



FIGURE 14.4 (a) The idea of the sampling distribution of the sample mean \bar{x} : take very many samples, collect the \bar{x} -values from each, and look at the distribution of these values. (b) The theory shortcut: if we know that the population values follow a normal distribution, theory tells us that the sampling distribution of \bar{x} is also normal. (c) The bootstrap idea: when theory fails and we can afford only one sample, that sample stands in for the population, and the distribution of \bar{x} in many resamples stands in for the sampling distribution.