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PREFACE

Complexity science and the emergent patterns of global change expected in the future. An ecopolitan state is created by the evolution of the civil system, which is a complex adaptive system with emergent properties. Unlike biological evolution, there is feedback and teleology, and so the system evolves as a combination of natural selection and human intervention (teleology). The methodology involves identifying regions and establishments as transacting entities, which gives spatial structure to the trajectory of the civil system so that macrolaws may be derived from the complexity landscape. Civil ecostructures (towns and cities) form in a fractal-like civil system, with emergent behaviour in the macrostructure at the regional, state, continental, and planetary levels. An evolutionary timescale for cities is measured in decades, in relation to a century for the lifetime of buildings, and the system as a whole survives generations of the transacting entities. There are a number of potential hazards that may impact upon our civilization in the future, and the scale of hazards and disasters can be measured in terms of their spatial scale, ranging from local to regional to global impacts. Long-Range Futures Research takes a planning time horizon of 100-150 years to 2150 to include five future generations and tracks the evolutionary trajectory to 2250. However, in the course of a millennium, there will undoubtedly be discontinuities, and so a meta-timescale for deep futures has been established.

Long-Range Futures Research: An Application of Complexity Science sets out the scientific basis for futures studies by a unique application of the science of evolution