the many satisfactions that belong to democratic living: appreciation, respect for individuality and human dignity, affection, ideals, and opportunities.

I want to stress two things about this argument.

First, it's not an oppositional either-or or zero-sum argument. It's a both-and argument. The meaning, significance, and promise of extension isn't just economic and material. And it isn't just cultural or civic. It's all of these. But while it isn't either-or, it's grounded in a judgment about what is most important. As stated in the 1930 survey, the "most important purpose of extension education" is the development of people, the fostering of "attitudes of mind and capacities that will enable them better to meet the individual and civic problems with which they are confronted."

Second, while parts of the passages I've quoted read like reports of actual achievements, it would be naïve for us to view them as such. To do so would be to succumb to a different kind of comic-book history than the dominant one that only includes and focuses on material and economic ends. Instead, we must read and interpret these passages as expressions of aspirations that were (and are) only partially and imperfectly pursued and fulfilled. Here, I want to bring in the voice of an early extension home economics leader from Illinois, Kathryn Van Aken Burns. At the annual conference of the Association of Land-Grant Colleges and Universities in 1937, Burns (1937, p. 51) said:

The development and growth of home economics in the agricultural colleges brought to them an idealism and a cultural element not always recognized, as well as a new measuring stick. Heretofore, results had been largely in terms of livestock or crops; hereafter, the measure of successful agriculture was the kind of life produced. In spite of much fulsome oratory on the part of agriculture that successful living was its aim, the aim seems to have been such a remote one that provisions for bringing it about were pretty much lost sight of in carrying out the immediate objectives for improved agricultural practices.

Reading these comments, we can begin to imagine the challenge of actually living out aspirational ideals. And we can begin to see why the authors of the 1930 surveymade a point of mentioning the "pressures" extension and rural people felt from various forces and agencies—pressures that "make necessary adherence to sound and definite ideals, to long-time objectives, and to procedures determined by such ideals and objectives."

The Work of Reconsidering Extension

I want to conclude by asking how, in the context of its centennial moment, we should understand and approach the work of reconsidering extension. In my view, there are two related answers to this question.

First, we need to see and approach it as research. Not just research that is aimed at measuring impacts and outcomes, involving the establishment of relationships between variables. But also ethnographic, historical, and narrative research and inquiry that is aimed at moving us beyond comic-book depictions of extension's history—and just as importantly, contemporary practice and experience—to a more nuanced, critical,

and trustworthy understanding of extension's civic and cultural practices, impacts, meaning, significance, and promise. This has been the focus of much of my own work (e.g., Peters et al., 2005; Peters, 2006; Peters et al., 2006; Peters, Alter, and Schwartzbach, 2008; Peters, 2008; Peters, 2010; Peters, 2013a; Peters, 2013b).

Second, we need to see and approach it as deliberative choice work that engages people in weighing trade–offs between alternative courses of action (Nabatchi et al., 2012; Mathews, 2014). Such work can include public discussion of several key questions:

- What are, what have been, and what should be extension's purposes?
- What is and what has been its public value and impact?
- How and why does it matter?
- What should it do—and not do—in its second century?

There are no single, correct answers to these questions. That's because they're not about simple matters that can be definitively answered with uncontested empirical facts. Rather, they're about complicated matters about which people have reason to disagree—matters that are normative as well as empirical, with cultural and political as well as technical dimensions.

Both of the approaches I've just outlined cut against current trends and realities in extension, in higher education, and in our larger society. Qualitative research is vastly overshadowed by quantitative. Public deliberation is overshadowed by public relations, protest, and ideological posturing. A critical yet hopeful and energizing idealism is overshadowed by a pessimistic and de-energizing cynicism. And a democratic-spirited consideration of common and public interests is overshadowed by a narrow-minded pursuit of economic self-interests.

We must not let all this discourage us from taking up what can be deeply rewarding, rejuvenating, and inspiring work. We owe the women and men who came before us the effort. And we owe it to the coming generations. It is our responsibility to carry forward into its second century a flexible and dynamic organization that not only adapts its work to address the challenges of changing times, but also recommits to a broad, rather than narrow, purpose—adhering, in the words of the 1930 survey, to sound and definite ideals, to long-time objectives, and to procedures determined by such ideals and objectives.

