

Seeing & Understanding.

The study of chemistry for a decade shaped my current views. As I learned way back then, I interpret the physical world processes at their molecular scale, which no human eye can see. They are strictly governed by the laws of thermodynamics, formulated mostly in the 19th century. And they became foundational to our modern civilisation, facilitating energy generation and its use, propelling our civilization's development to where we all are now. Over the last decades, I have observed a growing disregard for them, and therefore, the possibility of pivoting human civilization's uncontrollable downfall.

Fundamental to these laws is the concept of entropy, which quantifies molecular disorder. It spans the absolute stillness and the "heat death." The biological life found and expanded within each ecological niche, the narrow margins of possibility. What they are and why they act as such has already been verified in the human knowledge base, confirmed by empirical evidence. It took biological evolution billions of years to master adaptation within them, and millions of once-living species, for me to be, see it and articulate what I am doing now.

The composition of species in each ecosystem is defined by the narrow temperature range it can sustain itself. At the base of each one is the symbiotic plant life, converting sunlight energy into chemical bonds, a more orderly form of matter, lowering the entropy. With any range of existing temperature change, species must evolve their relationships or migrate. The outcome depends on the availability of time, space, adequate conditions, living soil, and water. The scarcity any of them may pivot the cascading effect of conditions changing faster than most species' abilities to adapt.

This common predicament of our biological life might be difficult for some of us to fully grasp. If most of us can't, that will inevitably challenge the foundation of all our lives.

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