

THE EVOLUTION OF CITIES: DISCUSSING G.WEST'S BOOK “SCALE...” FROM THE PERSPECTIVE OF “THE ECONOMIC THEORY OF RELATIVITY”/“INNOVATION SNAIL”

Badulin N.A.

FiBr Innovation Management Company LLC, Moscow Region — Tomsk,
E-mail: nick-badu@yandex.ru

The approach of Jeffrey West [1] was analyzed by means of: 1) the method of fractal logic (V.V. Tarasenko [2], M.M. Dubovikov) for the study of fractal topologies in various fields — from living organisms to the life cycle of organizations and cities; 2) the method of resolving contradictions according to TRIZ and the ontological method (V.A. Efimov [3], S.A. Taktaev [4]), which is applied in control theories to network communities; 3) using the “Economic Theory of Relativity” / “Innovation Snail” (N.A. Badulin, abbreviated as ITO / UI [5]), used to model the life cycle in living systems, including the creation of a General theory of cities.

As a result, 12 different paradigms of urban development were identified, corresponding to the 12 stages of IT / IA, formed at the moment and giving a complete system of urban settlements in human civilization: from the “city of the Hermit Sergius”, “Nile Desert”, “Izba Vlasov” and “Coral castle ”(stage 1) - up to the concepts of the information and digital “Smart City” (stage 11) and “Social Network City” (“City of the Sun” by T. Campanella, “Ecograd Masdar”, stage 12). In addition the urban models created during the evolution of human civilization are described, the paradigms of which are orthogonal in nature, and the development methods are based on 12 invariant topologies (reflected in various categories of law), therefore, acting in the real economy, they contribute to the formation of wave processes in urban studies and give birth to cycles leading to crises of different types of cities. Several mechanisms for predicting crises of various nature in urban development and developing measures to reduce losses from future crises were proposed.

References.

1. Scale: The Universal Laws of Life, Growth, and Death in Organisms, Cities, and Companies / Geoffrey Brian West, trans. from English D. Prokofiev. - Moscow: ABC Business, 2018.
2. Fractal logic / Tarasenko V.V., Ed. 5, rev. and add. - M.: URSS. - 2018 .
3. Index of physical effects and phenomena for inventors and rationalizers. Denisov S., Efimov V., Zubarev V., Kustov V. - Obninsk, 1979.
4. <http://taktaev.ru/c/Инфогигаполисы---спутанные-системы>
5. Economic theory of relativity or “Innovation Snail” / Badulin N.A. // Triple Helix International Conference 2015, Beijing, 21-24th August 2015, THA Thematic Research Group Entrepreneurial Universities. Verified on electronic resource: 10.30.2019, URL: <https://www.triplehelixassociation.org/th-repository/economic-theory-of-relativity-or-innovation-snail>