

EXPERIMENTAL LAW: A THERMODYNAMIC APPROACH

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ABSTRACT

In order to extract fundamental rules in social sciences, I apply thermodynamics of synergy to social organization (countries) by evaluating the socioeconomic correlates of constitutional law. Empirical evidence showed a relationship between countries' sociocultural order (negentropy) as estimated by their constitutions, academic development and indicators of their rule of law; and their socioeconomic success or free energy (amount of useful work) estimated using indicators of productivity and socioeconomic health. These analyses (SSRN.4077340) revealed strong correlations between estimates of the rule of law and the number of academic publications with socioeconomic health indicators (GDP, Human Development Index, and Infant Mortality). In contrast, correlations with the length of constitutions (the numbers of words and articles) and the content of populist wording, showed a negative relationship between negentropy and free energy. A historic analysis revealed that countries with low free energy were more likely to produce wordy constitutions; but that changes in constitutions had no predictable effect on the country's free energy. These findings showed that different dimension of negentropy are involved. More scientific articles correlate positively with better socioeconomic indices, whereas more articles in a constitution correlate negatively with these same indices. This suggest that certain kind of order increases free energy whereas others decrease it. We need a better understanding of the working of different types of order on the free energy of a society. Thermodynamics my help by differentiating those differences by relating negentropy to free energy.

Keywords: synergy, thermodynamics, negentropy, free energy, GDP, Human Development Index