



*New Approaches of Inquiry and Practice*  
**1<sup>st</sup> International Symposium  
on Rural Design**

January 15-16, 2010

University of Minnesota

Saint Paul, MN

<http://ruraldesign.cfans.umn.edu/symposium>



# A Symposium Report

**CRD**

The Center for Rural Design, University of Minnesota

The Center for Rural Design (CRD) is an award winning, multidisciplinary research studio that empowers communities to find innovative solutions to problems in rural areas in Minnesota, the Midwest, and globally. Founded in 1997 by the College of Design and the College of Food, Agricultural and Natural Resource Sciences at the University of Minnesota, the Center's mission is to work with people to protect and improve rural landscapes, cultures, and communities through innovative design strategies. Working with University faculty, graduate students, rural communities, and industry on research-based design projects, CRD offers an integrative, problem-solving approach that promotes communication and learning in rural communities and amongst policymakers about designed solutions to complex rural issues.

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# **The First International Symposium on Rural Design**

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A Symposium Report

*Stephen Streng, editor*



Nearly half the world's population lives in rural areas, which comprise over ninety-five percent of its land area. In the United States, rural areas contain twenty-one percent of its population and comprise ninety-seven percent of its land area. Yet, no comprehensive approach similar to the well-established interdisciplinary fields of urban design and urban planning exists for identifying and solving the issues challenging rural areas. These issues include: loss of access to adequate education, healthcare, and other vital services; lack of economic opportunity; conflicts between established and new residents, especially along the urban-rural boundary; increased environmental degradation from changing land use patterns and agricultural practices; and declining quality of life, especially for children.



David Witty, Randy Cantrell, Ann Ziebarth

These problems are mostly being addressed piecemeal and one-dimensionally, typically along economic development, environmental, or healthcare lines without considering their inherent co-occurrence in a problem. In addition, the problems are often addressed at institutional or political jurisdictional scales smaller than the area at which the problem occurs. A critical need exists for a means to engage these problems at the scale at which they operate with all the knowledge and tools available—without regard to disciplinary boundaries—to develop effective solutions. Design is a powerful tool for integrating and applying knowledge from disparate fields to solve complex social, technological, environmental, and economic problems; yet the design and planning professions have concentrated on urban/suburban concerns and largely ignored rural issues.

On January 15-16, 2010, representatives from academia, government, non-profit organizations, and professional practice from across Canada and the United States gathered in Saint Paul to explore the creation of a new interdisciplinary field dedicated to addressing the rural issues above and more: rural design. The symposium's objectives were to:

- convene experts working on rural issues from as many disciplines as practically possible to discover and discuss opportunities for synergistic research and practice;
- reveal areas within particular disciplines that can be aided by approaches and insights from other disciplines and vice versa;
- identify pressing rural issues requiring interdisciplinary research and formulate research questions, especially in the areas of multifunctional landscapes, overcoming barriers to regional approaches, and ecosystem health;
- create interdisciplinary and inter-institutional partnerships with the comprehensiveness necessary to research and generate useful data and develop successful strategies for engaging these problems;
- identify funding opportunities for the partnerships; and
- develop an organizational infrastructure to support ongoing partnering and knowledge sharing.

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The symposium was the first ever in the United States to gather researchers from so many different disciplines to focus specifically on rural issues. As a result, rural design was further conceptualized, defined, and positioned as a new, interdisciplinary field of inquiry and practice capable of meeting the need for a means to address rural problems comprehensively, scale appropriately, and thus, effectively. During the symposium's two days, many enlightening and energetic conversations took place before, during, and after panel discussions; during meals and breaks; and on trips back to the hotel. Of these, this report summarizes the first day's introductory remarks and panel discussions and the second day's panel discussion on creating an international rural design organization.

### Welcomes and Introductory Remarks

Dewey Thorbeck, Director, Center for Rural Design, University of Minnesota  
 Al Levine, Dean, College of Food, Agricultural and Natural Resource Sciences, University of Minnesota  
 Tom Fisher, Dean, College of Design, University of Minnesota

Dewey Thorbeck opened the symposium by welcoming attendees and briefly describing the Center for Rural Design's history. Thorbeck related that while teaching architecture design studios that incorporated rural issues, he realized that the design and planning professions had fundamentally ignored rural areas' concerns. If urban areas merited their own standalone disciplines—urban design and urban planning—dedicated to improving urban quality life, did not rural areas deserve the same? To remedy this, he pursued the creation of a center dedicated to creating a new discipline: rural design. The Center was subsequently founded in 1997 and is part of the College of Food, Agricultural and Natural Resource Sciences (CFANS) and the College of Design (CDes). Thorbeck remarked that a Center hallmark are its efforts to help rural communities manage change by fostering interdisciplinary and interjurisdictional collaboration.

Al Levine followed by detailing the extent of some of those changes. He noted that now in the United States, ten percent of the population grows all of the nation's food, and two percent account for ninety percent of food production. However, despite the declining numbers of farmers, and even if robots could do *all* the farming, the land would still remain, and the rural landscape needs the assistance of those gathered. He was followed by Tom Fisher, whose remarks focused on the role of, and potential for, design in rural areas. Dean Fisher observed the popular view of design is that it is only for making things attractive, when in fact, design's purpose is to make things function better. Rural areas are full of functioning things that are designed and need to be designed better. For an example, alluding to the current agricultural practice of vast monocultural cropping systems, he observed that we have inadvertently designed a fracture critical food system, i.e., one that is brittle and prone to catastrophic collapse. The pressing challenge is to design and build a system that is instead more resilient, that can withstand shock.

