Categorical Data: 5.2, 5.3
Classifying data by two criteria simultaneously, labeled on the row and column of a two-way table

|  |  | Criteria 1 |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Criteria 1A | Criteria 1B |  |
|  | Criteria 2A | Joint Frequency 1A2A | Joint Frequency 1B2A | Marginal Freq 2A |
|  | Criteria 2B | Joint Frequency 1A2B | Joint Frequency 1B2B | Marginal Freq 2B |
|  |  | Marginal Freq 1A | Marginal Freq 1B | Grand total |

- Joint frequency is the frequency with which two categories, one from each of the two classification criteria occur together (middle counts).
- Marginal Frequency is the frequency of each category (row and column total)
- Marginal distributions are the proportions of counts for each marginal frequency of the grand total (ex: row total/grand total or column total/grand total).
- Conditional relative frequencies give the proportion of one category, given the other category has occurred (ex: joint
 frequency/marginal frequency).
- Segmented bar graphs display conditional relative frequencies.

