
JOSEPH TANTER

Professor of Sustainability in the Department of Environment and Society, Utah State University, United States



Joseph A. Tainter is Professor of Sustainability in the Department of Environment and Society, Utah State University, having previously served as Department Head. He received his Ph.D. in Anthropology from Northwestern University in 1975. Dr. Tainter worked on issues of sustainability before the term became common, including his acclaimed book *The Collapse of Complex Societies* (Cambridge University Press, 1988). He is co-editor of *The Way the Wind Blows: Climate, History, and Human Action* (Columbia University Press, 2000), a work exploring past human responses to climate change. With T. F. H. Allen and T. W. Hoekstra he wrote *Supply-Side Sustainability* (Columbia University Press, 2003), the first comprehensive approach to sustainability to integrate ecological and social science. His most recent book is *Drilling Down: The Gulf Oil Debacle and Our Energy Dilemma*, with Tadeusz Patzek (Copernicus Books, 2012). Dr. Tainter has taught at the University of New Mexico and Arizona State University. Until 2005 he directed the Cultural Heritage Research Project in Rocky Mountain Research Station.

Dr. Tainter's sustainability research has been used in more than 40 countries, and in many scientific and applied fields. Among other institutions, his work has been consulted in the United Nations Environment Programme, UNESCO, the World Bank, the Rand Corporation, the International Institute for Applied Systems Analysis, the Beijer Institute of Ecological Economics, the Earth Policy Institute, Technology Transfer Institute/Vanguard, and the Highlands Forum. Dr. Tainter has been invited to present his research at the Getty Research Center, the University of Paris (Panthéon-Sorbonne), the Royal Swedish Academy of Sciences, Uppsala University, the Universitat Autònoma de Barcelona, the University of Sheffield, Politecnico di Torino, Alpen-Adria University, the University of Zürich, Leiden University, and many other venues. His research has been applied in numerous fields, including economic development, energy, environmental conservation, health care, information technology, urban studies, and the challenges of security in response to terrorism. He appears in the film *The 11th Hour*, produced by Leonardo DiCaprio, Leila Connors Petersen, Brian Gerber, and Chuck Castleberry, in the ABC News special *Earth 2100*, and in other documentaries. Dr. Tainter's current research focuses on complexity, sustainability, energy, and innovation.

Innovation, Complexity and Cultural Heritage

Cultural heritage, both tangible and intangible, emerges from the process of innovation. We are socialized today to consider innovation to be innate and immutable. In fact, innovation as we know it today did not exist in the ancient world. It is a product of specific historical conditions. Innovation, like all forms of knowledge production, evolves along a trajectory of increasing complexity and costliness, ultimately producing diminishing returns. This presentation explores the consequences of complexification in innovation for the production of tangible and intangible cultural heritage.