Fisher commented on the diversity of disciplines represented at the symposium and observed that we have solved the easy single discipline problems. The problems left to be solved are the complex, "wicked" ones requiring interdisciplinary approaches. He urged attendees to instead look at prob-

## Symposium highlights

Over 90% of survey recipients reported they were either satisfied or very satisfied with the Symposium (78% response rate).

75% of attendees stated their interest in rural design was higher as a result of the symposium, and the remainder's interest stayed the same (72% response rate).

Fields represented included:

- Agricultural Engineering
- Agroecology
- Agronomy
- Applied Economics
- Architecture
- Business
- Community Development
- Forest Resources
- Geography
- Housing Studies
- Landscape Architecture
- Landscape Ecology
- Natural Resources Management
- Planning
- Political Science
- Public Health
- Public Affairs
- Sociology
- Veterinary Medicine

lems from a place-based perspective rather than a disciplinary one and to think as designers do by imagining the future, particularly of what rural areas could be, and devising the necessary steps for getting there.

### Multifunctional Landscapes Panel Discussion

Panelists: Michael Bell, David Blandford, Nick Jordan, David Pitt

Moderator for all panel discussions: Stephen Streng

*(Information about all panelists follows this summary.)*

The costs to the environment and rural communities of large-scale monoculture farming have generated increasing concern and prompted a search for landscape patterns that produce wider benefits and fewer negative effects. Creating multifunctional rural landscapes is an emerging and promising alternative this panel explored.

The exploration began with the panelists being asked to define their understanding of multifunctionalism and of what functions comprised a multifunctional landscape. Nick Jordan started by stating his interest in determining how the biological diversity of a landscape can be arranged to increase the production of ecosystem services important for agricultural production *and* other societal needs. Agricultural landscapes must go beyond the monofunctional production of commodities and be evaluated for how they can additionally provide high-quality water supplies, biodiversity, carbon storage, optimal biogeochemical cycling, and greenhouse gas emission reduction. David Pitt remarked that as an environmental planner and landscape architect he would second Jordan's list and add explicit thinking about anthropocentric values: what are the food, fiber, and mineral commodities important to us? What are the amenity values and what are the environmental hazards that affect its intrinsic suitability for human use? The challenge is to reconcile ecological and anthropocentric values. Pitt described the process as juggling multiple values, knowing that some values (balls) will fall—and their fall will affect the ones remaining in the air—and striving to put some balls back in the air.

Michael Bell contended that landscape multifunctionality entailed five aspects. The first is that the land is not all the same, and it is important to build on those differences. Likewise, people are not all the same. Thus, while working to transform the landscape, one must take advantage of people's different strengths and ensure their participation. Thirdly, it is impossible to do just one thing in a system so complex. One must realize that every action is an interaction and think about consequences. Next, it is paradoxically very hard to do more than one thing. A realistic approach is to recognize that difficult problems will never be "solved" because every "solution" brings a new set of problems. Finally, Bell asserted that a "soft path" approach is required. This is one that thinks through and synergizes the capacities of the land and people, as opposed to a "hard path" in which one tries to build a way out of a problem. However, a challenge to the soft path approach is that it is "harder" (more difficult) to accomplish.

Expanding the perspectives on multifunctionality, David Blandford detailed his understanding of the relationship of multifunctionality and economic incentives. He stated that multifunctionality is more than an agricultural

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issue, it is a land management one involving water and air quality and other difficult to price services, and it involves all actors in the land region-wide. Economic incentives drive farmers' land use decisions, and it is necessary to understand behavior to create the right incentives that will elicit the response that will produce the desired mix of products from the land. However, Blandford argued that the power of price incentives to produce the outcomes envisioned for multifunctional landscapes is limited. The optimum output resulting from everyone behaving rationally is unlikely to occur, and market failure is probably the rule. To him, achieving multifunctional landscapes will result only from public policy efforts *and* collective local action.



Paul Watson, John Koepke, Tom Fisher

The moderator then asked the panel for their views on the potential for top down (e.g., the Farm Bill) vs. bottom up (e.g. local government efforts to preserve farmland for its amenity value) approaches to achieve multifunctional landscapes. Jordan explained he saw a powerful opportunity in enterprise development efforts that capitalized on the opportunities multifunctional landscapes afforded for creating value and wealth. Poorly organized markets for ecosystem services, however, stand in the way. Different strategies for bringing together the existing willing sellers and buyers need to be tried, he continued, and that this was a prime opportunity for regional efforts.

The bottom and top need to be considered simultaneously, Bell advanced. The top must work with the bottom, for it is expensive when the bottom resists. Conversely, the bottom needs the top to help it coordinate and prevent excess parochialism. Blandford noted Europe has successfully changed the policy discussion and agenda away from narrow and traditional agricultural concerns to a broad view of land management and quality of land use. He explained that European rural policy comprises biodiversity, animal welfare, environmental quality, and other issues in addition to agriculture. The United States treats them all separately. The United States' narrow policy focus on agriculture is not working, but it is not clear what means will get us to the desired end. For him central questions are how do we use dwindling public funds for agriculture to efficiently get to where we want to be? And, is it possible to do this within the current policy scheme?

For the next question, the moderator described how the Iowa landscape with its monocultures of corn and soybeans represents for some the perfect example of what must be changed while for others it represents a geometrically harmonious and pastoral ideal to which they are strongly attached. For the latter, Iowa's corn and soybean fields are a significant cultural landscape. Thus, if multifunctionality requires new landscape patterns, how will cultural issues be addressed?

