POWER LAWS FROM RANDOMNESS

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Another explanation for apparent power laws is random division. Consider a line of unit length. Select n random numbers between 0 and 1 and use them to partition the line into n+1 segments. For a large n, the size distribution of the segments follows a power law shape. For more on this, see

"Random Division and the Size Distribution of Business Firms," Complex Systems, 18:2, 2009.