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Article

Editorial: "Ecological wisdom inspired practice research for building resilient communities in socio-ecological systems"

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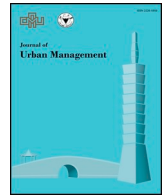


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Editorial

Editorial: “Ecological wisdom inspired practice research for building resilient communities in socio-ecological systems”



Research on urban resilience building that centers on either social or ecological systems without consciously linking the two has been the norm for mainstream practice. Rooted in the intellectual traditions of positivism, this stream of research has often been conducted in ways parallel to those of basic or applied research in physical and social sciences, and informed largely by quantitative modeling and large scale data analysis. Because of the increasingly recognized limitations of this positivist and reductionist approach in socio-ecological systems (SES) research and practice (Churchman, 1967; Davoudi et al., 2012; Flyvbjerg, Landman, & Schram, 2012; Geyer & Rihani, 2010), where problems are wicked in nature (Rittel & Webber, 1973; Xiang, 2013), alternative approaches have been proposed and some implemented. These include, but are not limited to Adaptive, Participatory & Transdisciplinary (APT) approach (Head & Xiang, 2016a,b; Huang & London, 2016), Participatory Action Research (PAR) (Bacon, Mendez, & Brown, 2005; Gavin, Wali, & Vasquez, 2007; St. Martin & Hall-Arber, 2007), and Community Based Participatory Research (CBPR) (Israel, Eng, Schultz, & Parker, 2005). Through this Special Issue, we aim to make a compelling case for an emerging and promising research direction on the construction of an overarching framework of practice research focused on building resilient SES communities with a variety of transdisciplinary approaches.

More specifically, drawing upon literatures of action research, communicative rationality, practical rationality, complex adaptive systems, urban resilience, ecosystem services, and in particular, ecological wisdom, we have collected contributions that focus on one or any combination of the following topics: environmental justice – social and ecological implications; urban ecology and the role of local residents in restoration; creation of green infrastructure; building healthy (physical and mental) communities; and the fusion of social, economic and ecological systems. In particular, we welcome manuscripts that report transdisciplinary projects in which usable, useful and efficacious theories, methods and practical tools are developed and used in the practice of urban resilience building.

This special issue begins to collect a variety of cases that point towards the construction of an overarching framework of practice research, a fusion of nuanced theoretical and practical frameworks, that centers on building resilient SES communities with a variety of transdisciplinary approaches. Drawing upon existent literature in action research, communicative rationality, complex adaptive systems, urban resilience, and in particular, ecological wisdom, we can push the scholarly conversation to address the following questions:

1. What kinds of professional knowledge do practitioners need and use in their practice of building resilient SES communities? What are the defining characteristics and components of the professional knowledge they use?
2. What are the criteria practitioners employ in searching and orchestrating the kinds of professional knowledge they need?
3. What kinds of *moral improvisation* (Forester, 1999) skills do the practitioners need and use in their practice of building resilient SES communities? And how exactly have these skill sets been integrated into their practice?

We have organized manuscripts in this special issue to explore insights into these questions via an exemplary-case-based approach. Authors have used instances of resilient community building and challenges to such work from around the world in their deliberation. The topical areas of these cases include, environmental justice with social and ecological implications; urban ecology and the role of local residents in restoration; creation of green space and healthy communities; and social and economic system's dependence on environmental ecosystems.

In the first article of this issue Forrester reminds us that “...wise ecological practice must engage complexity and plurality, conflict and power, and multiple avenues of negotiations too.” This statement sets the stage for unpacking what elements of practice and lived experiences contribute to ecological wisdom. Forester's own selection of case studies begins this conversation looking at issues such as proper problem framing using a case study of local anglers in Brooklyn, learning to see and read the landscape and its political

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context thereby building power of knowledge in Philadelphia and finally exploring deliberative engagement between humans and our environment through a case study located in Sicily. This Sicilian case study is explored in all its details by authors Raciti and Saija in this special issue offering extensive lessons on action research methods to shape ecological devices within a long term University-Community partnership in the Simeto-River Valley (Sicily, Italy).

