

Title: Reconsidering the New Normal: The Impact of Trauma on Urban Ecological and Social Diversity

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Abstract

In recent years, scholars and researchers have used the phrase "new normal" to refer to the complex and multi-faceted outcomes of post-disaster recovery and reconstruction processes. Generally, the volatility and chaos occurring immediately after a trauma are followed by a relative stabilization, usually at levels and configurations different from the pre-trauma "normal." The purpose of this exploratory research is to investigate the impact of trauma on urban ecological and social systems using post-Katrina New Orleans as a study area. Specifically, the research will use ecological and social measures to track and characterize the transition from trauma to stabilization. Data will be analyzed to measure patterns of ecological and social diversification. "Ecological diversification" refers to species richness and dominance, community structure and composition, succession stage, land cover, and other measures. "Social diversification" tracks human population differentiation in terms of class (median household income), race, ethnicity, age, education, nativity, gender, renter/homeowner status, and other metrics. Toward this end, this study proposes two major research objectives. The first entails a GIS-based spatial analysis of pre- and post-trauma landscape and social metrics derived from satellite imagery and the 2000 and 2010 federal census, analyzed for diversification and compared to stabilization metrics. This citywide study will be supplemented with three fine-grained studies in the neighborhoods of the Lower Ninth Ward, Hollygrove, and Pontchartrain Park. Qualitative data collected in these neighborhoods will provide insight into the relationships between trauma and ecological and social diversity, and identify variation in the timing, pace, and trajectory of neighborhood recovery. The second objective involves the organization and coordination of a network of scholars and practitioners to exchange experience and knowledge and thereby increase understanding of the complex interactions and connections among trauma, human actions, and urban ecosystems.

The project will yield several empirical, theoretical, and practical contributions to understanding the interactions of humans and natural ecosystems. Empirically, the research will provide extensive numerical data and analyses on social diversification and post-trauma stabilization, at detailed spatial scales. Theoretically, this project will identify feedbacks and reciprocal effects among patterns of post-trauma urbanization, ecological consequences, and human responses. Practically, this project will establish a broad-based, interdisciplinary research program that will identify the human and natural system drivers of post-trauma urban ecosystem changes, and develop strategies for responding to these changes. With respect to broader impacts of the

proposed research, the project will involve an interdisciplinary team of ecologists, biologists, sociologists, geographers, anthropologists, a civil engineer, a trauma psychologist, a U.S. Forest Service researcher, and urban planners, plus members of the community who bring traditional knowledge to the project. By leveraging the research and education resources of three major universities – Tulane University, the University of New Orleans, and Xavier University, a major HBCU - this research will foster unique collaborations between ecologists and social scientists, and broaden participation of underrepresented groups in generating new knowledge about human-natural system interactions. The involvement of local researchers and scholars from the social, behavioral, and ecological sciences will provide for integrative interdisciplinary research with the potential to create new knowledge, new subfields, and new paradigms for understanding human-ecosystem interactions and transformations.