

# Research Methods (HDFS 3390), Alan Reifman, Texas Tech University

## Organizing Data/Unit of Analysis

Video: "[What is a Dataset?](#)" (Elon University)

How to Organize Data – **Individuals** as Units of Analysis (or Units of Observation)

*In anonymous survey, respondents will have code numbers.	Variable 1 <b>Age</b>	Variable 2 <b>Gender</b> (M=0, F=1)	Variable 3	Variable 4	Variable 5
Ann*					
Barney					
Carol					
Dave					
Edna					
Fred					

If this were a restaurant marketing survey, **V3** might be number of weekly visits to a fast-food restaurant, **V4** number of weekly visits to a sit-down restaurant, etc.

If this were a political survey, **V3** might be whether respondent thinks the president is doing a good job (N = 0, Y = 1), **V4** one's assessment of the state of the economy (1 = very poor, 2 = poor, 3 = average, 4 = good, 5 = very good), etc.

## How to Organize Data – **Couples/Dyads** as Units of Analysis (More Complicated)

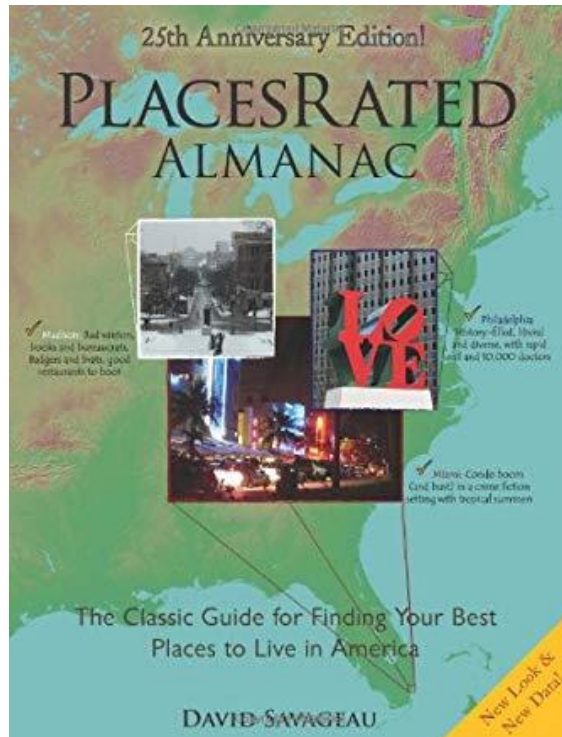
	Variable 1 Number of Years Couple Has Been Married	Variable 2 Husband's Marital Satisfaction 0 (low) to 5 (high)	Variable 3 Wife's Marital Satisfaction 0 (low) to 5 (high)	Variable 4 Average of V2 and V3 "Couple Satisfaction"	Variable 5 Judge Rating of Quality of Problem Solving in Role Play
Arnold & Amy					
Brian & Brooke					
Carl & Cathy					
Dick & Donna					
Ernie & Eve					
Frank & Fanny					



### Statistical Complications of Analyzing Couple/Dyadic Data

- *Why must there be six rows with two people (a couple) each, instead of 12 lines with one person each?*
  - Each line must represent an **independent** observation (**unconnected to other participants**). As shown to the right, two members of a couple are not independent (more similar to each other in SES, attitudes, etc., than any two random people). Thus, we must arrange the couples as pairs.
- *How can we assess the overall marital satisfaction between each pair of spouses, when a survey typically asks each person **separately** for his or her sense of satisfaction?*
  - Averaging V2 and V3 to create V4 ("Couple Satisfaction") loses distinction between, for example, spousal scores of 1 and 5 and 3 and 3.
- *With increased interest in studying same-sex spouses/couples, same-sex partners cannot be distinguished as "Husband" and "Wife," so must use advanced statistics to account for **indistinguishable** dyads (beyond the scope of our course).*

## Here are a couple more examples of units of analysis...



Here's one that may have real-world relevance for those of you who are considering moving to another city after graduation from Texas Tech. Let's look at how the publication *Places Rated Almanac* evaluates different metropolitan areas (cities with their suburbs).

*For copyright reasons, I am not putting the relevant charts on the web. Instead, I will just show them in class.*

### Consumer-health example

What are the units of analysis in these examples?