

Week 1 Day 3

Stat140-04

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Part I: An example of admission Consider the following table of counts, based on data from the University of California at Berkeley's graduate admissions process in 1973:

	Men	Women
Accepted	533	113
Denied	663	336
Total	1198	449

Answer the following questions with your group members. Write in complete sentences.

Questions

- (1) Why is it not reasonable to simply consider the counts 533 and 113 in order to compare admissions decisions of men and women?
- (2) Calculate the proportion of male applicants who were accepted. Also calculate the proportion of female applicants who were accepted. Below is a R block that you can use as a calculator.
- (3) Comment on how these proportions compare. Does this difference appear to be substantial?

Part II: Let's proceed to dig a little deeper. The counts in the table above came from combining data from two programs that we'll call A and F. The following tables show the counts for these two programs separately:

	Men(accepted)	Men(denied)	Women(accepted)	Women(denied)
ProgA	511	314	89	19
ProgF	22	351	24	317
Total	533	665	113	336

Before analyzing these data, first convince yourself that there's no cheating here: The bottom row reveals that counts for programs A and F really do add up to the counts given earlier

Answer the following questions with your group members. Write in complete sentences.

Questions

- (1) Within each program, calculate the proportion of male applicants who were accepted and the proportion of female applicants who were accepted. Comment on how the proportions compare within each program.

- (2) Based on this more in-depth analysis, is there evidence of discrimination against women in the graduate admissions process?
- (3) What's odd about your calculations? Explain, based on the data provided, how this oddity occurs.

Part III: the Simmson's paradox With your group, search for the Simpson's paradox on the internet. Summarize what this paradox is about, and explain how does this relate to Part I and Part II. Write in complete sentences.