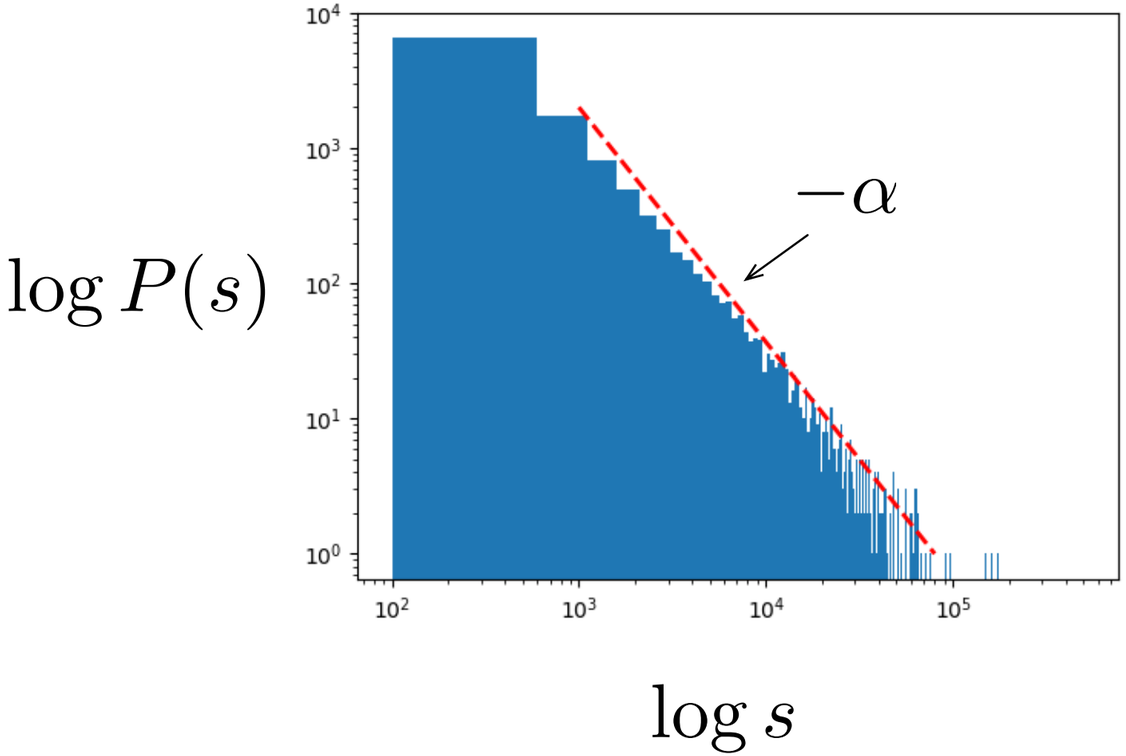

$$P(s) = Cs^{-\alpha}$$

$$\log P(s) = \log C + (-\alpha) \log s$$

linear relationship between log P(s) and log s

exponent $-\alpha$ is the slope on a log-log plot

power-law distributions sometimes referred to as "heavy tailed" since they fall off more slowly than an exponential distribution (more events in the long tail)

Many systems in nature exhibit a broad range of response sizes when driven from equilibrium (often showing signs of power laws):

- wildfires
- earthquakes
- cascades of electrical activity in the brain
- magnets in a magnetic field