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Opportunities for Rural Development in Cooperative Extension's Second Century

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The Importance of Rural Places in America's Future

It is well-known that the United States has moved towards a service-oriented economy in recent decades. Less widely known is that the value of goods exported far exceeds the value of exported services. The nation's trade balance, therefore, heavily depends on our ability to produce goods for the international market. Historically, our comparative advantage in production of goods tended to be our vast per capita land-based resources compared to most other developed economies, our technology, our institutions, and our relatively uncorrupted market system of governance. While the goods sector produces exports from cities, rural areas still provide opportunities in the form of food and natural resource-based goods. For example, natural gas has revived the U.S. energy sector in recent years, and may lead to exports, either in the form of liquefied gas or lower-cost goods made through processes powered by natural gas.

Another future export growth opportunity is in food production. Current world population projections, together with stagnating crop yields and uncertainty about climate, raise questions about the ability of the planet to feed itself in the future. The nation's future potential for exports depends in large measure on our ability to efficiently and flexibly connect rural areas to international markets. The rural America of the future will need to muster sophisticated responses to changing market requirements.

The creation of cooperative extension 100 years ago played a prominent role in the development and growth of our nation by providing knowledge and skills developed at universities to workers in the goods industries. As was true 100 years ago, extension can play a vital role in helping rural America meet today's challenges.

Extension's Roles in Meeting Challenges for Rural America

To succeed in this challenging future, America needs skilled workers who choose to live in rural places. Increasingly, many rural places struggle to offer basic services as well as other amenities typically valued by skilled workers. Among these are viable career opportunities, amenities to promote healthy lifestyles, strong educational systems, and solid infrastructure including broadband Internet (Banchero, 2014). The rural challenges in delivering the kinds of goods and services required by skilled workers are great. Extension could play key roles in addressing eight priority issues for a strong rural America. While our focus is on the extension system, viable investments in extension must be supported through complementary investments and activities in the Agricultural Experiment Station system.

1. **Streamline Local Governance.** Rural America suffers because local governments often lack economies of scale to produce expertise consistent with the demands of society. New government delivery mechanisms to lower costs or improve services at the same cost will help maintain our ability to compete internationally. Extension investments in local government education and applied research can facilitate the modernization of government service delivery through better metrics and innovative methods to capture economies of scale while maintaining local control. New approaches to understanding community needs could complement these

efforts through crowd-sourcing and by engaging citizens in meaningful dialog via a wide range of opportunities including the use of new communications tools. Nationally, extension has over 150 professionals who participate in a loose network of local government educators (www.LGET.org). Strengthening the network for needs identification and curriculum development through targeted investments in national or regional coordination could unleash the power of this group.

2. **Balance Labor Supply and Demand in Agriculture.** The days of cheap, imported labor may be ending (Carpenter, 2013; and Martin and Jackson-Smith, 2013). In Michigan, much of a bumper fruit crop in 2013 was left in the field despite unemployment in the 8% range (Jackson, 2013). In the short run, extension can help to alleviate spot labor shortages by working harder to match labor with need through matching services in a manner similar to what MarketMaker (http://national.marketmaker.uiuc.edu/) does for agricultural production. MarketMaker has already started to take steps to reprogram its website to help match farmers and workers (North Central Regional Center for Rural Development, 2012, p. 9). It would be relatively simple to accelerate that process and expand the service to the whole country. In the longer term, extension investments in teaching farmers how to implement increasingly automated operations is essential for continued productivity improvements. The extension investments in automation have to be preceded by experiment station work to develop varieties and practices appropriate to automation, and affordable, effective machines to do the work. If land-grant university investments in agricultural automation lag, extension can connect to non-land-grant institutions, such as Carnegie-Mellon, where work on mechanization of labor-intensive cropping techniques is pushing forward (Fletcher, 2012). Another efficiency role for extension might be to identify the substantial spoilage losses within the food system (Buzby and Hyman, 2012) and educate people along the line from farmers to businesses to consumers in ways to reduce losses.

3. **Improve Stewardship of Natural Resources.** One of the strengths of rural areas is their close proximity to abundant natural resources. However, a strong rural America requires attention to the environment to protect and maintain this asset. Extension's skills in leadership development and conflict resolution, along with its ability to transmit information about practices to sustain our environment, are critical to preserving rural areas as attractive places to live. Extension's neutral role as a knowledgeable non-enforcer can be critical in communicating with land owners and businesses about how to best manage existing resources and how to reclaim areas if remediation is needed. Stewardship of natural resources also means spreading high quality communications technologies throughout rural areas so that electrons can reduce or replace the physical movement of people and goods. Extension can help by teaching people how to use the technologies and also how to organize their own service delivery districts when no existing provider is available.

