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**Scale, Change and Resilience in Community Tourism Planning**

**Alan A. Lew, Ph.D., AICP**

**Northern Arizona University**

**<alanalew.com>**

Abstract

Resilience planning has emerged in recent years as an alternative to the sustainable development paradigm to provide new perspectives on community development and socio-ecological adjustments to a rapidly changing world. Tourism scholars have been somewhat slow to adopt the recent conceptual ideas related to community resilience that have been published in other disciplinary areas, though this situation is also changing rapidly. While most resilience research focusses on major disasters and crises, new frameworks that encompass slow change variables provide a more comprehensive view on resilience. A model for tourism resilience considers this rate of change (transitioning from slow to fast), and the scale of tourism interest (scaling from that of the entrepreneur to those that are community-wide). The resulting 2x2 matrix presents four context with distinct resilience issues, methodologies and measurements, ranging from entrepreneurs managing daily maintenance needs, to community disaster readiness, response and recovery.

Keywords: Tourism planning, Resilience planning, Sustainable development, Community resilience, Complex adaptive systems, Sustainable tourism, Socio-ecological resilience

Sustainable Development and Resilience Planning

Resilience planning has emerged in recent years as an alternative to the sustainable development paradigm to provide new perspectives on community development and socio-ecological adjustments to a rapidly changing world. Tourism scholars have been somewhat slow to adopt the recent conceptual ideas related to community resilience that have been published in other disciplinary areas, though this situation is also changing rapidly. This brief survey presents an introductory overview of some of the evolving thoughts in community resilience studies and proposed a model to apply these in a tourism context.

Tourism destinations, along with the rest of the world, face ever increasing levels of greenhouse gasses, global temperatures, biodiversity losses, human population densities, regional fiscal imbalances, income disparities and social inequities (WEF 2013; Davidson 2010). Given the seeming inevitability of social and environmental change, resilience planning has recently emerged as perhaps a more effective approach to community planning and development than the sustainability paradigm. From a modeling perspective, Derissen, et al. (2011) define the difference between these two approaches as one where sustainability mitigates or prevents change by maintaining resources above a normative safe level, whereas resilience adapts to change by attempting to build capacity to return to a desired state following both anticipated and unanticipated disruptions (see also Prasad et al. 2009; McLellan et al. 2012).

Contemporary resilience theory and research has its origins in dynamic system models in the mathematical sciences (Davidson, 2010), which were adapted to ecosystems by ecologists (Holling, 1973) to define the ability to maintain biological relationships through periods of environmental stress. Today, resilience is widely used beyond ecology as a conceptual framework in psychology (individual resilience in coping with adversity) (Kashdan, 2006), in physics and engineering (as a property of materials), as well as in organizations and communities, ranging from private companies to governments and societies (the ability to maintain services in periods of disruption) (Norris, et al. 2007). In tourism, resilience has mostly mostly been discussed as a theoretical concept, focusing on Complex Adaptive Systems, with Farrell and Twining-Ward (2004) calling for a “Complex Adaptive Tourism” approach and Falkner (2000; 2001), using chaos theory ideas, suggested a “Turbulence Studies” approach to tourism. Those ideas, while intellectually stimulated, have had limited empirical application. It is only recently that the resilience approach has emerged from complex adaptive theories and disaster planning and relief, which is often referred to as “engineering resilience” (McManus et al. 2007), to become a distinct paradigm for community planning and development. Engineering resilience is one of three major orientations to resilience planning (Holling 1973; Davoudi 2012), which together include:

1. An engineering approach that focuses on efficiencies in returning to a steady state that existed prior to a disturbance or change through readiness, response and recovery planning. This is the focus of most disaster management efforts, and would include, for example, geoengineering adaptations (e.g., sea walls, levees, beach nourishment) to reduce the impact of coastal erosion due to sea level rise (Fünfgeld & McEvoy 2012).

1. An ecological approach where a change results in adaptations that utilize a new or different equilibrium than existed prior to the event – i.e., different ecological equilibrium are used for different conditions (or habitats). This is mostly applied to identifying thresholds that mark shifts in natural ecosystems, though it also applies to humans and settlements that shift into new occupations and economic base industries (see Ranjan, 2012), or the adoption of land use policies that force development away from increasingly sensitive areas (Russel & Griggs 2012). From a community planning perspective, however, it is more frequently referred to as socio-ecological resilience (Folke et al. 2003; Walker & Salt 2006).

1. A synoptic approach in which change and adaptation are constants, subsumed within a meta planning framework, and stability and equilibrium are rejected as temporary illusions. This approach is based in the resilience concept of “panarchy” (Gunderson & Holling 2001), in which coupled natural and human systems are in constant interplay at multiple and often opaque, levels (Cutter, et al. 2008). Davoudi (2012) has suggested the term “evolutionary resilience”, based on the concept of evolutionary economics (Boschma & Martin 2010), and the approach may be more suited to adaptations in response to slow changes in environmental and social conditions, even so far as to reject the concept of thresholds and tipping points (Davidson 2010).