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Through design, Pitt replied. We must consider and examine cultural norms, he recommended, abstract from them and use them to help frame the new designs for the countryside. It is imperative to think about the design process, who is or is not engaged in it, and how the products of the process reflect stakeholder values. Bell followed that we should consider moving away from clean and controlled landscapes to designing in “mess.” Mess allows for surprise, differences of opinion, change, and learning, and where it remains, we should save it.

Jordan followed up on Pitt’s point regarding framing and designing by emphasizing that it must be done with care. For him, the question is how can we support and facilitate critical systems thinking about these issues. The Farm Bill contributes greatly to the current dominance of a particular landscape pattern. Yet, in much of Minnesota, this creates an undesirable “mess” because nutrient runoff from this landscape and the production practices associated with it foul most lakes during the summer, rendering them unswimmable. Bell clarified his use of the term by commenting that there are different kinds of “mess” and getting rid of mess often creates worse mess. A participant asked if in fact a rural “de-design” was needed. Perhaps rural areas are over-managed? Iowa’s rural landscapes were once multifunctional but have become highly specialized. One interest has taken over, Bell responded. We are forcing the landscape to do one thing, which it cannot. He holds that we need to reintroduce more voices and values, which will result in more ecological, cultural, and political diversity.

A participant question returned the discussion to incentives. Blandford elaborated that people behave according to the value they place on their actions. Getting prices right (on things that can be priced) is a critical part of the change process. However, if one follows the climate change debate in Washington D.C., it is clear the federal government will not get the price of carbon right. This is not a result of bad policy but of government failure. Therefore, Blandford urged, the response should be to act locally and circumvent the failed process in Washington. Echoing Jordan’s comments about lake water quality, Blandford stated unswimmable lakes are a local cost, thus the local residents need to devise the solution because the federal government will not and perhaps cannot. (A few participants later responded by emphasizing the importance of federal policy, particularly the harmful potential of corn ethanol policy in the United States and Canada and the beneficial results of conservation programs on water quality in Iowa.) Blandford was then asked if “multifunctional” incentives were not the answer. The European incentive system, though not perfect, could be a useful model, he answered. If we value non-commodity outputs, such as ecosystem services or landscape amenities, then we should incentivize them, as opposed to solely rewarding increased production (as the United States does now). Although, it will be important to analyze how ecosystem services are distributed across the country to see where payments would go.

Bell observed that the discussion seemed to be about the tension between the top-down and bottom-up approaches. He expressed concern that if we use financial incentives might we not create a new, but still uniform, landscape? Or, do we attempt to encourage the extant diversity of skills and strengths to grow and become more? Continuing the return to a discussion about process, Pitt emphasized the necessity of understanding the larger

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The panel next addressed the moderator’s question of what were the potential pitfalls to changing to a more multifunctional landscape. That is why process is so important, Bell answered. We need to regard designs as never done, and understand we will always be learning and revising. Pitt echoed that attending to the feedback of landscape performance would aid the inevitable readjustments. Jordan warned of the “shadow side” to predominately local efforts—insularity and prejudice—that must be guarded against. There are many interests that will resist change, Bell added, requiring a role for “the top.” Blandford prefaced his response by stating there would inevitably be conflict over the roles of regulation and a market approach, and the economics field is in crisis regarding what the balance should be between the two. In either case, policymakers should never underestimate individual decision maker’s ability to do the completely unexpected. A participant noted that in many cases (in his example public health and environmental science), potential pitfalls of a particular action are being identified by other disciplines, unbeknownst to those effecting a change. Educators are not training policymakers to connect information across all relevant disciplines. We need to devise mechanisms for checking in with other knowledge and practice areas.

The moderator asked the panel what they considered the top research question(s) about multifunctional landscapes. Blandford responded that we needed a better understanding of the dynamics of incentives to effectively modify and use them. Bell wondered what social and biophysical processes would achieve our desired multifunctional state, and how do we obtain real- or nearly real-time feedback about the process? Next, Pitt added we need to understand how to develop decision-making systems that will incorporate that feedback and aid making sound evaluations. Finally, Jordan began his answer by distinguishing between two ways of knowing: systemic (using various methods to reveal interconnections and patterns) and communicative (learning about and from others with whom we differ). There is potentially great power in being able to combine these two, but the question is how. A participant commented that we need improved understanding of how to manage the risk involved in our efforts and of how far into the future to look while designing. Another participant offered a farmer’s perspective that units of measure were lacking. He spends much time measuring units of input and output, but in landscape systems, failure is being presumed when in some cases there is not a way to measure it.

Because several participants had experience with indigenous peoples, many of whom manage and live in multifunctional landscapes, the moderator invited their perspective on the discussion. A participant emphasized that his colleagues living in sparsely populated boreal forests have a much different experience than Midwestern farmers. For forest tribes dependent on hunting and fishing, a key question is how to enter the market economy (which larger forces compel them to do) without ruining the landscape they depend on? How can they produce products that will give them the cash they need for the current economy without jeopardizing the land’s ability to

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provide the other things they need. Another participant asserted that Native Americans continue to hold values that prize landscape multifunctionality. He suggested a change is necessary in the underlying paradigm of how we exist in the world, that we can learn from the Native American models, including the paradigm of recognizing non-monetary values in the landscape that are equal to monetary ones.

Further points raised during participants' discussions included recognizing that much farming is practiced for non-financial reason and that the design process must reflect all values, not just the economically incentivized ones; the importance of accounting for energy costs' considerable power to influence land use practices and landscape pattern; and that small towns add an urban element to rural multifunctional landscapes.

