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Designing a Placed-based Self-organising Ecotourism Plan

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Abstract

Ross Ashby's Law of Requisite Variety [1] is used as a mental model to operationalize the concept of resilience in coupled complex adaptive systems. One way to deal with complexity and surprise is to increase the diverse range of capabilities that can be called upon when different stressful conditions arise. A resilient system is a system capable of: 1) adaptation, 2) evolution. While adaptation can be achieved by investing in the absorption of shocks through investing in the structural properties of a system, evolution requires flexibility and decentralised architecture [2, 3]. Therefore, a type of robustness that leaves enough space for the introduction of novelty and the selective pressure of evolution needs to be explored in the discourse of resilience. A resilient system has been considered to have specific adaptive capacities that enable it to make decisions about kind of trade-offs that insure its stability whilst leaving sufficient flexibility for transformation [4]. In this paper, I emphasise that only a certain type of management is able to produce a resilient, adaptable, and evolvable system. This management is called the adaptive governance in the current state of resilience theory [5]. Nevertheless, the lack of a sound theoretical basis that explicitly demonstrates the link between adaptive control and resilience is still evident. The law of Requisite Variety means that the larger the variety of actions available to a control system, the larger the variety of perturbations it is able to manage. Put more simply, only variety absorbs variety. Since a system is resilient only if it can absorb changes that are arising from shocks and stressors, and since the impacts of change unfold in complex and nonlinear ways, I argue that fostering diversity management skills can enhance a system's overall resilience. Diversity can be thought of as an adjustment parameter that, if it is rightly managed and designed in a system, can be used as a tool to tweak or nudge [6] a system's trajectory of evolution toward a higher degree of resiliency[7]. Using a case study of collaborative ecotourism network [8], I demonstrate that a placed-based adaptation strategy [9] that is focused on harnessing the collective intelligence of the local community [10] can be a potential way to empower communities' capacity for self-organisation [11], self-sustainability, coordination and learning.

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