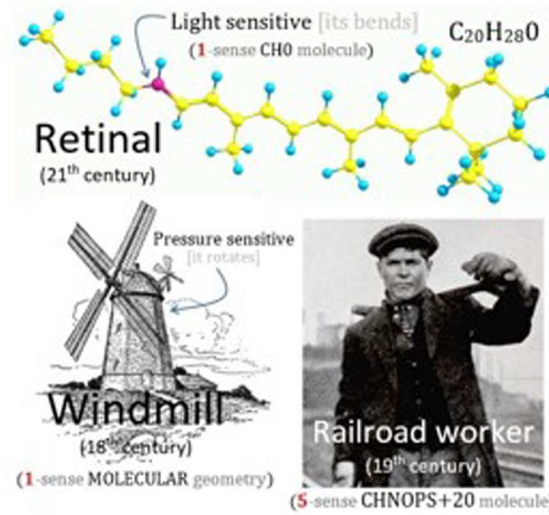


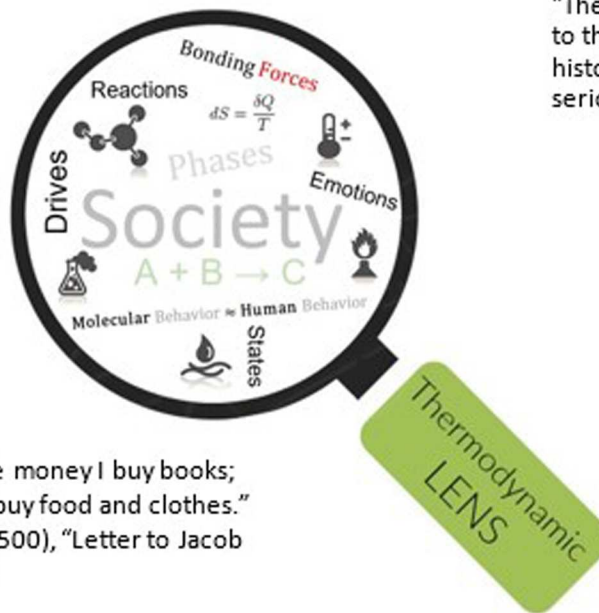
"The **concept of purpose** is involved in several physical principles, notably Hamilton's principle and the related but identical principle of least action, Hertz's principle of the straightest path, Gauss' principle of least constraint, and Fermat's principle of least time. They all effectively state that things take place in the physical world, e.g. the motions of systems of particles, in such a way as to make a certain function assume a stationary value under certain boundary conditions, usually a minimum as compared with all possible values satisfying the given conditions. Hamilton's principle, e.g., says that for a conservative dynamical system the motion between any two instants of time is such that the time integral of the difference between the kinetic and potential energies taken between these two instances has a stationary value. It has *as if* the system had a certain purpose to satisfy. A rational individual is said to arrange his actions so as to be sure of achieving his fundamental **desires**, whether it be to accumulate wealth or gain power over his fellow men. In particular, the aim here is almost always to try to attain the given desired end at minimum cost in human effort. This 'strongly suggests' a heuristic connection with the minimum [Gibbsian] principles of [chemical thermodynamics] physics."

— Bruce Lindsay (1983), "Social Exemplifications of Physical Principles"; earlier article age 27 written "Physical Laws and Social Phenomena" (1927), penned in the "brashness of his youth" as a newly MIT-minted, Bohr-mentored, Yale physics professor

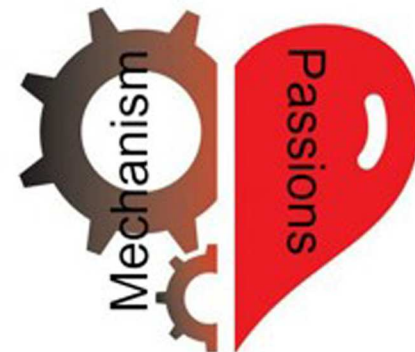


"The subjects of **socio-thermodynamics** are more to the **future** of thermodynamics rather than to its history. Presently, they are struggling to be taken seriously, and to obtain admission into the field."