### Regionalism Panel Discussion

Panelists: Tim Borich, Kristen Nelson, Tom Stinson, David Witty, Ann Ziebarth

*(Please note, due to recording equipment failure, the report does not reflect the last approximately 35 minutes of panel/participant discussion.)*

Rural problems such as polluted water, poverty, uncontrolled-growth at the rural-urban fringe, degraded ecosystems, and lack of opportunity don't conform to political or institutional boundaries or disciplinary ones, and neither can the search for, and application of, solutions. Correspondingly, most problems of rural areas are implicated in other regions and cannot be solved by treating them only within a county's or state's boundaries. This has stimulated debates about the necessity for regional approaches and how to apply them.

Panelists began the discussion by explaining their understanding of what is a region. Tom Stinson consciously gave an economist's answer: a region is something that internalizes the benefits and costs of the activity being studied, and thus a region varies by the particular activity. However, other boundaries (e.g. biophysical, cultural, and political) can affect an activity and define a region. Interestingly, political boundaries are not necessarily good indicators of regions, but since data about activities is collected based upon those boundaries, they become defined as regions. Following, Kristen Nelson offered definitions of what regions are and are not. A region is a like type and a socially constructed definition of identity with a spatial component. In addition, regions help define what we are not. However, Nelson provocatively asserted a region is not a community, state, or nation.

David Witty replied that foremost, regions cannot exist without being underpinned by a unique natural system that gives them their identity. Regions are created

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by natural systems first, are settled by humans, then modified and overlain by geopolitical ideas to manage land and resources. Witty contended that most healthy, dynamic regions have strong physical boundaries created by their natural framework. Humans can overlay their ideas and culture on the natural system, but ultimately it is the foundation that strongly influences the end result. Tim Borich agreed that regions do not exist without social construction, i.e., they are identified by humans. He added they cannot exist without human interaction and the creation of a social identity, which introduces the question, where does community end and region begin? We are seeing new patterns of personal interaction, he posited, that are independent of settlement patterns and with uncertain effects on regional identity. In regions, people want a physical entity with lines drawn around it, Ann Ziebarth offered. What intrigues her are the multiple, overlapping boundaries (ecological, social, and political) that exist, prompting the question of which boundary to use? Regions are often defined by what products can be obtained in them or by behavior (e.g. clothing worn). This demonstrates that people are the most difficult (but most important) element to include in a planning model.

At the end of her reply, Nelson had, again for discussion, asked why focus on regions and why do they matter? Dewey Thorbeck replied that simply, in the Center for Rural Design's work, they had been frequently asked to address problems that extended beyond the local political boundaries. He suggested that many of problems challenging rural areas could only be effectively addressed at a regional scale. Nelson agreed that scale was important. She elaborated that a system for addressing problems has to be big enough to fit the problem. Unfortunately, most of society does not yet recognize the complexity of the problems we face. We have to ask and understand, where is the rest of the world in this system, where does our object of interest fit in the world, and where are the connections? As an example, Nelson discussed her work studying wildfire planning. The planning was done at different scales in different parts of the United States, producing different outcomes and products. For instance, planning undertaken by counties tended to produce strategic plans while more local efforts resulted in equipment purchases and new personnel. People working in the middle of the scale often connected up and down, whereas people working locally connected across to others working at the same scale.

In addition to scale, orientation is important too, remarked Witty, for it leads to different perspectives. Is it urban, rural, or resource centered? In further response, Witty asserted that a region can be a community of communities. However, if community participation is a challenge, he acceded that participation of communities within a community could be even more so. On the other hand, he offered metropolitan Vancouver as a region that has succeeded in this. Ziebarth proposed that at this point it was important to distinguish between bonding capital (networking with like aspects of the community to achieve ends) and social capital (the networking capacity to bridge to external political, economic, and other resources to achieve ends).

As a potential model of a regional community of communities, the moderator invited Stinson to discuss his work on the concept of spatially separated neighborhoods. Stinson explained that during the farm crisis in Minnesota of the 1980s and earlier, the commercial sectors of many rural towns shrunk

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or disappeared, considerably reducing rural residents' access to services. It became clear that the model of a self-sufficient rural small town was no longer tenable and not a realistic platform for policy development. Looking to urban models, he wondered, what if the various activities that once comprised a self-sufficient town were distributed to clusters of neighboring towns thus forming a whole? Could these towns function together as neighborhoods do in a city? If so, that begs the question, spatially separated neighborhoods of what? The next level up in scale is the region, but defining the relevant region is difficult due to boundary and jurisdictional challenges, Stinson concluded.

The moderator explained to the panel that the Center has frequently employed a strategy of overcoming jurisdictional boundaries and community rivalry by attempting to unite communities around a common natural asset. What did the panel think of this strategy for creating a regional approach? It only works if the issue is a natural resource one, Ziebarth claimed. A watershed district only works for water and not as a housing and development district. Borich proposed that Iowa lends itself to studying how regions come to be because the natural element (e.g. mountains) is eliminated as a variable. When people and institutions tackle widespread issues in Iowa, he has observed the continued creation of extemporized, issue-specific regions (an approach he characterizes as BYOR for "bring your own region"). The drawback, he contends, is that this approach disrupts the formation of the personal networks necessary for forming social capital because individuals are constantly engaging issues in different locations with different people. This sabotages the community of communities (referencing Witty's statement) and creates a situation in which people do not know who to talk to when a crisis develops. Thus the question is, without defining physical features, how does one create the form that creates regional identity? He continued that he has observed some identity being formed based on place and multiple communities—as in urban areas where an individual can identify as a member of a block, a neighborhood, and city. Unfortunately, this process is sometimes interfered with by how planners apply regions *to* people rather than *with* people.

