

Peer Review

Review of: "From Coherence to Control: A Non-Systematic Approach to Multi-Parametric Phenomena"

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This manuscript presents an ambitious, philosophically oriented commentary arguing that scientific inquiry—especially in far-from-equilibrium systems—should shift from an emphasis on control toward an emphasis on coherence. Drawing on a wide lineage from Galileo and Bacon to Prigogine, Haken, Turing, and Varela, the author proposes a “non-systematic methodology” based on ontological alignment, methodological reduction, and participatory observation. The essay concludes with reflections on the role of artificial intelligence in future scientific practice.

As a reviewer coming from the social sciences, I cannot fully evaluate the manuscript’s technical claims. Nonetheless, even from a non-technical standpoint, several broader issues are evident.

The strongest aspect of the paper is its compelling narrative synthesis. It weaves historical, philosophical, and scientific threads into an engaging argument about the limits of classical experimental control. However, the manuscript is long on narrative and short on empirical grounding. Although it references experimental domains such as evaporative assembly, colloidal crystallization, and nanophotonics, these remain illustrative rather than concrete. A worked example—showing how the proposed methodology operates in practice and what “coherence” means in measurable terms—would significantly improve the manuscript’s clarity and persuasiveness.

I’m not sure which publication venue the author is targeting, so the next point may or may not be relevant. The writing style is quite experimental; for example, the original Section 4 consists largely of quotations. I see that the updated version has a slightly more elaborated Section 4, but still, this unusual writing style could pose challenges for more traditional scientific journals.

Finally, the reference list contains noticeable formatting inconsistencies that should be corrected.

Overall, the manuscript raises intriguing and worthwhile questions but requires substantial revision—particularly the addition of a concrete example and stylistic tightening—before it can be suitable for publication.

Declarations

Potential competing interests: No potential competing interests to declare.