Douglas et al. offers a case study using a PAR approach focused on a City-led resiliency planning process in Cambridge. This paper expands the conversation to techniques and methods for generating and activating ecological wisdom and use local knowledge to inform urban climate change adaptation and resiliency planning. The article by Wang et al. asks: “*What are the key adaptive attributes of a resilient community*” using four case studies to inform the answers. This article contributes geographic diversity to our special issue by learning from Los Angeles, Copenhagen, Shanghai and Sydney.

With a reminder of the foundational work by Ian L. McHarg on “Design with Nature” Steiner’s article ties a need for increased ecological literacy to increased and more meaningful participation in a comprehensive planning process in Austin, Texas, demonstrating the ways in which ecological wisdom is useful to planners, designers, policy makers and citizens to consider long term ecological impacts of plans and actions. Through this article Steiner makes contributions to planning practice and theory building with important conversations for planning scholars to continue linked to the role that ecological wisdom can play in plan making. The final case study included in our collection is written by Schwann and centers on Traditional Ecological Knowledge and Wisdom (TEKW) of indigenous Syilx/Okanagan people in British Columbia. In this article we learn how TEKW can be a base for environmental policy for sustainable management of natural capital.

While most articles in this collection of articles are based on place based case studies, The first of two articles by Walsh offers us a historical account of a pioneering sanitary engineer, social reformer and educator. Her analysis of the contributions of Ellen Swallow Richards (1842–1911) creates a valuable historical foundation for contributions to theory and practice of work tied to ecological resilience and environmental justice. Walsh’s second contribution, equally importantly, addresses white fragility as an obstacle to resilience planning. In the final paper she explores how practice based research can support well-being and capacity of vulnerable communities. With these contributions an important and direct push for anti-racist and feminist theory to inform the work is evident.

By collecting a series of case essays describing projects that operate at the intersection of the social and the ecological across different spatial scales (regional, urban, neighborhood), we have started the conversation needed to share the state of knowledge about methods and practical tools used to implement projects and generate new knowledge in the process. The collection of case studies also serve to exemplify and begin to inventory the varied types of projects working at this intersection. Our hope is that this special issue will be a start for a long standing interdisciplinary conversation to further knowledge about building resilient communities in socio-ecological systems.

About the Guest Editors:

Dr. Janni Sorensen holds a PhD in Urban and Regional Planning from the University of Illinois–Champaign Urbana.

As an associate professor in Geography and Earth Sciences at UNC Charlotte, her research agenda is focused on neighborhood scale participatory urban planning and community organizing. In 2008 she established and continues to direct the Charlotte Action Research Project (CHARP). CHARP has long standing partnerships with local marginalized communities, with a mission to consistently work towards a larger agenda of social justice. As an instructor for undergraduate and graduate courses in Neighborhood Planning and Community Development she has successfully integrated teaching into partnerships with neighborhood residents working together to develop comprehensive neighborhood plans, small scale research projects, grant writing and neighborhood events. Dr. Sorensen’s work has led to many journal articles and several grants from local government and foundations that have supported her ongoing work in Charlotte neighborhoods.

Dr. Tara Benge is the Community Research Manager for the Smith Institute of Applied Research at Johnson C. Smith University.

She received her doctoral degree in Geography from UNC Charlotte in 2015. Dr. Benge’s research focuses on participatory planning and democratic processes in underrepresented communities. This research builds on feminist and popular education methods to raise critical consciousness for the purpose of transforming individuals and systems of inequality. Tara has worked extensively in local community development initiatives and was recipient of the 2015 Community Development Scholar Award from the Community Development Society.

Dr. Wei-Ning Xiang is a professor of geography and earth sciences at the University of North Carolina at Charlotte, USA, and research fellow of ecological practice research at Tongji University, Shanghai, China.

Dr. Xiang’s scholarly activities have been found in the areas of landscape and land use planning, geographic information science, spatial modeling, complex adaptive systems, and recently ecological wisdom inspired urban-rural resilience building in China. His scholarly contributions appeared in *International Journal of Geographic Information Science*, *Environment and Planning B*, *Journal of Environmental Management*, and *Landscape and Urban Planning*, among others. He is the Co-Editor-in-Chief of *Landscape and Urban Planning* since 2011, and the founding Editor-in-Chief of the Springer Nature EcoWISE (Ecological Wisdom Inspired Science and Engineering) book series since 2016.

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