

The objective of this paper is to explore the use of analog to understand the subject of the Vulnerability of Communities. The social science domain is then the target domain for the analogy. The source domain is chosen as Structural Engineering because it is also very concerned with vulnerability of structures.

The concept of vulnerability can be applied to structures in the context of their lack of capacity to withstand various perturbations. Structural integrity is an overarching concept in structural stability, but will be taken here to indicate the satisfactory connection of individual structural elements. Redundancy in a structure refers to the presence of a multiplicity of load path. Robustness refers to good distribution of load carry elements, so that no part of the structure is unduly stressed, since loads will be well shared. Ductility

refers to the ability of (generally) individual elements of the structure to deform without sudden or brittle failure.

The sociological parallel of integrity is community; this too is an overarching concept and can be described as a shared experience of belonging or of being one-a very similar idea to that of integrity. The parallel of redundancy is leadership, or the capacity for it. This is the factor that holds communities together. Robustness can be related to participation, which ensure the functioning of communities. The parallel of ductility can be described as resilience, referring primarily to an individual trait, which nevertheless influences the entire community.

Concepts from the source domain in fact found to correspond to features in the target domain. Other relevant factors that affect communities, such as land and its history and culture may also have parallel features that affect the vulnerability of structures.