4. **Revitalize Rural Education.** Changes in education may present the toughest challenges facing our rural areas. The pressures on rural schools are tremendous. Where population decline combines with fewer children per household, school consolidation usually follows. School consolidations, in turn, lead to longer student commutes, encouraging parents to opt out of the system. As a result, rural home schooling is on the rise (Price, 2012). A weakening tax base threatens local school funding and declining enrollments cause state payments to shrink. Parents who might have advocated for the system are instead busy home-schooling. While much can be done with technology in a home school environment, it cannot replicate the socialization process of education occurring side-by-side with other students who may come from different backgrounds. Furthermore, a home schooling system may perpetuate parents' shortcomings, cascading down to subsequent generations (Green-Hennessy, 2014). A future with a highly fragmented and possibly dysfunctional system looms. Extension's club-based youth development system may be able to bridge the gap between small, isolated school environments (home school or public school) by creating intensive co-learning situations that expose children to age-appropriate career and socialization experiences. Rural schools also face serious difficulty in attracting and keeping talented teachers. Strategies similar to those noted above about streamlining local governments may have parallel applications to small, rural schools. Likewise, providing training, support, and networking opportunities for rural teachers through distance education networks offered by extension may draw more interest to rural teaching positions from both within and from outside the community. Finally, extension's full repertoire of resources to train and support parents to work effectively with their children at home and in support of the school system can be

deployed more extensively to rural areas to seal the gaps between home and school partnerships.

5. **Revive Interest in Outdoor Recreation.** Nationwide, we are becoming detached from skill sets and even the physical fitness needed to enjoy the great outdoors. As we lose these skills, the attractiveness of rural areas as places to live and work also declines. The outdoors becomes something to fear rather than an amenity to enjoy, and urbanized people may resist job moves that require relocation to rural America. The national labor market will be less efficient if well-paying jobs located in rural areas go unfilled. A classic example of this mismatch is in health care; rural areas have struggled for some time to find enough practitioners willing to operate out of small towns. A less well-known example is in veterinary medicine, where a rural shortage in some states co-exists with an urban or suburban oversupply (Jacob, 2012). Extension can work to overcome the lack of familiarity with outdoor activities through educational programs designed to reskill urban populations in outdoor pastimes and through urban-to-rural-host matching programs much like the national and international exchange programs it now operates in many states. As the interest in visiting rural places is rekindled, extension is ready to help agricultural establishments learn how to build and market agritourism opportunities. This relatively new type of tourism might help reestablish rural-urban connections.

6. **Improve Health Outcomes.** Some areas of the United States are experiencing serious declines in life expectancy, and rural places are disproportionately represented on the list of losers (Marema and Poynter, 2013). Extension is well positioned to deliver community health assessment programs to help local leaders identify the problem areas (which could be quite different from one location to the next), and facilitate dialog to identify priority areas for improvement. This should be conducted on an ongoing basis based on routinely updated health metrics. Extension personnel are already engaged in community health programs through the family and consumer sciences program area. Small amounts of additional funding can help organize them nationally in partnership with other land-grant health professionals, as shown in the recent U.S. Department of Health and Human Services-funded project led by the Regional Rural Development Centers that is engaging 18 land-grants (team web site: http://healthbench.info/team.html; and pilot community web site: http://healthbench.info/communities.html). Additionally, extension plays an important disease prevention role by promoting healthy cooking and eating practices, encouraging fitness and exercise, and helping individuals understand the importance of monitoring and controlling key health metrics such as body mass, blood pressure, and cholesterol. In the absence of health care professional services, these prevention practices are even more crucial to community viability.

