Review of: "Classical Thermodynamics: Primacy of Dissymmetry Over Free Energy"

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In this article, the author argues that the central tenet of thermodynamics is the principle of dissymmetry, or the modern formulation of the second law as the increase of entropy in a spontaneous process. The manuscript incorporates an extensive accounting of the historical record, including many quotations from the early developers of thermodynamics, including Thompson, Joule, Gibbs, Clausius, and others, taken mostly secondhand from textbooks and some from primary sources. While I certainly agree with and appreciate the importance of the increase in entropy in classical thermodynamics, I find the current manuscript lacks novel insights into this idea. The definitions and formulations presented are well documented in classic textbooks on thermodynamics, where there is no ambiguity over dissipated energy and entropy production. While the manuscript could in principle still be useful despite a lack of novel ideas, it is written in a sufficiently opaque way that it is difficult to extract logical threads, reducing its use as a pedagogical text. Further, the arguments made are almost entirely qualitative, with little in the manner of rigorous and quantitative exposition.