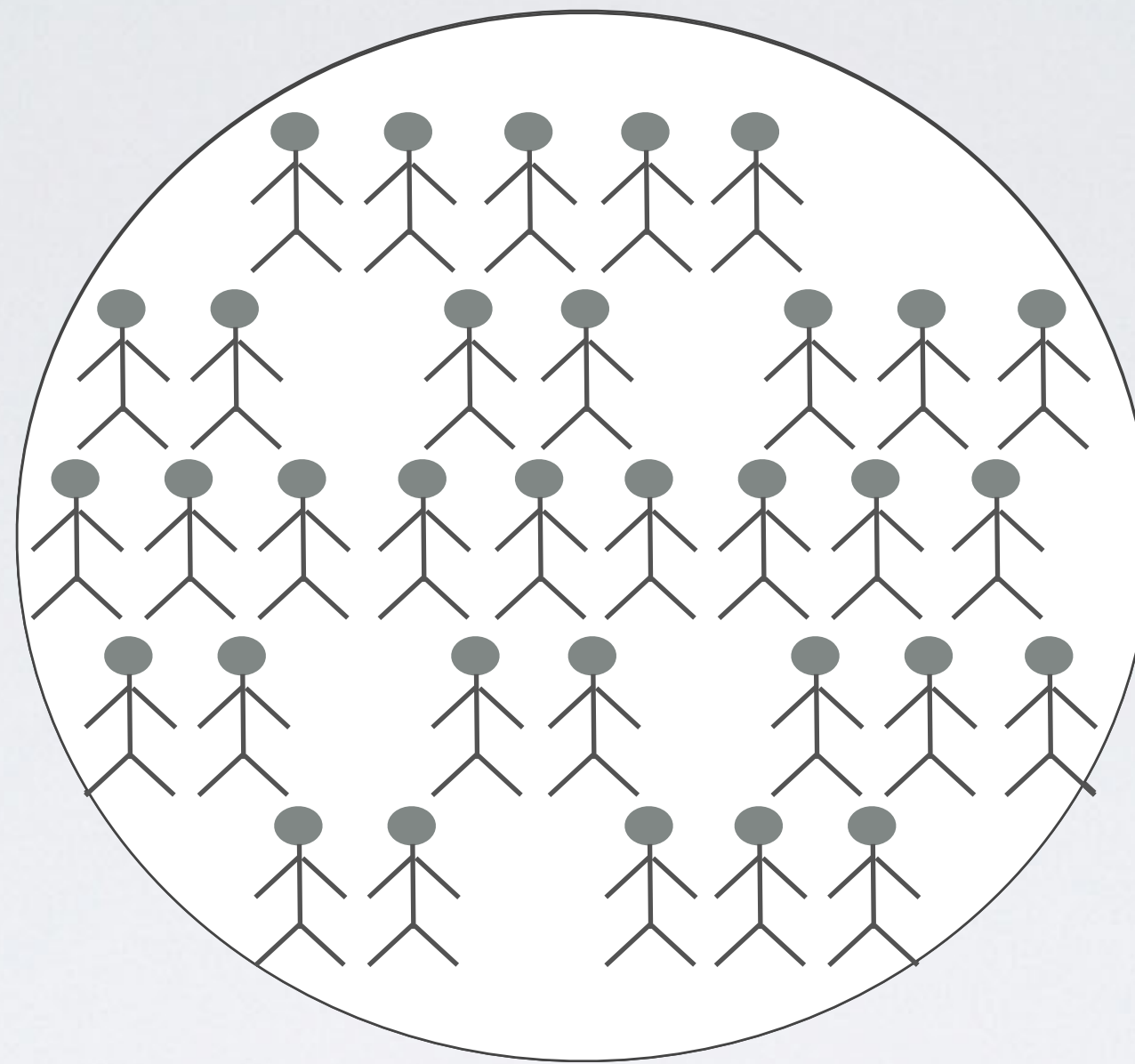


A spotlight is positioned in the upper left corner, casting a bright, circular beam of light onto a dark stage. The beam is wide and soft-edged, creating a gradient from white at the center to dark grey at the edges. The word "spotlight" is written in a white, italicized serif font within the beam. Below it, the text "random sampling vs. assignment" is written in a black, italicized serif font, also within the beam. In the bottom left corner, the Duke University logo is visible, consisting of the word "Duke" in a large, blue, serif font and "UNIVERSITY" in a smaller, blue, sans-serif font below it.

