

## Department of Sociology (SOC)



- Requires Sociology 301: Social Statistics (4-credit course)
- All students graduating with a degree in sociology should understand: The methods and procedures used to conduct social scientific inquiry. Assessment (2004) shows that
  - Students have a general understanding of measurement
  - Have difficulty interpreting findings

### • Description of Students

- Minimum 2.0 gpa to be in major
- Prefer applied study
- Diverse Learning Styles due to busy schedule [work and family]
- Pre-course inquiry reveal that 95 percent fear taking social statistics
- Pre-course inquiry reveal that nearly 100 percent do not see the relevance of the course
- Students study statistics for an average of one hour per day

## SOC 301: Social Statistics

### • Course content

- Descriptive Statistics
- Hypothesis Testing
- Measures of Association

### • Purpose of Using Strange News in Social Statistics

- Engage students by selecting topics that are relevant
  - Class Generates Data
  - Calculates appropriate statistic
  - Compares and Interprets
- Increase the knowledge of and application of statistics. Students learn the appropriate use of statistical procedures
- Decrease fear and anxiety

## Observations in SOC 301

### • Students are engaged

- Attend class and participate in class discussion
- Utilize the Language
- Discussion of Course Content Continues Outside of the Classroom

### • When Strange News is Used, Students remark:

- Examples aid in learning
- Process of identifying a problem solving helps in other courses
- Social statistics is not terrifying (just the math).



### • Researcher is currently gathering quantitative data [Test and Homework Scores].

## Humor

- Use the jokes and witticisms related to Statistics
- The Internet is the primary resource
- Categorize the humor by material taught in class
  - Jokes for General Statistics class
  - Witticisms for Descriptive Statistics
  - Co-relational humor
- Make the humor relevant to the material taught in the class

## Department of Computer Information Systems (CIS)

### • CIS 435: Data Mining (3-credit elective course)

- One third of the course includes with introductory statistics material and use of SPSS.
- Students enroll for this course in their senior year
- Students have a general understanding of data bases management and administration
- Have limited knowledge in data analysis and interpretation

### • Description of Students

- Minimum 2.0 gpa to be in major
- Predominantly male students (80%) mostly working full-time or part-time on-campus or off-campus
- Pre-course inquiry reveal that almost 85% are interested to learn the SPSS software, only 15% are interested in learning the statistical theory

## CIS 435: Data Mining

### • Course content

- Descriptive Statistics & Hypothesis Testing
- Correlation & Regression
- Visualization tools: Charts, Graphs, Scatter Plots

### • Purpose of Using Humor in Statistics Course for Computer Scientists



- Reduce Stress that is associated with learning new concept not directly related to major
- Makes the course more interesting
- Create positive learning environment

- Improve communication between students and teachers

## Anecdotal Observations in CIS 435

### • Here are a few anecdotal observations concerning the experience of using humor in teaching statistics:

- Students attended class regularly
- Students were more apt to ask questions and interact with faculty during class as well as SPSS-lab sessions
- Humor in classroom seemed to help students getting out of the boredom and pay more attention to class presentations and lab work

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# Illustration of Humor and 'Strange News' Used in Two Statistics Courses

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## Abstract

The purpose of this poster is to illustrate the use of humor and strange news used in two undergraduate statistics courses at SUNY Buffalo State College. As the largest comprehensive college located in an urban setting, Buffalo State College tends to attract non-traditional commuters. Majority of the students work full-time and raise a family while attending school on a full-time basis. Time constraints, influence of gender, and fear about the subject matter of statistics require teaching strategies that engage and motivate students. Two departments, Sociology, where statistics is a required course for students in the major, and Computer Information Systems, where statistics is optional, will be used as case studies. The poster will depict examples used in SOC 301: Social Statistics and in CIS 435: Data Mining.

