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Chris Thron* (thron@tamuct.edu), Chris Thron, Department of Mathematics, Warrior Hall, TAMU-CT, Killeen, TX 76549. *Increasing prosperity, decreasing satisfaction: insights from an agent-based model.*

Sociological surveys have shown that in many instances, increases in a society's material prosperity have been accompanied by either no change or slight decreases in self-reported well-being. In this paper we present a simple heuristic, agent-based mathematical model of the well-being of individuals in a population, which explains these trends. The model predicts that when individuals' lifestyle choices are biased due to comparison with others (a factor which we call "envy"), then as a result the average well-being of the overall population may experience enormous declines. The net effect can be surprisingly large even when the bias is quite small. Furthermore, even individuals in the population that are not envious end up shifting the balance in their lifestyles towards "conspicuous consumption" at the expense of to less tangible contributions to well-being. (Received September 14, 2014)