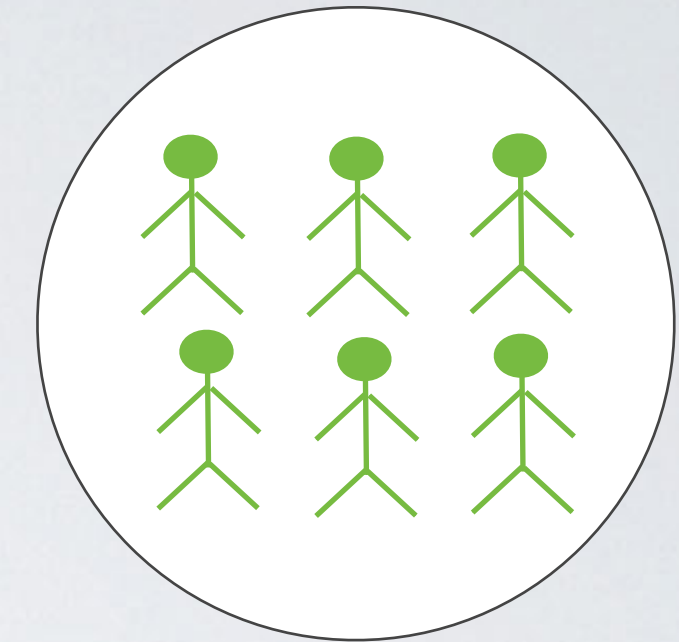
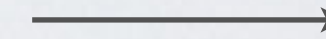
spotlight