Iowa needs more mountains, Witty humorously interjected. More seriously, he related that British Columbia has numerous regional districts for delivering infrastructure, health, and other services, and they all are defined by, and function on, topography. In contrast, the currently defined regions in Manitoba are not successful because residents cannot relate to the regions' perceptually arbitrary boundaries. In the Plains, Witty continued, we roll across the land more and spend less time in activities that define community. Regional identities are changing because of the globalization of culture and communities reaction to globalization. Witty contended this was having a particularly negative effect on rural regions. The counterbalancing forces



Tom Stinson, Kristen Nelson



Back: Casey Hoy, Steve Roos, Fred Iutzi, Valentine Cadieux, Nick Jordan. Front: Michael Bell, Iain Davidson-Hunt

are local interest and culture, which design can enhance. Additional participant discussion centered on what defines a regional approach. Is it aggregation of effort and if so, whose effort?

### Ecosystem Health Panel Discussion

Panelists: Robert Corry, Judith Read Guernsey, Katey Pelican

Using an ecosystem model and the metric of health to facilitate holistic approaches to solving problems is an emerging technique in several fields. As in the other panels, panelists started the discussion by giving their understanding of the term at hand, in this case, ecosystem health. Judy Guernsey began that in public health the traditional definition of health being a function of environmental exposure still prevailed. However, the view has shifted from solely focusing on proximal risk factors to thinking more globally and about the health of populations. Looking at single risk factors had not worked, therefore those in public health were looking at the whole system that affects human health, including the social and political environment. This wider, systems approach has opened the door for an ecosystems perspective to enter.

Katey Pelican explained that the medical field was reaching the same conclusion (as public health). Medicine is facing grand challenges and a focus on ecosystem health—defined as the intersection of animals, humans, and the environment—is the response to these “wicked problems.” A key component of this effort is the attempt to bring together disparate groups (researchers in different fields, practitioners, affected communities) because we know we need them. Robert Corry suggested that the term “ecosystem health” might

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be of limited use. He cannot talk to his rural neighbors about ecosystem health without eliciting blank stares, but if he instead talks about components of it, such as resilience, then he would be more successful. Given that, to him a healthy ecosystem would have ecological amplitude and the landscape would work the way we expect or desired it to without unacceptable levels of subsidies.

The moderator asked the panelists, since ecosystem health often involves creating new arrangements of things in the physical environment to achieve a better, desired future (which is a definition of design), why among the many disciplines included in definitions of ecosystem health are the design professions left out? Corry replied that in agricultural areas, such as where he lives, it is everyone involved in agriculture—from the seed companies, equipment manufacturers, farmers, policymakers, to the bankers—who are designing the landscape, not the landscape architects. Pelican offered that designers are not mentioned because there is little understanding of what good design and designers can do. She believes the different perspectives and community engagement process design offers are uniquely valuable. Guernsey admitted that although she works collaboratively and has worked with planners, she never has worked with designers.

Panelists next moved to discussing the spatial aspects of ecosystem health, where design has the most potential for positive influence. One must recognize the key geographically-related differences between living in rural and urban areas, Guernsey stated. But, good data is often lacking for rural areas, compromising the ability to make informed decisions about rural health. As an example, she mentioned that air quality is a recognized problem in Canada's rural areas but most air quality measurement stations are located in urban ones. Pelican replied that interfaces between animals, humans, and wildlife—such as in animal markets and mining camps—are critically important. Knowing where (in space, in the landscape) they are is a necessity, for emergent diseases often first appear there. In addition, people and animal movement play a huge role in health (and the spread of disease). Referencing the previous panel, she maintained that regions become very blurry when one considers the amount and degree of human and animal movement around the globe. Another key challenge requiring good design is optimizing land use to meet the future global demand for food, Pelican continued. Food security is likely to become a dominating world issue.

Where and how biological diversity is arranged in the landscape strongly influences ecological health, Corry asserted. Our task is to improve health by fitting in biodiversity, but he cautioned it must be done right. It cannot necessarily be the wild, messy stuff, but has to fit the cultural context. If it is not culturally acceptable, it won't stick. For now, the opportunities are to work around the edges of the large single-crop fields. Unfortunately, as small farms consolidate to bigger ones, there are fewer edges, and we lose the little spaces left for biodiversity. Further relating this panel's topic to the first one on multifunctional agriculture, Corry reflected that the less amount of labor and regulation involved, as well as technical and business simplicity, stimulated farm managers' preference for monofunctional landscapes. This creates another challenge to designing in biodiversity. He proposed that we must locate places in the landscape that can absorb the impact from current farm practices. Similarly, we must identify those sensitive places that are

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less resilient to current practices and designate them for other uses. On a final note, Corry mentioned that farmers he encountered during his research are aware that external forces are pushing them towards creating a certain landscape. They do not necessarily like it—they would prefer the landscape of their parents or grandparents—but feel constrained.