7. **Foster Greater Rural Entrepreneurship.** When family farms were the predominant employer in rural America, most residents were either entrepreneurs or related to an entrepreneur. This is no longer the case. The government sector, including healthcare and social assistance, has displaced the private sector as the major employer in many rural counties, and retailing—often through chain stores—now employs more workers than any other private sector (Goetz, Loveridge, and Albrecht, 2013). Entrepreneurial skills that formerly came naturally to residents through farm life and exposure by family members now must be learned in other ways. The road to economic growth through entrepreneurship is a long one. Many of the seeds planted today will die, and those that thrive may not sprout a major employer for many years. But the odds of gaining a vibrant new business only increase when people are exposed to entrepreneurship. Extension already has in place a number of programs aimed at helping youth gain entrepreneurial skills, increasing the success rate of food entrepreneurs, and fostering greater entrepreneurship in communities. These programs can be expanded into more regions through creative, forward-thinking partnerships with schools, state governments, and local leaders. The advent of 3D printing has the potential to offer vast and as yet unknown opportunities for rural entrepreneurs. Additionally, the growth of broadband availability that is beginning to spread to rural areas opens the door even wider to rural entrepreneurial success. Yet training rural innovators to use the newly available technologies effectively is key, and extension can fill that gap.

8. **Reconcile Old Differences.** Many current rural residents are descendants of farmers who settled the land generations ago. The injustices of past generations against members of the community are often remembered by the current generation, resulting in distrust, and shape the actions of the players in ways that are detrimental to progress (Robison and Ritchie, 2010). One of the authors once worked with a town of 200 residents and four

churches—all serving people of the same ethnic background and denomination. Schisms within the town had caused the people to divide their limited resources. Another example comes from farmland sale research, which reveals multiple prices, depending on whether or not the seller and buyer hold a family grudge (Robison, Myers, and Siles, 2002). It is more difficult for markets to perform their magic in environments fraught with conflict. Extension programs in facilitation and conflict resolution can help residents overcome past differences to move forward towards a brighter common future. Similar skill-sets can be applied to assure that new arrivals don't fall into the old traps of mutual dislike and distrust or to bridge ethnic differences that arose from long-abandoned state or federal policies.

The Way Forward

Rural America is evolving. While its history and culture are interesting and rich, it is not a museum. It is a work in progress and extension is positioned to be a key player in forging a dynamic, productive, and exciting future for this critical and oft-forgotten part of our country. To meet the challenges with limited resources, extension must reinvent how it interacts with stakeholders. Extension must meet learners in the spaces where they now congregate. One hundred years ago, it was the county fair. Now it must expand to include a tablet or some other online form. However, like the county fair experience of 100 years ago, a chance meeting in a connecting space is not enough; the follow-up must engage learners in behavioral change that visibly improves their lives. More extension programs need to adopt outcome-based metrics for self-assessment. An example of the type of metrics all extension programs could be considering can be found with Extension Community Development programs in the North Central Region (http://ncrcrd.msu.edu/ncrcrd/state_extension_leader_section1). By adopting outcome-based measures, extension can learn where it is most effective in addressing rural problems and concentrate resources into those areas while also identifying new areas for development and improvement. A national study team could help surface more ways in which extension is already innovating at the state and local levels so that emerging best practices could be disseminated rapidly throughout the national system.

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The New Rural-Urban Interface: Lessons for Higher Education

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Americans—taxpayers, politicians, and policy makers—have an urban-centric world view. Big cities and suburbs are where most of us live and work. Urban issues and interests understandably dominate our everyday discussions; they also define America's problems and policy solutions. Urban America is where culture is shaped and reshaped by politics, media, and money, where new jobs and technology are incubated, and where big ideas start and flourish. Rural Americans—all 46 million of them—are often left on the sidelines, presumably waiting to develop, prosper, and join the American mainstream.

For many rural Americans, waiting for rural development is no longer an option. Between 2010 and 2012 alone, 179,000 people on balance left America's rural areas (also referred to as nonmetro areas), escaping the perceived cultural and economic disadvantages of rural and small-town life. Rural natural increase (births minus deaths) no longer fully offsets population losses from net out-migration. As a result, for the first time ever, nonmetro areas overall are now experiencing population declines. In fact, according to the Economic Research Service at the U.S. Department of Agriculture (USDA) depopulation characterized 1,261 (or 64 percent) of all nonmetro counties for the 2010 to 2012 period, a fact that reflects chronic out-migration of young people (of reproductive ages) and rapid population aging. Rural natural decrease—deaths exceeding births—is the new demographic norm.

How can some parts of rural America avert a slow demographic death? This question seems hardly a priority for most Americans living in big cities and suburbs; they often know little or nothing about day-to-day life in small towns or in the countryside. Yet, we contend that *all* Americans have a large and growing stake in the demographic and economic vitality of rural people and places. At a minimum, we cannot forget that urban Americans depend on rural America for food and fiber, natural resources (for energy), recreation and entertainment, and much more. The fact that nonmetro counties today make up 72% of America's land area also demands good stewardship. Rural America requires our attention, perhaps as never before.

