

Abstract Submitted
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Cyclic Process as a Tool for Considering Evolution VICTOR BONDARENKO, WSU — Evolution is the process. The primary question is which tools we use to consider the process. In this work, basing on the original results of investigation of the intrinsic bistability in quantum systems, the concept of the cyclic process is developed for qualitative and quantitative consideration of processes as following: Everything that happens is the process of changing; the process is the cyclic process of “... → seed → plant → seed →...” type; the cyclic process is formed by two complement phase transitions of “seed → plant” and “plant → seed” type; the cyclic process is the manifestation of self-consistent interaction of interdependent two-state system, environment, and radiation, so that the whole Universe is involved in each process; the cyclic process can be described qualitatively and quantitatively by a real cubic equation with four generalized dimensionless real parameters, provided that one of the parameters undertakes cyclic change of its value and all four parameters belong to limited interdependent intervals to maintain cyclic process. Using the cyclic process approach as a powerful tool a variety of issues is considered. Preference of evolution, extinction, adaptation, and relation between microscopic structure and macroscopic behavior of the system are addressed. Seeing the evolution is the most transcending seeing of existence. The cyclic process approach is suggested to be a corner stone for scientific approach to seeing evolution.

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