Most of the climate change resilience policies for human settlements center on adopting various forms of engineering resilience for managing weather and geology-related disaster risk scenarios (Prasad et al., 2009;

Falkner, 2001). Social approaches to resilience tend to raise the more difficult political and social equity issues of “resilience from what, to what, and who gets to decide?” (Porter & Davoudi 2012: 331). This is especially problematic in conflict involving multiple stakeholders and uncertain outcomes (Plummer & Fennell 2009; Strickland-Munro, et al. 2010). At the same time, there is also a recognition that human settlements at all scales face a diverse range of predictable and unpredictable or nonlinear natural and social shocks, some of which are sudden and large, but others of which are gradual and moderate in their perceived impacts. Walker, et al. (2012) refer to these as “fast variables” and “slow variables”, respectively. Slow variables, for example, include the gradual extinction or relocation of ecosystems in response to long term climate change, as well as cultural shifts under globalization that may take a generation to become apparent.

Scale, Change and Resilience in Tourism

Within tourism, the concept of resilience has largely focused on economic resilience (rather than cultural, institutional or infrastructure resilience), and most tourism related resilience research has focused on case studies rather than advancing theoretical constructs. The most common resilience perspective in tourism has been on the recovery of tourism industries and tourist arrival numbers following fast variable changes – that is, disaster and crisis preparation and recover (Falkner, 2000). These have included the Asian economic crisis of the late 1990s (Pearce 2001), the SARS epidemic in China in 2002-2003 (Zeng et al 2005), the Indian Ocean tsunami in 2004

(Biggs, et al. 2012; Smith & Henderson 2008; Calgaro & Lloyd 2008), earthquake threats in New Zealand’s Southern

Alps (Orchiston 2013), and combinations of economic, political and economic crises in Southeast Asia (Lew 1999; Prideaux et al. 2003). Ritchie (2004; 2009) and Hall, et al. (2013), among others, have provided comprehensive overviews of resilience, but mostly in the context of large change variables, which continues the dominance of engineering resilience research of earlier years (see also Hall 2010 and BESTEN 2005).

More recently, and reflecting broader social science interest, slow change variables have started to receive some attention by tourism scholars. These include relating resilience to Butler’s (1980) tourism area life cycle (TALC) model (Petrosillo, et al. 2006; Hamzah & Hampton 2013) and to the impacts of economic migration and social change on tourism destinations (Lew 2013). A major slow variable focus has been on destination resilience to global climate change (Becken & Hay 2007; Kaján & Saarinen 2013), including its impacts on tourist behavior (Becken & Wilson 2013) and on specific tourism industries, such as snow skiing (Steiger & Stötter 2013) and coral reef-based scuba dive services (Biggs et al. 2011; Hillmer-Pegram 2013)

While offering valuable insights, these case studies tend to reflect a common approach that treats tourism as a separate enclave from its larger social and environmental system, which is anathema to the complex systems approach of resilience. Both Tyrell and Johnston (2007) and Strickland-Munro, et al. (2010) have sought to address this narrowness by proposing conceptual frameworks in tourism that reflect broader systems science, with the former taking a mathematical modeling approach and the latter a more qualitative planning approach that incorporates local stakeholder perceptions, historical trajectories and regulation theory (governance) in their approach to tourism in protected areas. Lacitignola, et al. (2007) also proposed a mathematical resilience systems model, while Farrell and Twining-Ward (2004; 2005) proposed a multi-scalar Complex Adaptive System (a closely related concept to resilience) tourism model that places ecological process as the basis for a new sustainability approach. The problem with these frameworks is that by incorporating larger considerations in their models, as required by a systems perspective, they have a tendency to overshadow distinct understandings of the tourism phenomenon. Applying these models to real world problems is also a challenge because “[u]nfortunately, the tourism research community is far from being able to formulate or estimate such systems at any level of realistic detail” (Tyrell & Johnston 2007:19).

Hopkins and Becken (2014: forthcoming) note the additional challenge of understanding “how resilient different actors and cultures are to changes [and] … why some individuals, communities or institutions persist in their largely unchanging form, while others evolve, and whether they would evolve anyway…”. Part of the answer to this question lies in the context and needs of the individuals and tourism entities involved. Figure 1 conceptualizes four generalized types of tourism contexts, based on the degree of disturbance (x axis - from gradual shift to sudden shock) and the scale of tourism actors (y axis - from private entrepreneurs to shared public interests) that are involved. The model assumes that private entrepreneurs, who may be considered agents of tourism production (Shaw 2014), have a fundamentally different focus in addressing resilience issues than do more public or collective interests, such as destination marketing organizations and local or regional governments. These interests overlap across a transition that includes corporate social responsibility and community economic development policies. The rate of change recognizes that people perceive and manage slow changes in the environment, culture and society in a different manner than they do under sudden major shocks to these systems. In addition, this proposed Scale, Change and Resilience (SCR) model recognizes that rates of change can be highly variable over time and at different social and geographic scales, which can require different modes of response.