The paradox is that rural and urban America are highly interconnected and embedded in a rapidly globalizing world. The rural-urban interface has been given new meaning and shape by the increasing back and forth flows of capital, labor, population, information and ideas, and material goods. The "new" rural America is marked by accelerated spatial interdependence—a rapid blurring of traditional rural-urban spatial and symbolic boundaries. We contend that a simple binary view of urban vs. rural represents a conceptual and empirical roadblock to addressing underdevelopment, yet it is a view that is endemic to higher education and the land grant university system. As Shaeffer, Loveridge, and Weiler (2014) argue in their introduction to a special issue of *Economic Development Quarterly* on the rural-urban interface, rural and urban are "complementary parts" of a nation's settlement system, and "familiarity with only one of them limits understanding of the whole." Viewing "rural" and "urban" as competing rather than complementary sectors obscures fundamental spatial interrelationships that often drive rural economic development. The rural-urban interface is a zone of interdependence, not a clear boundary that neatly separates rural from urban people and places.

Our main point is straightforward: Rural and urban issues are flipsides of the same coin, in research, teaching, and extension. They need to be treated as such in higher education. We argue here that research on the social, economic, and environmental interactions at the urban-rural interface should be better reflected in extension-outreach programming. To be sure, Cooperative Extension has played a central role in outreach activities conducted by land grant universities, and it has a well-deserved reputation for effectively translating research knowledge into practical applications. But extension also has concentrated on agricultural issues, while arguably underinvesting in community economic development (as well as family and consumer issues). The continuing disproportionate emphasis on agriculture, often at the expense of other critical rural public policy issues, seems increasingly anachronistic and unsustainable.

Rural-related theory and research must be integrated with urban and global perspectives, and vice versa. The rural social sciences cannot be relegated to the intellectual backwaters of America's universities, devalued and ghettoized administratively. Higher education—the U.S. land grant system in particular—must assume a much larger leadership role in the rural social sciences at a time when many of our most pressing problems are social, cultural, economic, or environmental rather than technical. Energy development, climate change, waste disposal, among other topics, impose new challenges for all Americans, now and into the foreseeable future. They also provide important new lessons for higher education, including the land grant system. At a minimum, higher education must foster a new research synthesis that acknowledges the shared destinies of rural and urban people in a rapidly globalizing and interconnected world. The land grant system's commitment to expanding investments in rural social science research or engagement has never materialized. Funding has always been negligible when contrasted with the resources targeted to the agriculture disciplines. Now is the time for a change in priorities.

The Blurring of Spatial Boundaries

The cultural, economic, and political hegemony of the nation's largest cities has been unmistakable over the past century. In 1900, over 60% of the United States lived in rural areas, defined as people living in small towns (less than 2,500), the open countryside, and on farms. Today, roughly 85% of Americans live in urban areas; the largest 10 metropolitan areas alone account for over 25% of the U.S. population. Rural and urban communities have always been linked to some extent; yet, the social and spatial boundaries that have separated rural and urban people arguably are much less pronounced or obvious today.

Of course, cities and their elites have always been viewed as the incubators of new ideas, technology, and mass opinion that spread outward to people living in small places and the countryside. What is different is the accelerated pace of social, economic, and political transactions spanning spatial and social boundaries. New rural-urban interdependencies are driven by rapidly changing information technology, globalization, and governmental devolution. Past technological innovations—railroads, interstate highways, air transportation, hard-wired telephones, and telegraphs—had large spatial impacts by virtue of improving the movement of products, people, and information. Yet, the speed of rural-urban transactions was limited by the physical characteristics of these technologies. Today's technologies have greatly reduced the costs of physical distance and have facilitated the rapid (and relatively costless) movement of information and capital—Internet, cable and satellite TV, broadband—while stitching together America's rural and urban communities as never before.

Technological advances also have brought most aspects of rural life into the urban fold and linked rural people and communities directly to the global economy. Today's multinational corporations have a global reach, often dominating local commerce and dictating the price of products and services, even in remote rural areas. Fiduciary obligations to international investors have placed many rural communities at increasing risk of off-shoring, especially if they are unable to compete with low production costs and cheap labor in developing countries. Cities, on the other hand, have become the main nodes in global economic networks, while having ever-more dominion over rural and small-town economies. This has occurred at the same time that the federal government's direct role in local affairs has fundamentally shifted. The Reagan revolution radically altered the nature of inter-governmental relationships in America, which often exacerbated spatial inequalities in local access to essential public services. The Obama Administration now recognizes that "rural communities will require a different place-policy approach" that better addresses the "evolution of interdependent and interconnected regions and ecosystems" over the past 40 years. We need a new, spatially inclusive social science that acknowledges growing rural-urban interdependencies.

