Open-Ended Evolution *in silico*

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The open-endedness of a system is often defined as the continual production of novelty. Here I report on work by Banzhaf et al. (2016) where we pin down this concept more rigorously. I define several types of novelty that a system may exhibit, and classify these as *variation*, *innovation*, and *emergence*. I also discuss an architecture suitable for building *simulations* of open-ended novelty-generating systems.

Reference

Wolfgang Banzhaf, Bert Baumgaertner, Guillaume Beslon, René Doursat, James A. Foster, Barry McMullin, Vinicius Veloso de Melo, Thomas Miconi, Lee Spector, Susan Stepney, Roger White. "Defining and Simulating Open-Ended Novelty: Requirements, Guidelines, and Challenges." *Theory in Biosciences*, **135**(3):131-161, 2016