<< Insert Figure 1 Here -- Scale, Change and Resilience (SCR) in Tourism >>

The SCR model generalizes four contexts for tourism and resilience. Each of these present a specific set of resilience issues for those operating within that context or setting. The individual entrepreneur or tourism facility needs to manage the persistent changes associated with the predictable deterioration of facilities from the entropy of gradual wear and tear over time and the need to upgrade or otherwise modify services to meet the less predictable changing tastes of tourists (Type #1). The challenges of these types of changes are, for the most part, slow and emerging, but they must be addressed through a consistent management plan for long-term viability and success. The type #2 context comprises slow change challenges that a community or collective must address, beyond the interests of any one individual or enterprise. These are more in the realm of the public commons and may exist at geographies ranging from a neighborhood, to a city, a region or a country. The slow change public issues faced in this context include shifts in ecosystems that are often imperceptibly gradual and confusingly nonlinear from a human lifetime scale (Walker, et al. 2012), as well as the impacts that neoliberal globalizing economic policies have had on economies and cultures in even the most remote regions of the globe today (Oberhauser & Hanson 2007; Fletcher 2011). From a tourism perspective, the type #2 setting is addressed through green certifications for hotels and other tourist services, as well as corporate responsibility policies that similarly contribute to the broader social good in a community. Such sustainable tourism policies and practices have almost exclusively address slow change issues (such as water conservation, fossil fuel consumption, and cultural resource preservation).

At some point the rate of change in the natural or social environment may pass a threshold (or breaking point) after which it is perceived to be a shock event. This might also be referred to as a disaster or system failure. Awareness of the shock event may be immediate and obvious (as with a major earthquake of flood) or it may emerge over a longer period of time (as with an economic or political crisis or disease pandemic). For the private individual or tourism enterprise in a shock setting (type #3 in Figure 1), the biggest concern is the loss of access to either a major tourist attraction resources or to primary tourist markets due to infrastructure, economic, political or other disruptions.

At the public community scale (type #4 in Figure 1), major natural and human disasters and crises have impacts far beyond the tourism sector, and preparatory planning needs to take that into account (Woosnam & Kim 2013). Such planning typically takes the traditional engineering resilience approach of emergency management, which includes reducing the vulnerability of key social and environment systems, building capacity to respond to anticipated needs, and having in place a long term recovery plan (McManus et al. 2007). Tourism has a direct interest in the rapid recover of the basic support infrastructure in a place that is affected by a major disruption, and is supportive of these efforts where feasible. In addition, tourists are a distinct population that requires special needs in disasters times (Prideaux 2004). The tourism sector can support preparation and response efforts for large disasters by, for example, supporting public education and awareness of known vulnerabilities through sites, museums and events that commemorate past disruptions, and which could serve both resident and visitor interests (Winter 2011). This is where an evolutionary approach, involving institutional and individual learning, may prove more effective to strengthening resilience for the future.

Conclusions

Tourism is an integral part of contemporary communities, and as such, reflects the challenges of that

communities face under the growing pressures of global environmental and social change. With the increasing pace and complexities of contemporary social and environmental change, resilience research has grown in importance, with a 400% increase Social Science Citation Index articles between 1997 and 2007 alone (Swanstrom 2008, cited in Davoudi 2012). Contemporary tourism issues that the resilience (and the proposed SCR model) specifically addresses include:

* Tourism destinations and businesses face a range of change pressures, including environmental (changing natural resources), social (changing cultural resources) and economic (changing economic conditions).
* Pressures for change occur over different rates of time, with some being slow and predictable, while others requiring urgent and flexible responses; and both occurring in linear and non-linear (sporadic) periodicities.
* Pressures for change occur at a variety of social and geographic scales, with some primarily impacting an individual entrepreneur, while others impact an entire community or social group.
* Common impacts of change that must be planned for in tourism destinations include the modification, deterioration or complete loss of: (1) tourism facilities, services and infrastructure; (2) environmental and cultural tourism resources; (3) tourist markets; and (4) skilled employees.

An earlier generation of researchers raised the need for tourism scholars to better understand the relationship between tourism and crisis events (e.g., Faulkner 2001; Prideaux et al. 2003; Ritchie 2004). Driven by global needs, resilience planning and policy research has expanded considerably in the past decade across the social sciences, and tourism research is similarly advancing in this area. Awareness of this trend will better enable the tourism industry to be an active agent in community resilience planning, as new ideas, frameworks and applications emerge to make that happen.

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Figure 1. Scale, Change and Resilience (SCR) in Tourism

