

“MEASURING RESILIENCE AND ADAPTIVE CAPACITY FOR LOCAL POPULATIONS AFTER ARMED CONFLICT OR NATURAL DISASTERS”

WORKSHOP DESCRIPTION:

On January 16-17, 2009, the Institute for National Security and Counterterrorism (INSCT), a joint program of Syracuse University’s College of Law and Maxwell School, will host an interdisciplinary workshop gathering scholars and practitioners with interest in the topic of resilience in conflict and disaster settings. The workshop is a vital first step in a larger effort to understand the underlying causal factors that impact society’s ability to recover from a major conflict or disaster. The inherent complexity of these societal problems spans across many traditional disciplines, demonstrating a need for an interdisciplinary approach to the advancement of knowledge on this pressing topic.

In the academic community, interdisciplinary research is widely recognized for its value in providing greater breadth and depth in understanding complex problems. Institutions and cultural norms within disciplines, however, often act as barriers to collaboration through distance, uncommon terminology and misperceptions. In this regard, interdisciplinary work is best conducted in person. INSCT (through Director William Banks and staff), Patricia Longstaff (Newhouse School of Public Communications), Ines Mergel (Maxwell School of Citizenship and Public Affairs), and Mark Lichtenstein (Syracuse Center of Excellence) have established an interdisciplinary Resilience Working Group within Syracuse University. The aim of this proposed workshop is to expand this working group by providing a wider forum for future resilience research and project development.

PURPOSE

The purpose of this workshop is to bring together academics and practitioners across multiple disciplines (social/information/biological sciences, military, emergency management, critical infrastructure) in order to: (1) develop a theoretical framework of resilience for empirical examination, and (2) establish an interdisciplinary research agenda on resilience.

SUBSTANTIVE BACKGROUND: RESILIENCE RESEARCH

Resilience is defined as the “capacity of a system to absorb disturbance, undergo change, and still retain essentially the same function, structure, identity, and feedbacks.”¹ Recent challenges in post-conflict reconstruction (PCR) highlight the need for a full understanding of a host nation’s resilience capacity to withstand the hardships of armed conflict. The same holds

¹ Resilience Alliance. <http://www.resalliance.org/1.php>.

true for communities impacted by natural disasters. Resilient communities recover more quickly from the resulting destruction in these settings which leads to the following initial research questions. What attributes (human, social, cultural, political, economic, technological) within a community are essential to ensuring resilience? How are they measured? How are they interrelated? Answers to these questions and those that will follow hold significant insights for leaders and planners in PCR and emergency management settings.

Every discipline acknowledges the importance of resilience, but each one uses its own terms of art and focuses on some resilience principles more than others. ***Cultural and Social Structure Resilience*** refers to how well a culture/society can retain its customs and identity over time through periods of great stress. Tensions between indigenous cultural/socio-political structures and new governance structures in post-conflict environments must be addressed for nation-building to be successful. ***Ecological resilience*** is found in systems with high uncertainty that must focus on persistence and adaptation. There are several (often many) possible stable states for these systems and these systems may change from one into another when disturbed. An important insight in designing ecological resilience is to understand what occurs at the boundaries of these states. For example, human systems (economic, political) are known to shift from ordered to chaotic and then to a new order when disturbed by war or lack of resources. ***Developmental resilience*** is found in humans, organizations, social systems, and ecosystems because they *develop*; that is, they change over time in form and function such that they grow, mature, die, and change in interesting ways as shaped by cultural and biological evolution. Economies and societies also develop; their resources, vulnerabilities, responses—and therefore resilience—will reflect their development. ***Engineering resilience*** will be the result of an effort to make a system return to one pre-designed state or function when it is disturbed. Resilience in these systems is measured in the time it takes to come back to system specifications. These four resilience concepts are not exhaustive considering the wide scope of available research. For example, physiology talks about the resilience properties of the human immune system.

The purpose of the workshop is to identify the commonalities in various resilient (or not-so-resilient) systems. Each expert will identify the basic components and processes that operate within their discipline and what factors indicate robustness and/or critical weakness in those systems. The commonalties should be indicators of the resilience of any complex system, including struggling communities which are really a network of systems, like social networks, economic networks and physical environments that support the community. To the extent possible these ideas will be incorporated into the theory-building part of the project. It will also aid in the development of successful reconstruction strategies. Academic research on resilience across multiple disciplines has practical applications for data collection and analysis to inter-agency planners in developing strategies to restore the critical functions of society. This research exposes several features of resilience that are found in many systems and are likely to be important for human community resilience (i.e., diversity, scale, efficiency, coupling, and social networks). It is critical to test these factors in several cultural contexts. *By better identifying indicators or principles of resilience, and then developing a way to assess or measure them, we hope to provide guidance to interveners (military or otherwise) in how to plan operations, to support existing networks during an intervention, and to foster weaker systems during a reconstruction phase.*

RESILIENCE WORKSHOP

INSCT's Resilience Working Group has identified the initial disciplines and institutions relevant for this interdisciplinary project to convene in January 2009. This workshop will include participants from Syracuse University and outside institutions with expertise in the following fields and disciplines: Resilience, Social Networks, Ecology, Engineering, Environmental Science, Economics, Anthropology, Public Administration (Critical Infrastructure, Emergency Management), and Government (U.S. Departments of State, Defense, and Energy).

In advance of the workshop, participants will be asked to submit a 1-2 page brief which will include the following:

- Description of how resilience concepts are applied within their respective discipline
- Metrics used to identify resilience within discipline (if applicable)
- Names of major resilience contributors and recommended readings in their field

INSCT will collect and distribute these readings prior to the workshop. Participants will be prepared to provide a short, five-minute overview from this paper in order to stimulate and interdisciplinary discussion. INSCT will lead a structured discussion to elicit the underlying factors of resilience across the various disciplines and develop a theoretical framework from which these factors can be tested. The key session of this workshop will be a group exercise in response to a hypothetical scenario. Participants will break out into 2-4 groups to discuss how they would approach the problem from a resilience perspective. Groups will reconvene to discuss their approach in an effort to extract useful resilience metrics and initiate a framework-building process.

Graduate students will record the workshop through note taking to capture the dialogue and all conceptual ideas. INSCT will publish a culminating paper which reflects the collaborative results of the workshop and its participants. INSCT will also work to engage other academic institutions, the U.S. Army War College and other professional military education programs, DHS/FEMA, and other regional/international organizations both to contribute to the project and to encourage other entities to join the dialogue. Participants will leave the workshop as contributing members to the culminating publication and the opportunity to participate in future research.

FUTURE RESILIENCE RESEARCH

Following the workshop, INSCT will build upon the momentum gained from the Resilience Workshop and implement a long-term research project to evaluate this resilience construct empirically in multiple post-conflict and disaster settings. This project would have two main objectives: first, to validate the interdisciplinary framework as a theoretical model for future resilience research; and second, to refine and develop new analytical tools (data gathering, decision analysis) for PCR and emergency management planners. These tools will facilitate the identification of civilian resilience capacities and the development of more effective PCR

strategies. Above all, this research will provide a deeper intellectual understanding of what makes communities “bounce back” (or not) after a significant disturbance, and culturally sensitive metrics for measuring resilience of local populations that can be used for planning response, and rebuilding. INSCT’s Resilience Working Group currently awaits funding decisions for this larger project through the National Science Foundation, and it seeking other potential funding sources.