## Strange News

- Identify a (strange) news story in class
- Make the story relevant to students
  - Tie content of story to sociology and criminal justice
  - Personalize story by asking pointed questions
- Introduce statistical procedures by asking research-focused questions
- Illustrate procedures
- Reinforce procedure with other examples

## Literature Review Highlights

- Research tends to focus on Humor
  - Researchers recognize the use of humor as an effective teaching strategy. Humor
    - strengthens the relationships between student and teacher
    - reduces stress and fear for both teachers and students
    - makes a course more interesting
    - enhances the absorption and recall of material
    - creates a positive learning environment
    - improves communication between students and the teacher
  - Important tool in areas of statistics, law, biology and computer information systems
  - Jokes, riddles, puns, cartoons. and funny (strange) stories are ways to utilize humor in the classroom

## Gender matters

- Males can use all types of humor to increase evaluation ratings whereas females decrease evaluation ratings if they use puns
- Male instructors can use topic-related humor that distracts students from the lecture topic and still achieve high ratings; females who do so will receive low ratings.



## Two Examples of Strange News



WAUKESHA, Wis. (AP) - A man pleaded guilty to stealing more than 1,500 pairs of girls' shoes from area schools in a deal that calls for prosecutors to recommend probation. Erik D. Heinrich, 26, of Kenosha pleaded guilty to three counts of burglary and was scheduled for sentencing Oct. 23. He was arrested May 24 after a security video showed him entering North High School and leaving with some items. Police tracked him through his vehicle registration, searched his home and a rented storage unit and found the shoes. Heinrich has a previous shoe-stealing conviction, in 2005, that was dismissed at prosecutors' request after he completed a year of probation, counseling and 50 hours of community service.

You are interested in the types of shoes found in a typical closet. Class discussion on conspicuous consumption, fashion, and deviance. According to ShopSmart Shoe Poll, women own an average of 19 pairs of shoes. Class is charged with solving the average and standard deviation. The overall scores for BSC are shown below. Based solely on your relative standing, which type of shoe do you prefer?

Type of Shoes	BSC Norms		
	$\bar{x}$	$s$	Your Score
Running	6	.7	8
Dress	9	2.4	11

Dress Shoes or Running Shoes



VIENNA, Austria (AP) - He's now got a human name - Matthew Hiasl Pan - but he's having trouble getting his day in court. Animal rights activists campaigning to get Pan, a 26-year-old chimpanzee, legally declared a person vowed to take their challenge to Austria's Supreme Court after a lower court threw out their latest appeal. A provincial judge in the city of Wiener Neustadt dismissed the case earlier this week, ruling that the Vienna-based Association against Animal Factories had no legal standing to argue on the chimp's behalf. The association, which worries the shelter caring for the chimp might close, has been pressing to get Pan declared a "person" so a guardian can be appointed to look out for his interests and provide him with a home. Group president Martin Balluch insists that Pan is "a being with interests" and accuses the Austrian judicial system of monkeying around.

Class discussion on beliefs and values. The class became concerned about the animal rights activists' intent on declaring a chimpanzee a person. The class polls students, at BSC, to see if they agree with the provincial judge and the responses are below. Students identified levels of measurement and calculate the appropriate statistics to answer the two questions: What is the average response? How stable are the responses?

Responses	f
Strongly agree	17
Agree	23
Disagree	1
Strongly disagree	8

Students discussed who would be interested in naming a chimpanzee. They ask if there is a significant difference between animal lovers and non animal lovers in support for declaring Matthew a human.

Support	Animal Preference	
	Animal Lover	Non-Animal Lover
Agree	14	7
Disagree	8	16



## Concerns: Using Strange News

- Faculty
  - Need to be familiar with current events
  - Need to be flexible and willing to discuss students' interests
  - Need to trust students to collect data
  - Need to tie the process of statistics with the learning of statistics
    - Go beyond traditional ways of assessing students knowledge by allowing students to identify current events design exam and homework questions [per unit]
    - Require students to apply, compare, and interpret their preferences with collected data
- Students
  - Need to realize that identifying a 'class' strange-news can be time consuming
  - Need to integrate other courses can be a challenge. This method is interdisciplinary
  - Need to let go of pre-conceived notions of how social statistics is taught and how social statistics should be learned