— Ingo Muller (2007), *A History of Thermodynamics*



"When I get a little money I buy books; and if any is left I buy food and clothes."
— Erasmus (1500), "Letter to Jacob Batt", Apr 12



Hmolpedia, volumes 1-10, the print set of the contents of EoHT.info, comprises some 4,050+ articles, at Mar 2016 printing, a near-complete go-to reference for all subjects connected to *human thermodynamics*, *human chemistry*, *human physics* and related two cultures subjects (e.g. physico-chemical sociology, sociophysics, econophysics, political mechanics, romanticism, religio-mythology, extreme atheism, etc.), i.e. Shakespeare redefined via Clausius; namely: the social world, micro-to-macro, viewed through the 'thermodynamic lens', wherein human behavior is seen approximate to molecular behavior, Leucippus (455BC) and Empedocles (450BC) are intellectual forefathers, Gibbs (1876) is the operating manual, Lewis (1923) and Guggenheim (1933) are the cliff notes, Goethe (1809) is the divining rod, Rossini (1971), de Lange (1986), Beg (1987) are theologically-minded water testers, and modern thinkers such as: Muller (1998), Hirata (2000), Hwang (2001), Mimkes (2002), and Wallace (2009) are *tabula rasa* fireflies **spark**ing the future.



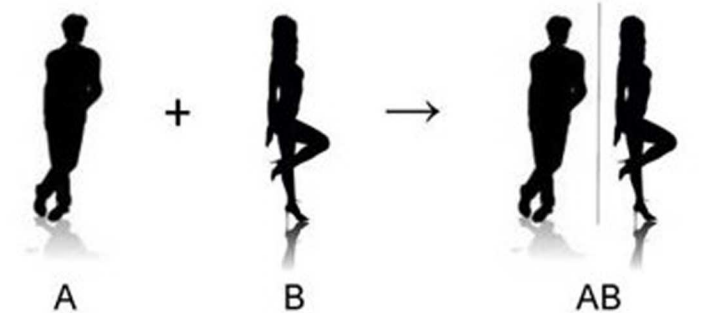
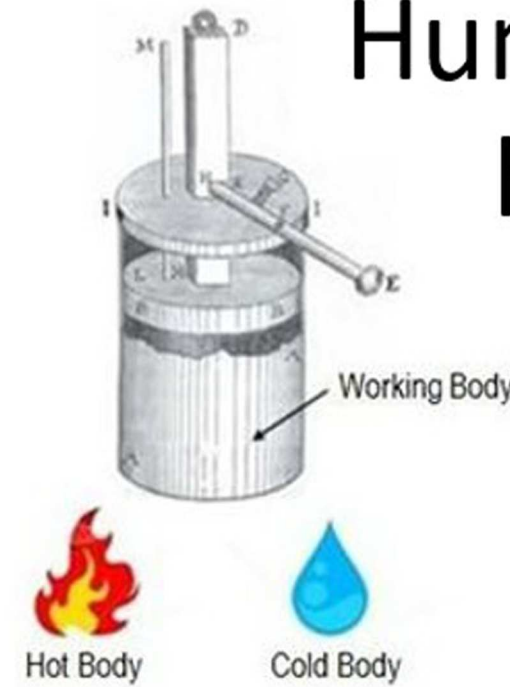
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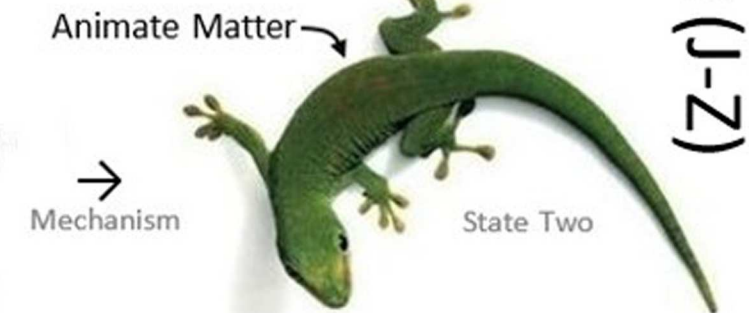
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A-Z Encyclopedia of Human Thermodynamics
Human Chemistry
Human Physics



$$A = - \left(\frac{\partial G}{\partial \xi} \right)_{p,T}$$

State One		
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13 Al	14 Si	15



V10 Misc (J-Z)

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