Some Examples

A simple demographic example illustrates our main point. Migrants can be conceptualized as crossing spatial and social boundaries; rural people become urban people and vice versa. New migrants, in either direction, represent cultural and economic change agents or brokers that bridge rural and urban America. Geographic

or spatial boundaries also can shift through metro or urban expansion into previously rural territory, for example, through annexation and the incorporation of new urban places. Some rural communities "grow up" to be redefined as urban or metropolitan areas. Indeed, boundary shifts account for a large but unappreciated component of all urban population growth and the metropolitanization in America. According to USDA researcher John Cromartie at the Economic Research Service, 113 nonmetro counties—roughly 5.9 million people—switched to metro between 2000 and 2010. This is hardly an asymmetrical process: 36 counties with just over 1 million people no longer qualified as metro, and were redefined as nonmetro. On balance, reclassification resulted in a net nonmetro population "loss" of 4.8 million over the 2000s.

Suburban communities might rightly be viewed as bridges between big cities and nearby rural communities and the countryside. The outward demographic and economic expansion of most big cities means that spatial boundaries are most ambiguous or blurred at the urban-rural fringe or in exurbia, where commuters, consumers, and local citizens interact on a daily basis. Research shows that even when persons move from urban to rural residences, they often retain their urban jobs. In other words, they have one foot in rural America and the other in urban. The so-called urban-rural divide is not a divide at all. It is a space of intense social, economic, political, and environmental interaction. It also is space where rural and urban interests are sometimes in competition, for example over land use management, while in other instances rural and urban interests are conflated.

Of course, new rural-urban interactions are not limited to demographic change. Many rural areas—ocean and mountain resort areas, retirement communities, cultural or historic sites, and national parks and recreational areas—have become "places of consumption." They are places where rural goods and services are directed toward and consumed disproportionately by people with strong urban ties. Recreational or amenity areas (as defined by USDA's Economic Research Service) have been among the fastest growing nonmetro counties; high-amenity counties increased in population by over 150% between 1970 and 2010 compared with population decline in low-amenity counties. Between 2010 and 2012, in the midst of overall rural population decline, areas rich in recreational amenities continued to grow, albeit less rapidly. Amenity-related growth, including retirement communities and eco-tourism, is part of the new lexicon of economic development strategies which further erode distinctions between urban and rural areas and create new economic interdependencies that are rapidly changing leisure patterns and urban lifestyles over the life course. Many urbanites own second homes and pay local property taxes in rural areas rich in natural amenities (e.g., along a lake or seashore).

The new interdependency of urban and rural America is perhaps illustrated best in the agricultural sector. America's "food system" cannot be examined in isolation from other aspects of the economy and society. The restructuring of the meatpacking industry makes our point. Rather than shipping cattle or hogs to slaughterhouses in faraway cities, such as Chicago and Kansas City, most are now processed close to where they are raised in rural areas. For some small towns, this has been a demographic and economic boon, especially in the Midwest and Southeast, such as poultry and pork processing. Some Hispanic "boom towns," such as Worthington, Minn., the home of Swift and Company, were virtually "all-white" in 1990, but today are "majority minority" communities with large immigrant populations from around the world and from urban gateways. The new in-migration of immigrants brings urban values, diverse cultural perspectives, and formal and informal social relationships that create new interdependencies between urban and rural America, along with clear linkages to the global community.

Ironically, the contemporary agricultural economy has also opened up niches for some small- to medium-sized producers who benefit from direct access to large urban markets. This development has been especially rapid at the urban-rural interface, where profits from direct marketing of high-value crops are sufficient to offset the high costs of land, labor, and operating costs. Location at the urban fringe also provides access to a large pool of seasonal or part time labor, and to urban consumers through farmers markets, restaurant and gourmet grocery outlets, road side stands, and U-pick operations. High consumer demand for fresh, local produce has led to a new symbiosis between city and countryside, one that benefits both small farmers and urban people. The metropolitan farmer is not an oxymoron.

