

Creativity – An Emergent Phenomenon in Interactive Art

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Creativity is usually considered as a phenomenon resulting from some mental and social processes: From the individual generation of new concepts or new associations between the existing concepts, so as the ability to find "new ways to look at things" (Minsky, 1986, p. 134), and the social process of accepting the result of the individual mental activity at least by a part of the society in which this activity runs. In the present contribution we continue in our contemplations concerning the creativity presented in (Kelemen, 2009). Using three examples taken from the field of interactive art we illustrate the phenomenon of emergence of creativity.

In the interactive art becomes, according our opinion, most evidently recognizable the fact that for emerging of the artistic affect of the artwork, the active roles both of the author of the "metapiece" which provides the conditions for active interaction of the audience, as well as the activities of the audience with the "meta-piece" are necessary. So, the appearance of creativity in the case of interactive artworks is in fact an emergent phenomenon which results from interaction between the author's (individual) work and the interactive activities of the audience (the part of the society).

The appearance of the emergence of creativity is tested applying the well-known (at least in the field of artificial life) emergence test proposed by Roland, Sipper and Capcarrere (1999). As the examples the project A-Volve by Ch. Sommerer and L. Mignonneau (1993, Fig. a), the Brain Opera project by T. Machover (1995, Fig. b), and the project Mnemeg by F. Diaz (2001, Fig. c) are used.



Fig.:



а

b

С

References

KELEMEN, J.: A note on agents, societies, and creativity. In: *Proc.* 7th *IEEE International Conference on Computational Cybernetics, ICCC* (A. Szakal, Ed.). IEEE CD Publication (IEEE Catalogue Number CFP09575-CDR) 2009, pp. 81-84

MINSKY, M.: The Society of Mind. Simon & Schuster, New York, 1986

ROLAND, E. M. A., SIPPER, M., CAPCARRERE, M. S.: Design, observation, surprise! A test of emergence. *Artificial Life* **5** (1999) 225-239

Keywords

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