1086-AC-999 Martin E. Walter* (martin.walter@colorado.edu). The Logic of Nature Versus the Logic of Industrial Humans: End Game. Preliminary report.

Our working definition of mathematics for this talk is: the search for and study of patterns. Building on the analysis and examples in the text, "Mathematics for the Environment," we give a self-contained look at actual, unsustainable, patterns in how our civilization acquires essentials such as energy, water, and food. We compare these with alternative patterns, that are mathematically possible and sustainable. We also look at processes that affect decision-making, such as certain aspects of our financial system, that are logically flawed from the standpoint of sustainability. (Received September 17, 2012)