4 SUMMIT VIENNA 2015 IS IS

Extended Abstract

Emergent Innovation: sustainable innovation as learning from the future as it emerges

On uncertainty and creating opportunities by exploring potentials and adjacent possibles

Markus F. Peschl [1,*] and Thomas Fundneider [2]

[1] University of Vienna, Cognitive Science Research Platform & Dept. of Philosophy / Universitätstsr. 7, 1010 Wien, Austria
[2] theLivingCore GmbH & University of Vienna / Mariahilfer Strasse 1d/13, 1060 Wien, Austria

E-Mails: Franz-Markus.Peschl@univie.ac.at (M.P.); fundneider@thelivingcore.com (T.F.)

* Author to whom correspondence should be addressed

Accepted:

Rethinking Innovation

Most approaches in innovation are extrapolating past experiences into the future or they use "wild" out-of-the-box-thinking methods for generating new knowledge or perspectives. However, how can we create something radically new and at the same time something that has been “waited for”, although nobody has explicitly known or seen it; i.e., something that—despite its perhaps radical newness—appears just in the right time at the right place (“kairos”) and organically fits in the existing environment (be it a market, an organization, a culture, or society). The challenge is to create something that is both radically new and fits into existing patterns of perception and thought. It is a kind of "innovation from within", an innovation that—despite its novelty—respects what is already there and makes use of its potentials for creating something new in a sustainable and thriving manner. We refer to this alternative approach to innovation as Emergent Innovation (Peschl & Fundneider, 2008, 2013, 2014). Both its theoretical foundations and a concrete well-proven innovation process will be introduced.

Emergent Innovation and adjacent possibles

Besides other approaches from the fields of innovation, cognitive science, and epistemology, this approach is based on S.Kauffman´s concept of adjacent possibles (Kauffman, 2014) and C.O.Scharmer's Theory U (Scharmer, 2007). Whenever we are dealing with the challenge of sustainable radical innovation, we are confronted with a kind of uncertainty, in which the future is not only unknown, but also unknowable. In such a perspective both search- and solution-spaces are unknown, and even "worse", they change permanently as they are continuously co-created in a process of interaction between environmental structures/dynamics, potentials, and cognitive system(s) (and their evolving needs). Comparing this situation with evolutionary dynamics, "…we do not know what all the possibilities are for such preadaptation, so we do not know the unprestatable and ever changing phase space of evolution. Not only do we not know what "will" happen, we do not even know what "can" happen." (Longo, Montevil, & Kauffman, 2012, p. 1384) For such a tricky situation, it is necessary to create niches or spaces for potentials (in Kauffman´s (2014) terms "adjacent possibles"; see also (Felin, Kauffman, Koppl, & Longo, 2014; Koppl, Kauffman, Felin, & Longo, 2014)) in which innovations may emerge.

Towards an epistemology of potentiality

It will be shown that a new kind of "cognition and epistemology of potentiality" is needed in order to accomplish such processes as "learning from the future" and "listening to the future as it emerges". It involves a whole new set of cognitive abilities, attitudes and epistemological virtues, such as radical openness, deep observation, skills of deep understanding, reframing, identifying and cultivating potentials, etc.

The second part of this talk presents the Emergent Innovation approach that applies these theoretical concepts in a concrete process design. It is a socio-epistemological innovation technology bringing forth profoundly new knowledge and innovations having the qualities explicated above. The practical concepts, the implications as well as the learnings will be discussed.

References and Notes

Felin, T., Kauffman, S. A., Koppl, R., & Longo, G. (2014). Economic opportunity and evolution: beyond landscapes and bounded rationality. *Strategic Entrepreneurship Journal*, *8*(4), 269–282.

Kauffman, S. A. (2014). Prolegomenon to patterns in evolution. *BioSystems*, *123*(2014), 3–8.

Koppl, R., Kauffman, S. A., Felin, T., & Longo, G. (2014). Economics for a creative world. *Journal of Institutional Economics*, *2014*, 1–31.

Longo, G., Montevil, M., & Kauffman, S. A. (2012). No entailing laws, but enablement in the evolution of the biosphere. In *Proceedings of the Fourteenth International Conference on Genetic and Evolutionary Computation* (pp. 1379–1392). Philadelphia, PA. (doi:10.1145/2330784/2330946)

Peschl, M. F., & Fundneider, T. (2008). Emergent Innovation and Sustainable Knowledge Co-creation. A Socio-Epistemological Approach to "Innovation from within". In M. D. Lytras, J. M. Carroll, E.

Damiani, Tennyson, D, Avison, D, & Vossen, G. (Eds.), *The Open Knowledge Society: A Computer Science and Information Systems Manifesto* (Vol. CCIS (Communications in Computer and Information Science) 19, pp. 101–108). New York, Berlin, Heidelberg: Springer (CCIS 19).

Peschl, M. F., & Fundneider, T. (2013). Theory-U and Emergent Innovation. Presencing as a method of bringing forth profoundly new knowledge and realities. In O. Gunnlaugson, C. Baron, & M. Cayer (Eds.), *Perspectives on Theory U: Insights from the field* (pp. 207–233). Hershey, PA: Business Science Reference/IGI Global. (doi:10.4018/978-1-4666-4793-0)

Peschl, M. F., & Fundneider, T. (2014). Evolving the future by learning from the future (as it emerges)? Toward an epistemology of change. *Behavioral and Brain Sciences*, *37*(4), 433–434.

Scharmer, C. O. (2007). *Theory U. Leading from the future as it emerges. The social technology of presencing*. Cambridge, MA: Society for Organizational Learning.