

Supplement to:

Macy, Michael W., and Anna Evtushenko. 2020. "Threshold Models of Collective Behavior II: The Predictability Paradox and Spontaneous Instigation." *Sociological Science* 7: 628-648.

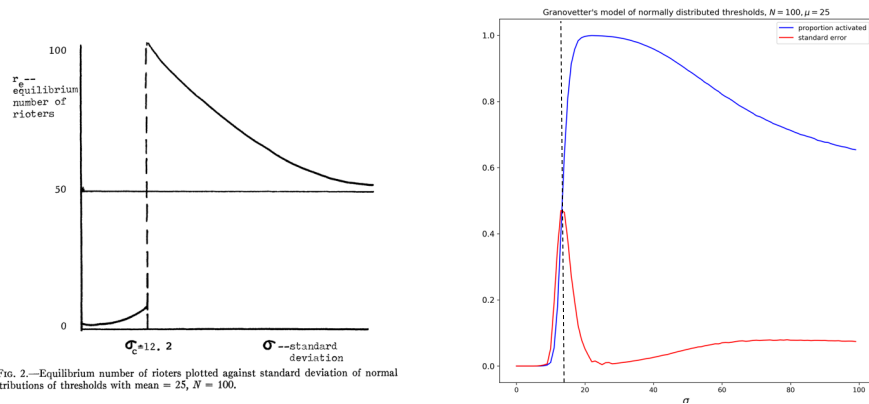


FIG. 2.—Equilibrium number of rioters plotted against standard deviation of normal distributions of thresholds with mean = 25, $N = 100$.

Figure A-1. Granovetter’s original Figure 2 from p. 1428 and a replication (averaged over 100 realizations at each σ). The critical window of threshold heterogeneity corresponds to the critical region in Figure 6.

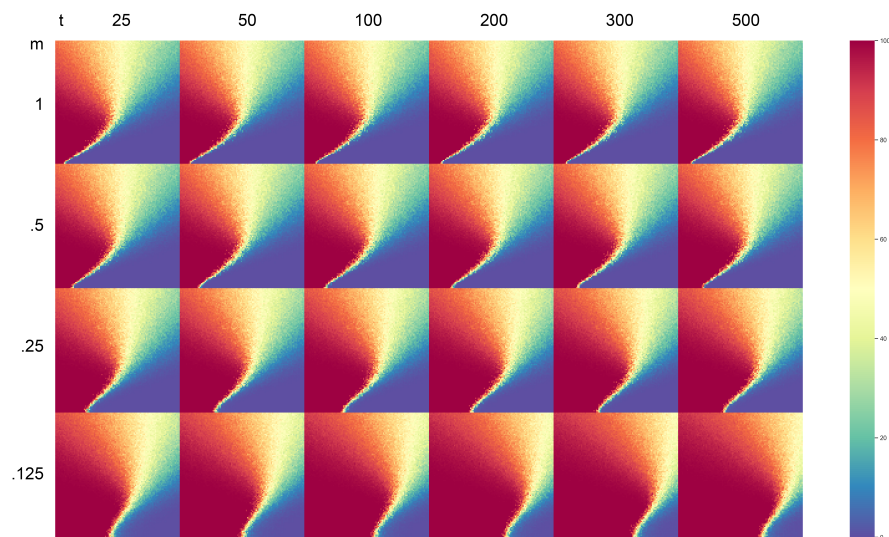


Figure A-2. Activation level as m increases from 0.125 to 1 and time-steps increase to 500. Threshold distributions are normally distributed with mean and standard deviation increasing from 0 to 100 starting in the lower left corner of each cell. Activation levels range from 0 (indigo) to 100 (red) and are averages over cascade outcomes in ten randomly sampled normal distributions. The 24 cells use the same ten sample distributions. As activation errors accumulate, cascades succeed across a larger proportion of the parameter space but the critical region along the border does not decline. Eventually there is a phase transition at which cascades always succeed regardless of the mean and standard deviation in the distribution of thresholds.