*random sampling
vs. assignment*

random
sampling



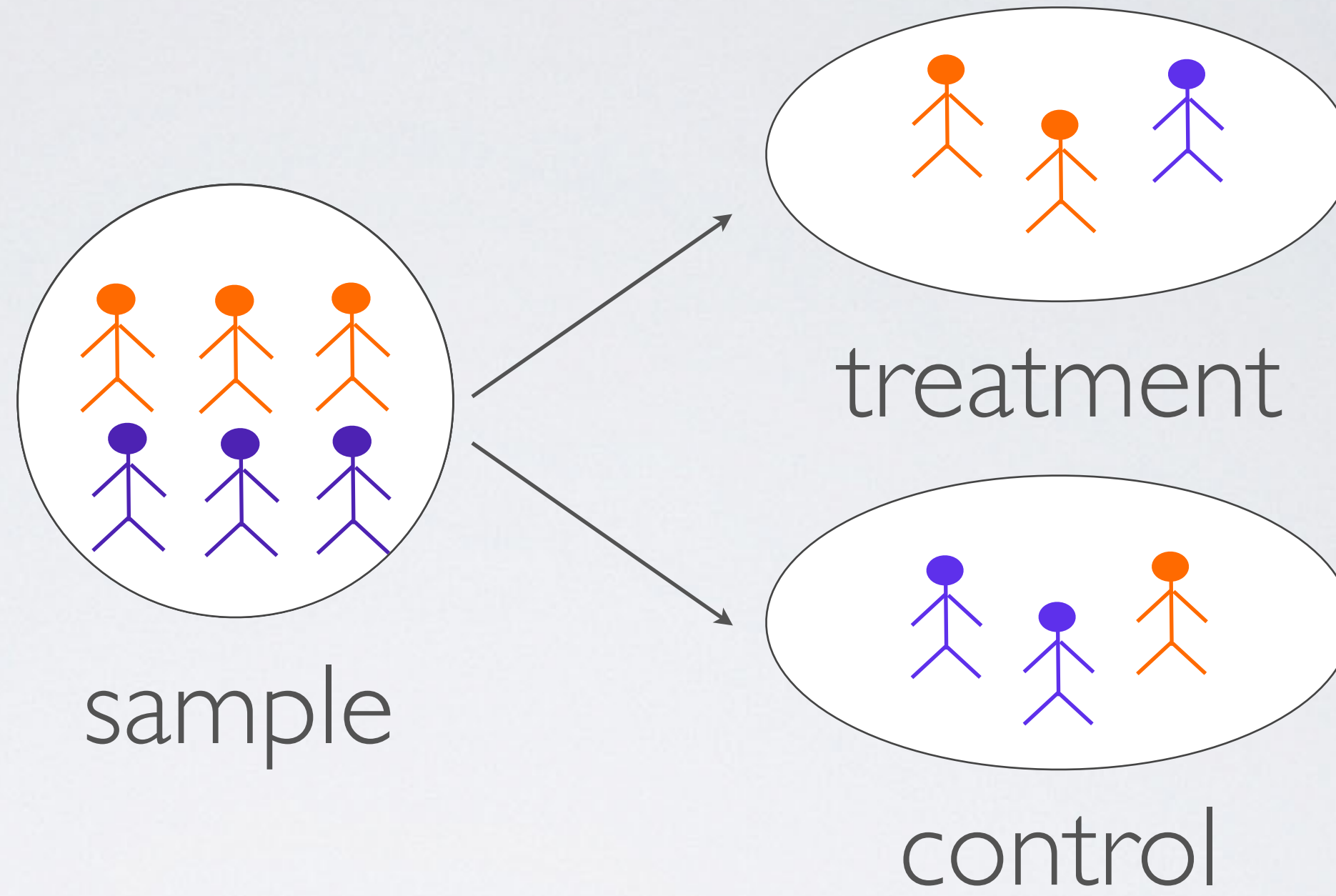
population



sample

generalizability

random
assignment



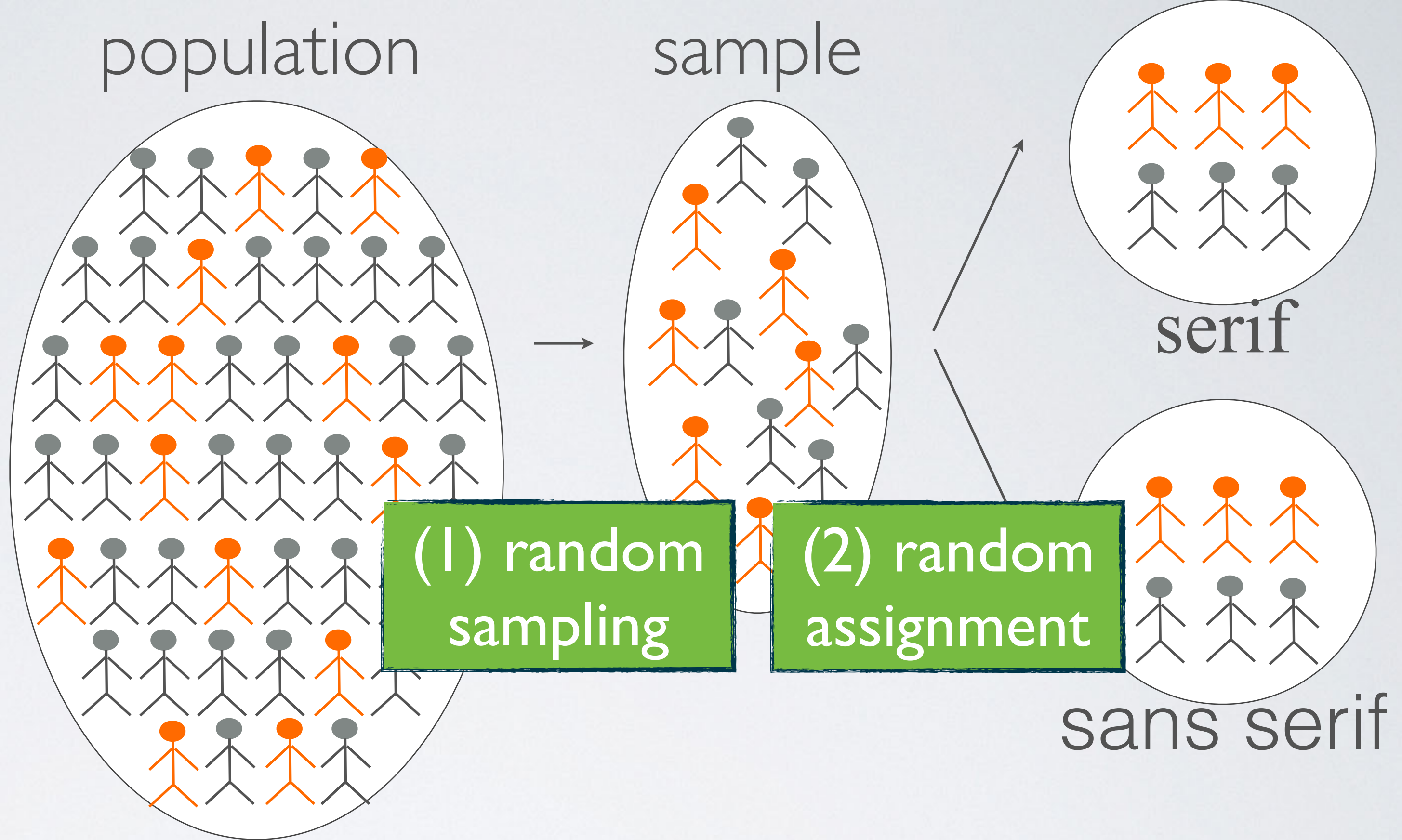
causality

example

Serif

Sans Serif

confounding
variable



	Random assignment	No random assignment	
Random sampling	causal and generalizable	not causal, but generalizable	Generalizability
No random sampling	causal, but not generalizable	neither causal nor generalizable	No generalizability
	Causation	Association	

ideal experiment

most observational studies

most experiments

bad observational studies