**Title:** Complexity science in innovation management

**Author:** Raffaella Manzini

**Affiliation:** LIUC Università Cattaneo, Castellanza, Italy

**Abstract:** Innovation is a dynamic, complex phenomenon. Most scholar and practitioners would agree on that, and an empirical confirmation can be found in the recent dynamic reaction of the innovation eco-system to the COVID pandemic. During the pandemic, a wide set of actors (agents) co-evolved as a complex system in which hospitals, institutions, doctors, large pharmaceutical companies, and small science-technology based ones, universities, and individuals leveraged their resources and capabilities and created new ones, to let new solutions to new problems emerge in very short time. So, studying innovation eco-systems with the lens of complexity science would help a better understanding of these systems and would have dramatic managerial implications.

Despite the above, the use of complexity science and its methodologies in the field of innovation management is still very limited, probably because it would require a strong change in the way we approach research on innovation management. Just to mention a few examples, there would be the need to abandon the traditional distinction among the micro, meso and macro perspecitves of investigation; to change the way rationality, efficiency and redundancy are conceptualized and evaluated; to extend research well beyond “theory testing”, dealing with emerging phenomenon.

It is not yet clear whether, and to what extent, these changes are actually taking place.

**Keywords**: Innovation ecosystems; innovation management; innovation network.

**Author Profiles:**

**Raffaella Manzini**

<https://liuc.esploro.exlibrisgroup.com/esploro/profile/raffaella_manzini/>

<http://linkedin.com/in/raffaella-manzini-41b22982>

<https://www.researchgate.net/profile/Raffaella-Manzini>