A participant surmised that the discussion may be about economic survival, which is short-term survival, vs. sustainability, which is long-term survival. Corry responded that farmers will respond to incentives, which prompted participant comments that incentives were indeed important and need changing. Blandford playfully described the United States agricultural and conservation incentive program by arguing if one wanted to design a really bad incentive program, ours would be it. Its disadvantage is that it is based on cost sharing. This limits its effectiveness because (in this case, conservation) the action will only be adopted if it has a clear personal benefit to the landowner. However, conservation's benefits are spread widely across society. We have a long way to go to figure out incentive programs that will get us what we want. A participant suggested that the programs do work, because they incentivize production, which we have plenty of. No, Blandford replied, the programs are designed to redistribute money from other taxpayers to farmers, but it has the effect of increasing productivity.

Next, the moderator asked the panelists if, given the criticisms of the definitions and use of “sustainability,” could substituting “health” for “sustainability” give us a more effective target when designing for a better future? Would aiming for ecosystem health give us a clearer and more workable objective than aiming for sustainability? A participant suggested that discussants entertain that equity concerns underlie any action towards improving health on a large scale. That is, when designing new systems, we are designing to alleviate disparities in health and to address the disparities that led to those differences. Pelican answered that using the term “health” can be problematic because certain groups claim it, particularly medicine. She likes “sustainable” because it requires thinking about the long-term, something our society does not do well. Corry felt that aiming for ecosystem health could lead one to design a fantastically functional ecosystem without people in it. The key question is how to fit people and the environment together. If asked to determine if a landscape is sustainable, he said he could tell if it *maybe* was. That is why he prefers to rely on the concept of resilience, for it seems less open to different interpretations and is the component of health that is manageable. By designing a resilient landscape one is more likely to include the community instead of designing it out of the environment—as his students tend to do in trying to achieve a perfectly functioning ecosystem.

Would aiming for ecosystem health give us a clearer and more workable objective than aiming for sustainability?



Nick Jordan, Michael Bell

Following this, a participant asked, if the proposition is to make health a metric—perhaps as the legacy of efforts to achieve sustainability—what are the elements of health? Or, the moderator added, the indicators of health? Corry honestly replied he was not sure. If he analyzed a landscape or a set of biotic communities, what he looked for might differ from what anyone else in the room would. There are lots of people with good ideas about what to measure, including the work of Hoy (a symposium participant who later discussed for participants his team’s work). The literature suggests looking for amplitude, redundancies, and diversity, but what does that all mean? As a landscape architect, he looks for physical manifestations in the landscape that help him see those pieces (amplitude, etc.), but it is unclear what they look like.

Pelican proposed health implies a degree of stability. The difficulty we face is that we are in a time when change is occurring at every level. Everything is in a state of flux, and we’re still struggling to catch up to this new condition. When looking at ecosystems and how they respond to these changes, unfortunately there is no control population (or system) to validate comparisons of healthy vs. unhealthy ones. Additionally, important health concepts such as sustainability and ecosystems’ ability to support the functionality we desire require further examination. This returns to the question of what we value in, and from, ecosystems. This can change, and has changed frequently in human history. In the end, she stated, the issue may not be so much about measuring health but how to address ecosystems’ functionality.

Guernsey proposed as useful indicators the key health variables in the environment identified by Sally Macintyre. These were physical landscape attributes; cultural landscape attributes such as ethnicity and access to services, doctors, the Internet, libraries, roads; social networks; and access to special or spiritual places that bring us positive mental health. What this research has been telling us, Guernsey explained, is that the local environment, particularly the neighborhood, has greater effects on health than the regional environment. She urged to make those local environments healthy, by putting in positive features, such as places where people can walk safely.

Further participant discussions centered on altering the demand side of the monofunctional landscape equation, particularly issues surrounding the amount of animal protein the United States consumes and increasing demand for a similar diet by other countries. This fed into participant observations on the inseparably entwined relationship between rural and urban areas. It is impossible to adequately discuss or address rural issues while ignoring urban areas’ role, many contended.

### Creating a Rural Design Organization Panel Discussion

Panelists: Tim Borich, Timothy Collins, Lars Hallström, Horst Schach, Dewey Thorbeck

A primary purpose of the symposium was to initiate discussion and planning for creating an international organization dedicated to fostering the development of rural design as both an area of academic inquiry and as a professional discipline. Panelists began with reflections on the discussions so far. Horst Schach observed that it is rare for a design professional

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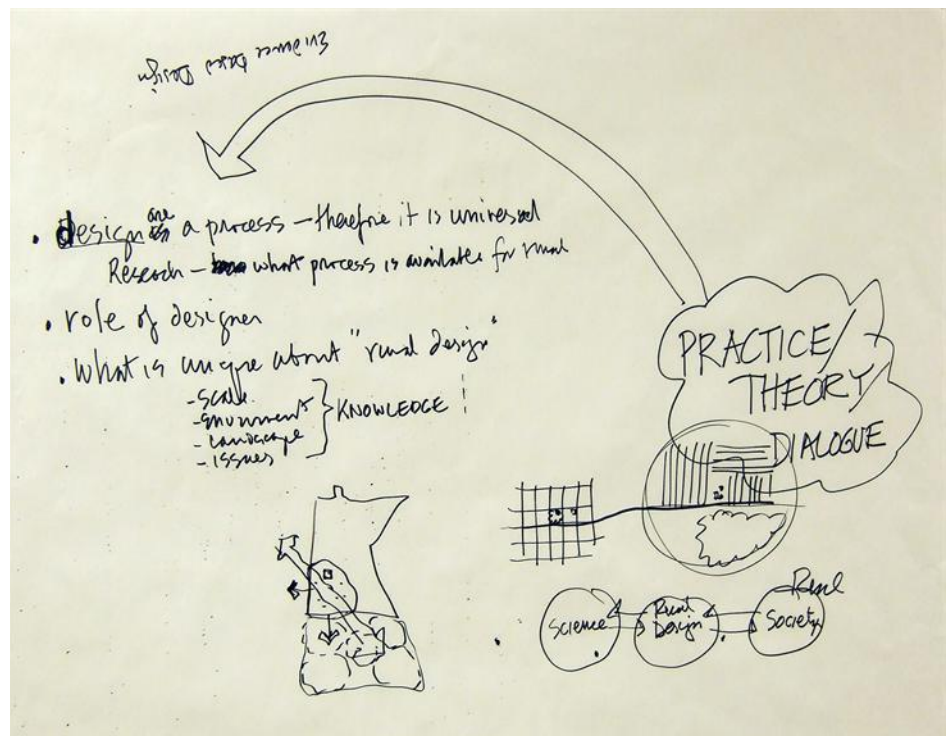
to be involved in designing for agriculture (and he is lucky to be one of the few, due to his horse farm consulting work). The chances of private sector designers becoming involved in agriculture are remote due to how expensive they are. However, other types of organizations such as nonprofits or university-based design assistance programs might be able to do it. He asserted that extension agents and the extension system are the key entry point for working with rural communities.

