

Interdisciplinary design thinking for resilient cities

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Is there a physical design strategy to design for resilient cities is the question raised through this paper?

This study does not aim to critically examine the concept of resilience but the physical design strategies.

Based on the scientific premise that a network has a higher ability to distribute disturbance and thus retain general balance within the system, a city is presumed to have higher resilience if designed as a composite system of synergistically networked subsystems, through this paper. Approaches of ecological determinism (McHarg, 1969) and environmentalism (Lyle, 1991) provide only remote clues to this spatial design question. The approach of eco-analogy to design cities (Alberti, 2008, Register, 2006, Makhzoumi and Pungetti, 1999, Benyus, 1997, Lyle 1991) is thoroughly investigated in search of further resolution. An in-depth review of these contemporary theoretical propositions, however, reveals a lack of popularly comprehensible and replicable physical design strategies for a spatial designer. This research aims to address the lacuna.

Study of biological, ecological exemplars of commensal or mutualistic symbiosis is conducted through literature review. Intentions are to derive a set of: physical design strategies to facilitate synergy amongst all composite urban systems, and, facilitative physical conditions, processes and patterns. In conclusion, the findings of synergistic design are outlined and supplemented with a critical discussion on transferability of these strategies to spatial design of cities. The paper is a continuum in ongoing research on interdisciplinary research in spatial design and systems ecology, and adds to the discourse on theory and design of resilient cities.