Qeios

Peer Review

Review of: "The Information Theory of Self-Organization Phenomena in Thermal Systems"

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I think this is an interesting read. Through a series of mathematical equivalences, the authors identified the connection between information entropy, energy, and temperature. The writing is clear and engaging.

I think my main criticism is that it could have more detailed examples to illustrate these points. Also, the results do not feel particularly novel in the sense that these connections are rather easy to identify and have been implicitly or explicitly used in many prior works on information thermodynamics. The authors might want to give those works a read and explain why the present perspective is novel.

The LLM part is curious but would benefit from some numerical examples and clarification of the meaning of these insights.

Declarations

Potential competing interests: No potential competing interests to declare.