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Patterns of inequality: Dynamics of income distribution in USA and global energy consumption distribution ANAND BANERJEE, VICTOR YAKOVENKO, University of Maryland at College Park — Applying the principle of entropy maximization, we argued that the distribution of money in a closed economic system should be exponential [1], see also recent review [2]. In this talk, we show that income distribution in USA is exponential for the majority of population (about 97%). However, the high-income tail follows a power law and is highly dynamical, i.e., out of equilibrium. The fraction of income going to the tail swelled to 20% of all income in 2000 and 2006 at the peaks of speculative bubbles followed by spectacular crashes. Next, we analyze the global distribution of energy consumption per capita among different countries. In the first approximation, it is reasonably well captured by the exponential function. Comparing the data for 1990 and 2005, we observe that the distribution is getting closer to the exponential, presumably as a result of globalization of the world economy.

[1] A. A. Dragulescu and V. M. Yakovenko, *Eur. Phys. J. B* **17**, 723 (2000).
[2] V. M. Yakovenko and J. B. Rosser, to appear in *Rev. Mod. Phys.* (2009), arXiv:0905.1518.

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