Thorbeck saw three issues as foremost in rural design's development. The first was determining how an international organization dedicated to rural design be organized and operate. Secondly, there is a critical need to create a rural design curriculum for training students and practitioners. Finally, there existed many key research areas in rural design, including on issues such as improving animal, human, and environmental health; protecting water quality and availability, ensuring a safe and adequate food supply, and providing new energy sources. He stressed that rural design is a way to translate research into application.

Tim Collins related he was wrestling with the relationship between rural design and sustainability. Is rural design enough by itself to get us to sustainability, or is it one of the several important tools? He noted that rural design offers the potential for significant interdisciplinary work and proposed that focusing on improving quality of life may be a central strategy for unlocking rural design's promise. As to a rural design organization, Collins stated that to be effective it must be involved in research, policy, and outreach. A valuable role for it would be to effectively communicate good research to rural residents, bring communities' stated concerns and needs back to researchers, and help communities make good decisions for themselves.

Next, Lars Hallström remarked that he was struck by the continuous theme of power during the discussions, which he found encouraging. He proposed having such a diverse group in attendance afforded the possibility for identifying areas of overlap and creating a broader sense of mission. What remained to be clarified is how rural design and an associated collective could link not only research, planning, and policy but also education, inter-institutional collaboration and curricula, knowledge translation and transfer, and community engagement. Hallström pointed out some institutions are, and in the future may be, competing for scarce resources. This need not prevent collaboration, but it needs to be acknowledged. Additionally, we must account for different degrees of commitment from institutions, including ones we may be part of. What form for

...rural design offers the potential for significant interdisciplinary work and proposed that focusing on improving quality of life may be a central strategy for unlocking rural design's promise.



the proposed organization could accommodate these circumstances? Finally, Hallström urged participants to consider the role of this proposed association and post-secondary institutions in rural stewardship.

Design, planning, and the rural landscape have a long history of connection in Iowa, Borich explained. Both planning and landscape architecture at Iowa State evolved from the agriculture college. Many of Iowa's state parks were designed by extension landscape architects and design and planning continue to be important parts of extension in Iowa. However, this degree of support for design does not exist at many other land grant schools and this has to be factored for. Borich commented he valued the holistic viewpoint of the symposium and urged participants to not let rural design become too issue specific. Just because rural design can do watershed or local food system planning does not mean that is what it should be. For example, urban design addresses not just housing but the whole system of urban space. The promise of design is that it offers potential solutions and a process to achieve them. It offers a better chance to make a difference and achieve a tangible outcome, in contrast to some traditional extension and USDA programs. Borich pushed participants to not lose the broad viewpoint.

In the ensuing discussion, panelist and participants made the following points regarding the proposed organization:

- Need to ensure that members have a clear, compelling reason to belong
- The organization must remain focused on how it can help communities
- The participants are all doers and this orientation to action should be reflected in the organization
- Collaborate to efficiently use scarce resources, but make sure there is a return to all partners
- The organization could serve to coordinate our individual project *outputs* into meaningful *outcomes*
- Organizational models include communities of practice, citizen-driven organizations such as Minnesota's Regional Partnerships, organizations of other organizations, joint public official/practitioner organizations such as the American Planning Association
- The organization's agenda must be driven by those affected
- Do not let funders dictate the agenda

Additional discussions with participants touched on the need to move design out of urban areas (where the vast majority of design professionals live) and into rural areas. One participant likened it to the challenge of attracting doctors to rural areas. It was pointed out that rural residents will not identify design as a need per se, but will often identify needs that can be met by design. This highlights a potential lack of knowledge and community capacity. Other participants concurred that rural residents do what they know, and their knowledge is limited. Rural areas are becoming homogenous due to the prevalence of industrial, prefabricated building types, Borich contended. This is becoming a quality of life issue and explains why many young adults forsake rural areas for better designed urban areas.

The promise of design is that it offers potential solutions and a process to achieve them. It offers a better chance to make a difference and achieve a tangible outcome....

## Symposium Panelists

**Michael Bell**, Department of Rural Sociology, University of Wisconsin. Dr. Bell is an environmental sociologist, chair of the Agroecology Graduate Program, and a faculty member of the renowned Gaylord Nelson Institute of Environmental Studies. Professor Bell is a prolific and award-winning author. His most recent books include *An Invitation to Environmental Sociology, 3rd edition*; *Country Boys: Masculinity and Rural Life* (co-editor and contributor); and *Farming for Us All: Practical Agriculture and the Cultivation of Sustainability*.

