

cope with but again it cannot adapt to unexpected events. Many classical systems are designed to maintain the efficiency of function given a set of broad constraints or defined changes e.g. loss of a single engine in an aircraft.

A *fluid* system is one with low engineering resilience but high ecological resilience. Though elements of the system can be considered fragile (operating within limited constraints or occupying a niche), the system itself adapts rapidly to changing circumstances i.e. the efficiency of function might decline rapidly due to a change but the function continues to exist. Many biological ecosystems can be considered fluid and the process of change is known as evolution e.g. adaptation of a species to some new predator or environmental catastrophe.

A *resilient* system is one with high engineering and ecological resilience. Not only is the system capable of coping with a wide variety of physical extremes, the entire system rapidly adapts to a changing environment in order to exist. Nature in its entirety can be considered resilient and it has become so through the process of evolution. Nature consists of many biological ecosystems occupying niches and any change in physical conditions enables one biological ecosystem to invade the space of another. The efficiency and survival of life is preserved bar the most catastrophic of shocks.

This last point is critical. It is evolution through competition and a changing environment that has made Nature itself resilient. Evolution is driven by competition and far from the gradual and peaceful concept