ASSIGNMENT THREE

PHASE 2: INTERPRETING THE LITERARY SURVEY AND MOVING TO THE DESIGN OF EXPERIMENTS

GOALS FOR THIS WEEK

BUILDING ON THE LITERATURE SURVEY

WHAT YOU'VE DONE SO FAR

- Organized into a group
- Worked with your professor to develop a topic
- Explored various primary sources
- Potential he explored a data collection tool, such as a questionnaire

WHAT IS ON DECK FOR TODAY

- Summarize the research you have done thus far
- Establish categories of historical research
- Draw a venn diagram to represent where various research has been done, and integrates
- Use your personal experience as a guide to pilot new categories within the research

IMPORTANT NOTE

- Without a literature survey, no research can take place
- Before I can meet with you, you must have read five academic papers per team member, and
- Possess a spreadsheet where each paper is summarized in a short summary, exactly as we did in the first paper
- When you had this, call me over and we can take the next step

DESIGN OF EXPERIMENTS

CREATING YOUR DATA COLLECTION TOOL

CREATING YOUR DATA COLLECTION TOOL

- Now that you understand the landscape of prior research, you can establish a direction for inquiry
- The spirit of the design of experiments is:
- How can we collect enough variables to illustrate a conclusion?
- What data can we collect to explore the topic without bias?
- If the best we can do is simply explore the topic, how much data do we need?

WHAT KINDS OF DATA DO YOU NEED?

- Some research must explore a topic without prior knowledge. These will demand interview subjects
- When you interview a person, you should simply ask for them to tell a story related to the topic
- Collect data from a small number of people, then look for categories, patterns and other ways to group their experiences
- Look for important contrasts between their stories
- This is called qualitative data and it exist without statistics, initially.

QUANTITATIVE VERSUS QUALITATIVE DATA

- If stories yield qualitative data, what if you do not need stories from interviewees?
- Some groups will know what data they wish to collect, and will use a questionnaire to gather data
- This is called quantitative data, and it creates statistics immediately
- Robust statistics include averages, medians, mean, some, minimum, maximum, and the count of data present.
- Rubost statistics yield percentages, and make good graphs such as you have been making

THE STRENGTHS OF QUALITATIVE DATA

- When you do new research, don't be surprised if no one has written about your topic before
- This is actually the best opportunity for you
- If you look at a topic no one has discussed before, you will be applauded!
    - This is why I'm encouraging you to do research on things that have not been discussed before
- But new topics usually demand for us to interview people who can provide us with information

ANALYZING QUALITATIVE DATA CONCEPTUALLY

- Stories from people who know something can be broken apart into categories, themes and big ideas
- Initially, we can't do statistics on concepts, because statistics needs raw data to serve as facts
- Conceptual divisions within your topic are extremely viable, however
- Let's talk about an example

YOUR GOALS FOR THIS WEEK

- Produce a design of experiments that is either qualitative or quantitative
- Design a research tool that will create categories and other summarizations within the data
- Remember that your audience needs complex data to be digested into simple messages
- How can you design a data collection tool that will deliver simple, coherent messages?