Chapter 2
Socio-Ecological System Implications of Organizational Resilience

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ABSTRACT

The aim of this chapter is to direct a socio-ecological system as a construct of organizational resilience able to include research to create a coherent and comprehensive analysis of the implications of uncertainty, complexity, discontinuity, and adversity. The analysis departs from the development of conceptualizations, definitions, methods, functions, operations, assessments, and measures. The methodology employed is based on transdisciplinary approaches to a qualitative and reflective analysis of the theoretical and empirical literature review. It is concluded that an integral approach to organizational resilience must consider a socio-ecological system to assess the environmental implications of uncertainty, complexity, discontinuity, and adversity as a source of bouncing back and forward from organizational crises.

INTRODUCTION

Any kind of organization needs to develop a resilience capacity enabling to cope effectively with environmental uncertainty and complexity of future events (Lengnick-Hall, *et al*., 2011). The definition of the organizational resilience profile may be able to describe how to cope the complexity of the system, the analysis of factors and categories under the assumption of their effects and limitations for a systemic organizational change.

The systems approach to a construct structure of organizational resilience (Tierney, 2003) is based on dimensions of robustness, resourcefulness, redundancy, and rapidity. Other construct structure of organizational resilience develops from robustness, integrity, and agility (Deniz & Iseri Say, 2015). Resilience incorporates notions of anticipation, retroactive evaluation, systemic adjustments, and validation.

Research in organizational resilience is a inter and transdisciplinary field that build bridges with the geographic, environmental, ecological, sociological, psychological, climate sciences, etc. aimed to develop and build resilience within socioecological systems. Qualitative research methods can be used and performed to study organizational behavior from a person-centric approaches such as interviews and focus groups to consider different experiences based on the evaluations of the severity situations in the face of adversity and crisis (Walker & Cooper, 2011)

The conceptual foundation for organizational resilience can be lay out through a transdisciplinary perspective based on psychology, ecology, engineering, ecology, and organization science aimed to develop a construct of resilience. The transdisciplinary approach frames organizational resilience to reap benefits from adverse events that have not been achieved in absence of adversity. This transdisciplinary approach draws insights on the concept and nature of organizational resilience after the comparison of underlying assumption. The nature of resilience is being exposed in the domains of psychology, systems, engineering, sociology, ecology, socioecological systems, organizational sciences.

Several disciplines such as management, psychology, sociology, ecology, etc., back up organizational resilience. The concept of resilience is used in ecology (Walker & Cooper, 2011; Walker *et al*., 2002), engineering (Woods, 2006), and psychology (Antonovsky, 1996), and across all fields. The concept of resilience was introduced in psychology (Coutu, 2002) and popularized after Holling (1973) in fields such as ecology, psychology, sociology, management and organization sciences, engineering, etc., and specific topics such as disaster management (Henry & Ramirez- Marquez, 2010; Annarelli & Nonino, 2016; Bergström, *et al*., 2015).

Resilience is an issue studied in all academic fields such as ecology (Walker *et al.,* 2002), psychology (Powley, 2009), organization management (Weick, 1993: Gilbert, *et al*., 2012), engineering (Hollnagel *et al.,* 2006), and several more. From the perspective of psychology and organizational behavior, Weick (1993) sustains that organizational resilience is the ability to support individual and social interactions in an environment of organizational wisdom. The psychological resilience refers to the quality of individuals, groups and organizations as a system that responds to disruptive change that results from the pattern of events without engaging in regressive behavior (Horne & Orr, 1998: 31).

Organizational resilience is critical response to the survival of economic, socio ecological and technological changes (Horne III, 1997). The interdependence between the socio ecosystem and organizational resilience as components of broader socio ecological systems may be analyzed at organizational level and in relation to the operating socio ecosystem. Distinct resilience attributes elements considered in the organizations with the corresponding practices and actions may contribute to establish and maintain organizational resilience, such as stresses and hazards, uncertainties, governance, and livelihoods.

The foundations of the organizational resilience construct derived from different disciplines, applied to get consistency in the articulation of robust assumptions in the way organizations should respond to adversity (Taleb, 2012).

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