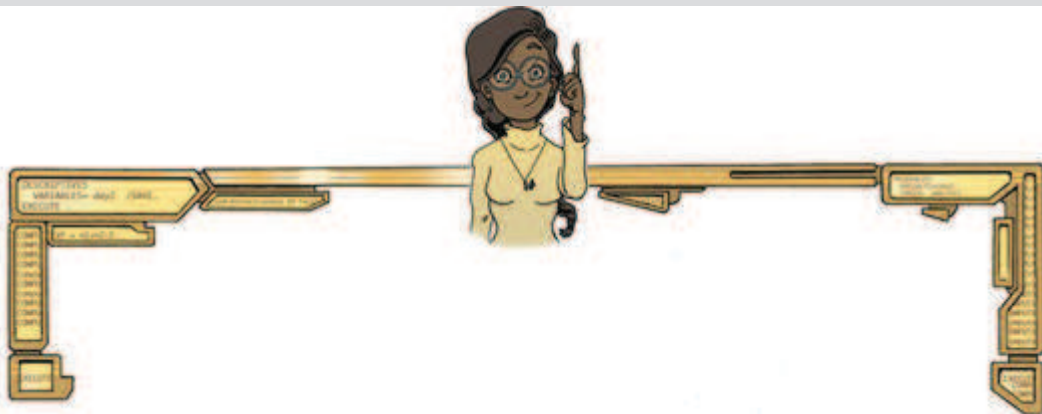


I'd announced to my parents that my career of choice was a rock star. Obviously I hadn't presented them with a robust t -test showing how much more money I would earn compared to a university professor, but even if I had, I'm not sure it would have mattered. My parents were quite happy for me to live this fantasy if I entertained the possibility that it might not work out and had a plan B. Preferably a plan B that was a little bit more sensible than being a rock star. At the age of 10, I think my plan B was probably to be a soccer star. One way or another I wanted my career to involve being a star, so if it wasn't rock, then soccer would do. However, we've seen already that I was at a genetic disadvantage when it came to soccer, but not so much when it came to rock stardom: my dad, after all, was quite musical. All I had to do was make it happen. The first step, I reasoned, was to build a fan base, and the best place to start a fan base is among your friends. With that in mind, I put on my little denim jacket with Iron Maiden patches sewn onto it, threw my guitar over my back and headed off down the rocky road of stardom. The first stop was my school.

10.14 Key terms that I've discovered

Dependent t -test
 Dummy variables
 Grand mean
 Independent t -test
 Paired-samples t -test
 Standard error of differences
 Variance sum law

Smart Alex's tasks



- Task 1: Is arachnophobia (fear of spiders) specific to real spiders or will pictures of spiders evoke similar levels of anxiety? Twelve arachnophobes were asked to play with a big hairy tarantula with big fangs and an evil look in its eight eyes and at a different point in time were shown only pictures of the same spider. The participants' anxiety was measured in each case. Do a t -test to see whether anxiety is higher for real spiders than

pictures (Big Hairy Spider.sav).



- Task 2: Plot an error bar graph of the data in Task 1 (remember to adjust for the fact that the data are from a repeated measures design.)



- Task 3: ‘Pop psychology’ books sometimes spout nonsense that is unsubstantiated by science. As part of my plan to rid the world of pop psychology I took 20 people in relationships and randomly assigned them to one of two groups. One group read the famous popular psychology book *Women are from Bras and Men are from Penis*, and the other read *Marie Claire*. The outcome variable was their relationship happiness after their assigned reading. Were people happier with their relationship after



reading the pop psychology book? (Penis.sav).

- Task 4: Twaddle and Sons, the publishers of *Women are from Bras and Men are from Penis*, were upset about my claims that their book was as useful as a paper umbrella. They ran their own experiment ($N = 500$) in which relationship happiness was measured after participants had read their book and after reading one of mine (Field & Hole, 2003). Participants read the books in counterbalanced order with a six-month delay. Was relationship happiness greater after reading their wonderful contribution to pop psychology than after reading my tedious tome



about experiments? (Field&Hole.sav).

- Task 5: In [Chapter 4](#) (Task 6) we looked at data from people who had been forced to marry goats and dogs and measured their life satisfaction as well as how much they like animals (Goat or Dog.sav) Conduct a t -test to see whether life satisfaction depends upon the type of animal to



which a person was married.

- Task 6: What do you notice about the t -value and significance above compared to when you ran the analysis as a linear model in [Chapter 8](#)



Task 6?

- Task 7: In [Chapter 6](#) we looked at hygiene scores over three days of a rock music festival (Download Festival.sav). Do a paired-samples t -test to see whether hygiene scores on day 1 differed from those on day 3.



- Task 8: Analyse the data in [Chapter 7](#), Task 1 (whether men and dogs differ in their dog-like behaviours) using an independent t -test with bootstrapping. Do you reach the same conclusions? (MenLikeDogs.sav).



- Task 9: Analyse the data in [Chapter 7](#), Task 2 (whether the type of music you hear influences goat sacrificing – DarkLord.sav), using a paired-samples t -test with bootstrapping. Do you reach the same conclusions?



- Task 10: Thinking back to [Labcoat Leni's Real Research 4.1](#), test whether the number of offers was significantly different in people listening to Bon Scott than in those listening to Brian Johnson, using an independent t -test and bootstrapping. Do your results differ from Oxoby



(2008)? (Oxoby (2008) Offers.sav).

Answers & additional resources are available on the book's website at <https://edge.sagepub.com/field5e>

