

Chapter 10 Within-subject designs

Additional self-test questions

- Q10.1** Explain the advantages and disadvantages of a within-subjects design.
- Q10.2** The book says ‘the longer the experiment goes on, inevitably, the greater the problem drop-outs will be.’ Explain this in your own words, and explain its relevance to consideration of within-subject designs.
- Q10.3** In the book, it suggests that there are 24 different orderings of four distinct treatments. Can you demonstrate this?
- Q10.4** How would you select a random permutation of 1 to 6?
- Q10.5** We wish to test for differences in fear reaction of mice to avian and mammalian predators. We intend to do this by monitoring the heart rates of wild-caught field mice following exposure to taxidermic mounts of a weasel and an owl. Consider the ethical and practical advantages and disadvantages of a within-subjects design for this experiment (where the same individual is exposed to both stimuli) compared to a conventional fully randomized experiment. The mice would be returned to the wild after the experiment.