

experiment sandbox



resource: experimental design 4 the life sciences 4e

@cjlortie

pseudoreplication is a pseudoissue

Oksanen 2001

mean of sample close to the mean of population
representativeness



independence is the measure of one sample not influenced by the value of another

most simple stats assume independence &
an accurate scope of inference (and conclusions)
benefits from true breadth

replicates that are unduly
influenced by one another or
a third variable are **pseudoreplicates**





N versus n
is a simple, powerful concept in design

why does it matter?

falsely inflates sample size

ignores third variables

does not sample extent of true variation

solution
change scope of inference



REGRETS

Those were the droids you were looking for.

discuss and interpret the scale that you sample



sources

shared enclosure
common environment
relatedness
shared stimulus
individuals within environment
time
species traits



design not necessarily statistics



N

choose scale **wisely**

global
regional
local
site
plot
individual

subjects

any neglected blocking variable can become a pseudo-rep issue

cross-sectional study
is a snapshot of a population
a single point in time



can lead to cohort effects

longitudinal study follows
individuals through time



shift the focus & clearly state design objectives