Symmetry or Urban Dominance?

Historically, urban-rural interdependency has been another name for urban dominance—corporate agriculture, big oil, and urban-based extractive industries (mountaintop mining or clear-cut forestry). But today, rural-urban interdependency arguably is less asymmetrical. Rural communities have new agency, in part because of the infusion of outside interests. Environmental groups in New York State, for example, have mobilized rural pushback to fracking. This has created new conflicts between some local landowners, who expect a financial windfall, and other local residents, who reap few financial rewards but bear the costs of more congestion, housing shortages, and environmental risk.

Consider also the issue of urban waste disposal in rural landfills. While one may complain that rural areas have become urban America's dumping grounds (e.g., hazardous wastes and prisons), some rural communities see this as an opportunity for economic development. Each day, New York City (NYC) generates over 12,000 tons of garbage. Prior to its closing in 2001, most of it went to the Fresh Kill Landfill on Staten Island. At its peak, 20 barges a day—each carrying 650 tons of garbage—made the 10-mile trip from Manhattan to Staten Island. Now, 2,230 trucks are needed each day to collect NYC's garbage, move it to transfer facilities, and then cart it off to landfills in rural upstate New York and surrounding states. Rather than traveling 10 miles on a barge, NYC's waste is now trucked over 250 miles to the Seneca Meadows landfill in rural upstate New York, near Seneca Falls.

The movement of NYC's trash contributes to the burgeoning set of transactions binding urban areas with their rural neighbors. Is this a problem or an opportunity for the local community—a source of pollution, an environmental hazard, or an economic development opportunity? Interviews with local leaders and citizens indicate that the Seneca Falls community believes that the Seneca Meadows Company is a benevolent corporate neighbor that is environmentally responsible, provides over 160 jobs, and is a generous contributor to community development and educational programs. Moreover, since the landfill determines the cost of depositing trash in the site, and regulates other aspects of the transaction, this form of mobility at the rural-urban interface reverses the direction of power contributing to a more symmetric urban-rural relationship.

The Role of Higher Education

Higher education, and especially the land grant university system, has a key role to play in enhancing social and economic opportunities at the urban-rural interface. At a minimum, it should endeavor to make the "space between the cities" an area of intellectual inquiry and excitement and a fertile ground for engaging students, faculty, and the broad array of community and regional stakeholders. Emerging information technologies make this now possible, creating new connections across the rural-urban interface in areas of business development (e.g., e-commerce), education and outreach (e.g., distance learning), healthcare, and governance and civil society (e.g., social media). Moreover, the research-based information produced by land grant scientists is largely a public good; it can be translated directly into the cutting-edge applications of immense policy importance such as environmental management, energy policy, or community and economic development. It should be noted, however, that the land grant university research system has its critics. Glenna and his colleagues (2007), for example, have argued that the trend toward neoliberalism in the United States has led to privatization of research conducted by land grant university scientists and, hence, a reduction of the public good value of their discoveries. Treating urban and rural as separate or self-contained spaces fails to acknowledge the intense social, economic, and environmental interaction now occurring between them.

Research and education focused on the urban-rural interface potentially benefits everyone, rural and urban alike. Most college-age young adults today, unlike their grandparents, have had little or no real exposure to rural issues. Higher education, and especially land grant universities, should target social science research at the rural-urban interface, and produce educational and training programs that translate research into innovative applications and public engagement. Colleges and universities arguably must endeavor to provide a curriculum that is spatially inclusive, that views rural and urban as symbiotic rather than competitive or distinct. "One size fits all" policies and perspectives, whether urban or rural, ignore a large and arguably increasingly important sector of the U.S. economy and social fabric. America's natural and human systems increasingly interact at the urban-rural interface. Higher education should, and must, acknowledge this reality and focus teaching, research, and extension-outreach activities where they are needed most.

This means adding instructors and researchers, coursework, and multidisciplinary journals that are sympathetic of an inclusive, spatial perspective. The university reward system, which emphasizes departmental rankings and disciplinary journals, has been slow to the challenge. New research at the rural-urban interface is inherently interdisciplinary. Research, teaching, and public engagement will be motivated and shaped by interrelated social, economic, and environmental issues that require conceptual lenses and empirical approaches of many different disciplines. These include issues of environmental quality, land use management, community and regional development, food security, human capital formation, immigration and race/ethnic relations, green jobs, waste management, poverty and inequality, and many others. These issues have large rural (and urban) dimensions that will only grow in importance over the foreseeable future. The rural-urban interface provides accessible natural laboratories that lend themselves to comparative studies of social, economic, and environmental processes that are of general rather than parochial interest.

