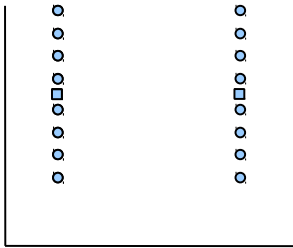
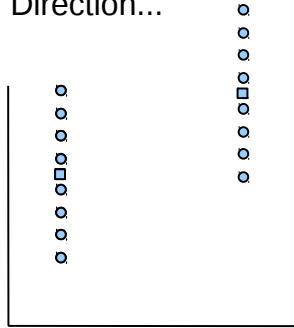


If There is Really NO Effect:

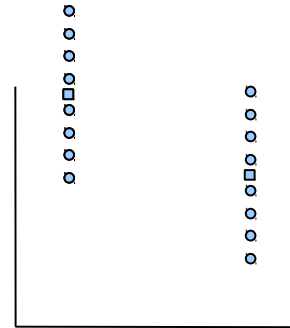
Then With No Confound We Should See No Effect:



But a Confound Could Make It Appear That There Is an Effect in Either One Direction...

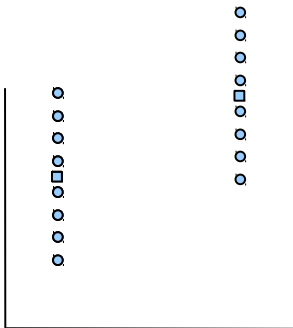


... Or the Other Direction.

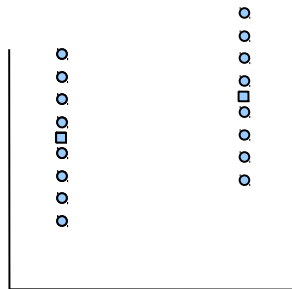


If There Really IS an Effect:

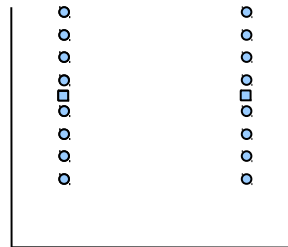
Then With No Confound We Should See That Effect As It Really Is:



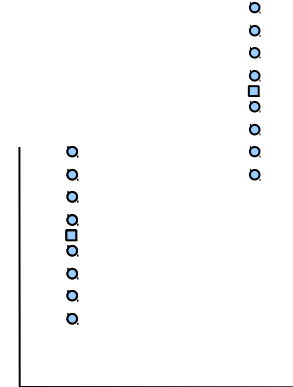
But a Confound Could Make It Appear That the Effect is Smaller Than It Really Is ...



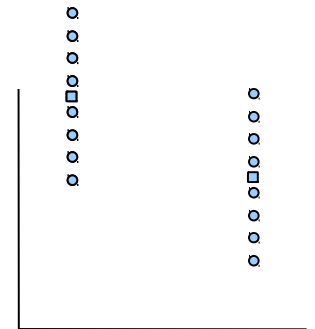
... Or That There Is No Effect At All...



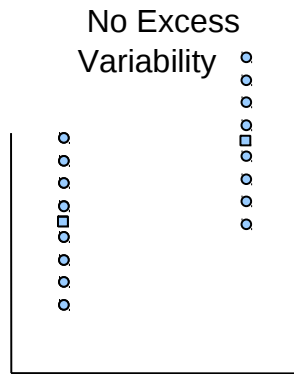
... Or That It Is Larger Than It Really Is...



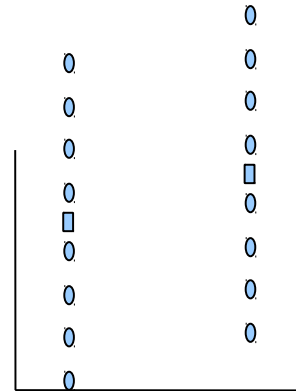
... Or That There Is An Effect In the Opposite Direction !!!



Effect

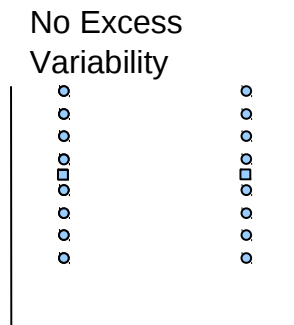


Excess Variability



If there really is a statistically significant effect, then excess variability can make it appear as if the effect is not statistically significant.

No Effect



Excess Variability



If there really is no effect, then excess variability makes no difference. It can NOT make it appear as if the effect IS statistically significant.