

Theory of Everything, Ultimate Reality and the End of Humanity: Extended Sustainability by the Universal Science of Complexity

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ABSTRACT. Instead of postulated fixed structures and abstract principles of usual positivistic science, the unreduced diversity of living world reality is consistently derived as dynamically emerging results of unreduced interaction process development, starting from its simplest configuration of two coupled homogeneous protofields. The dynamically multivalued, or complex and intrinsically chaotic, nature of these real interaction results extends dramatically the artificially reduced, dynamically single-valued projection of standard theory and solves its stagnating old and accumulating new problems, “mysteries” and “paradoxes” within the unified and causally complete picture of intrinsically evolving, dynamically complex reality. The permanently unfolding complexity progress thus revealed is fundamentally unlimited and does not need to stop at the directly observed diversity of usual matter complexity. The exciting, but rigorously substantiated and objectively inevitable prospects of further civilisation complexity development towards its superior levels of genuine sustainability and global Noosphere are outlined, with practically important conclusions for today’s critical problem solution.

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Extended Abstract: Genuine Dynamical Structure of Reality

Dynamic complexity is imminent, the unreduced dynamic complexity of *all* real, known and unknown, world structures – and this is the sense of our times, its hope and unavoidable challenge. Far beyond abstract imitations of fundamentally broken official, mechanistic science, this omnipresent real-world complexity underlies the very essence of any form of existence, from the electron to living and conscious organisms, and unifies them all in a single, intrinsically complete and permanently changing structure of dynamically probabilistic fractal [1-32].

Rigorously and directly obtained from the consistent, non-simplified, i. e. *truly exact*, solution of the unreduced problem of arbitrary many-body interaction (absent in usual theory), this unambiguously defined *universal dynamic complexity* reveals the necessary, well-specified extension and decisive completion of conventional science paradigm, providing causally complete solutions to its various, otherwise stagnating problems and accumulating “mysteries”, as well as the well-substantiated perspectives for future development [1-32]. The unified dynamic complexity obeys the equally *universal law of symmetry, or conservation and transformation, of complexity*, which unites the extended versions of *all* known (correct) laws and principles of conventional science.

The revealed key property of *fundamental dynamic multivaluedness, or redundance*, of the unreduced interaction problem solution leads to the infinitely diverse, but *truly unified picture of reality*, where its *unique, explicitly emergent* structure of dynamically probabilistic fractal exists in permanent change and evolution according to the *unique* law of the symmetry of complexity. The *physically real, dynamic and unified origin of time, space* and all other fundamental properties is also rigorously specified within this intrinsically complete picture [1-3,15,16,25-28,31].

Thus produced *real theory of everything*, far beyond those restricted dreams of conventional, *dynamically single-valued* (and totally abstract) fundamental physics, which have never and could never been realised (and we now know why), leads finally and naturally to a *yet greater extension* – presented and discussed in this book – beyond any known, explicitly observed and “tangible” reality we describe as “material” today. We argue that and show why the observed world structure in the form of communicating levels of complexity cannot and does not stop there and extends necessarily beyond this finite group of *now* observable complexity levels, without losing the full applicability of the universal concept of complexity. This deeply substantiated fact forms a solid basis for the inevitably emerging field of *edge research*, the previously impossible *rigorous* study of those other, now “external” levels of real-world complexity, as well as the related more subtle or strikingly unified aspects of “usual” observed reality, its future evolution and the *ultimate purpose*.

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