The immediate challenge is that rural issues typically are segregated, both intellectually and administratively, in land grant institutions and throughout the academy. By narrowly

focusing on rural issues or uncoupling them from urban, national, or global concerns, land grant universities may be missing opportunities to move forward in creative and responsive ways to pressing problems. The land grant university system should not abandon its traditional technical focus on farming and agriculture, but the current disproportionate focus on such issues can be short-sighted if it misses emerging opportunities that acknowledge the shared destinies of rural and urban people and places. Higher education, like other publicly supported institutions, is increasingly accountable to taxpayers. Targeting resources on the highest priority issues is essential for institutional sustainability.

In our view, research at the urban-rural interface provides a platform for expanding the mission and activities of the land grant system. Traditional rural and agricultural issues and their solutions have a large but often unappreciated behavioral component that requires the social sciences perhaps as never before. New perspectives are needed that recognize important interrelationships among the natural, physical, and social worlds. For example, rather than examining structure and change in agriculture per se, contemporary scholars now investigate structure and change in the global "food system." A new holistic perspective recognizes that the quality, quantity, safety, and security of our food supply involves basic and applied science; agronomic practices in the field, pasture, and orchard; marketing and retailing; as well as consumers and cooks in the home. Examining the food system in this holistic manner requires contributions from the social, economic, biological, and physical sciences, often in partnership with each other. The land grant system can take the lead in promoting the development of creative new inter-disciplines among the social sciences and creating new partnerships with the natural and physical sciences. New problems demand new scientific approaches.

We recommend a strategy that supports rigorous disciplinary scholarship, while allocating resources to activities that foster multi-disciplinary engagement with the world's most pressing social, economic, and environmental problems. Interdisciplinary research and training centers, especially those with a regional perspective that embraces rural and urban communities, are one option. Regional science associations, involving a mix of economists, geographers, sociologists, and planners, can provide valuable intellectual lessons for developing the kinds of interdisciplinary teams now needed for integrated treatments of social and economic interactions across spatial units. Most problems are multi-dimensional in nature; they cannot be fully understood through a single disciplinary lens. University-supported centers, for example, can be incubators for better understanding the food system, regional economic development, and the human dimensions of climate change, among other issues. Technical fixes alone cannot address the big issues facing America today, such as depopulation, concentrated poverty, immigrant incorporation, environmental management, schooling and upward mobility, food and obesity, energy and recreational development, or population aging. The social sciences must become better integrated into the fabric and mission of the land grant system.

At a minimum, this means allocating additional resources to social scientific research and educational programs that focus on people, communities, and the natural environment, especially those that operate in the space between cities. Moreover, we suggest that agricultural- and rural-oriented scientists, including social scientists, adopt a larger, less parochial agenda. Rural people, communities, and environments cannot be considered in isolation from urban populations and environments, either domestically or throughout the world. Redeploying efforts and resources at the rural-urban interface are an inherently interdisciplinary project. Contemporary issues do not respect disciplinary barriers, let alone institutional boundaries that separate colleges and departments into semi-autonomous domains. This is simply not the way the world is organized; in fact, it never was.

Failure to develop creative, interdisciplinary programs will almost certainly result in the marginalization of the land grant university system and the social science disciplines that comprise it. Why, for example, should universities continue to segregate (resource, applied, or agricultural) economists and (rural or development) sociologists in the land grant system—both intellectually and physically—from their disciplinary colleagues in other parts of the university? This has sometimes created a two-tier system that undermines the intellectual synergies that can result only from proximity, cooperation, and collaboration. Moreover, current physical and administrative arrangements narrow the spatial lenses at a time when a broader perspective is more likely to find cost-effective solutions to national and global problems. This also affects the way we train students, and it reinforces rigid hierarchies that often place rural people and communities at the bottom of our list of priorities.

Interestingly, the land grant system was a populist project that arose from the need to produce research-based information and education in support of the nation's development. It can reclaim this role by adapting to the demographic, economic, and environmental realities of contemporary society and to globalization. And it can start by recognizing that many inter-connected social, economic, and environmental processes

in contemporary society take place at the rural-urban interface.

For More Information

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