**David Blandford**, Department of Agricultural Economics and Rural Sociology, Penn State University. Professor Blandford is a professor of agricultural and environmental economics and a former economist and division head at the Organization for Economic Cooperation and Development (OECD) in Paris. His research and publications span multifunctional agriculture, effects of changes in agricultural subsidies, and environmental policy, among other topics. Dr. Blandford was a co-organizer of the recent joint USDA/Economic Research Service and OECD Workshop on “Evaluation of Public Policies for Rural Development.”

**Nick Jordan**, Department of Agronomy and Plant Genetics, University of Minnesota. Dr. Jordan’s research in agricultural ecology addresses the use of biological diversity to improve farm productivity, resource efficiency, and increase production of ecological services in agroecosystems. He is particularly interested in the organization of systemic change in agricultural land-use and associated social and economic systems. In 2007 he was first author of “Sustainable Development of the Agricultural Bio-economy” in the journal *Science*, and his research has been funded by the National Science Foundation, United States Department of Agriculture, Minnesota Department of Natural Resources, and the McKnight Foundation, among many others.

**David Pitt**, Department of Landscape Architecture, University of Minnesota. Professor Pitt has worked extensively with local governments throughout Minnesota on regional land planning issues. His work entails extensive multidimensional landscape analysis to augment using GIS as a decision-support system for making environmentally and socially sound land-use decisions. Dr. Pitt is co-editor of *Landscape Journal*, and a faculty member in the Water Resources Sciences Graduate Program.

**Tim Borich**, Associate Dean, College of Design, and Director, Extension to Communities and Economic Development, Iowa State University. Dr. Borich administers and coordinates Iowa State University’s outreach efforts in community development and economic development as well as promoting and coordinating research, outreach, and Extension and distance education for the College of Design. His research interests include community economic development, rural sociology and development; multi-community collaboration, citizen participation and planning, and regional asset mapping.

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**Kristen Nelson**, Department of Forest Resources, Department of Fisheries and Wildlife, University of Minnesota. Dr. Nelson is an environmental sociologist whose research foci include the human dimensions of wildfire planning, human choices and biogeochemical cycles, social networks and system change, and multi-stakeholder dialogues and environmental risk assessment. She has received numerous grants from the National Science Foundation and the United States Department of Agriculture: Forest Service. Professor Nelson is an award-winning teacher and the co-coordinator of the Environmental Science, Policy, and Management undergraduate major.

**Tom Stinson**, Department of Applied Economics, University of Minnesota. Dr. Stinson is a professor in the Department of Applied Economics, University of Minnesota and the Minnesota State Economist. A noted public finance and regional economic development expert, his current research interests include evaluations of alternative strategies for nonmetropolitan development. He has pioneered using the concepts of ruralplexes and small towns as spatially-separated neighborhoods for regional economic analysis.

**David Witty**, Department of City Planning, University of Manitoba. Professor Witty is the former Dean of the Faculty of Architecture at the University of Manitoba, a Fellow of the Canadian Institute of Planners and a Member of the Royal Architectural Institute of Canada. Dr. Witty's career has combined practice, teaching, and research on projects across Western Canada from the Lakehead to the west coast of Vancouver Island and into the high Arctic. He is currently studying issues of regional growth along the urban/rural continuum.

**Ann Ziebarth**, Department of Design, Housing, and Apparel, University of Minnesota. Professor Ziebarth is a rural sociologist who focuses on housing issues in small towns and rural areas. She researches housing as an indicator of economic, demographic, and policy changes, and her publications cover migrant workers' housing, employer-assisted housing, and local housing policies. Dr. Ziebarth is the current president of the Housing Education and Research Association.

**Robert Corry**, Landscape Architecture, School of Environmental Design and Rural Development, University of Guelph. Dr. Corry uses his combined background in landscape architecture (MLA) and resource ecology and management (Ph.D.) in teaching and researching landscape design, planning, and assessment. Professor Corry's current research examines restoring ecological function to abandoned pits and quarries using alternative futures scenarios and studies historical agricultural landscape changes in southern Ontario. He has previously been a landscape architect with the Natural Resources Conservation Service, United States Department of Agriculture, and received prestigious awards from the American Society of Landscape Architects, the Council of Educators in Landscape Architecture, and the Canada Mortgage and Housing Corporation.

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**Judith Read Guernsey**, Community Health & Epidemiology Department, Dalhousie University. Dr. Read Guernsey examines health of rural populations within the theoretical context of upstream social determinants. She has a particular focus on workplace settings and community landscapes. She is the Director of the Atlantic RURAL Centre, funded by the Canadian Institutes of Health Research, and is the Atlantic Director for the Canadian Aerosol Research Network. Professor Guernsey has been active as a member of numerous government panels, most recently the Government of Ontario Expert Advisory Panel on Climate Change Adaptation and the Canadian Public Health Agency of Canada's National Collaborating Centre on Environmental Health.

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### Moderator

**Stephen Streng** is a research fellow at the Center for Rural Design. He received his MLA from the University of Minnesota and has a BFA from the School of the Art Institute of Chicago. In between degrees he worked in publishing and has been a professional editor and writer. Streng's research interests include methods for communicating complex ideas and data to general audiences; public participation methods in research, planning, and design; restoration of ecological function to developed and degraded areas; and green infrastructure.

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