

# Statistical Consulting

## What is it, and why is it important?

STAT8801  
Statistical Consulting

School of Statistics  
University of Minnesota

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## Welcome and Introductions

Welcome to STAT8801, Statistical Consulting.

- Who are you? What's your preferred name?
- Where are you from? Country? State? Department?
- Why are you in statistics?
- Do you hope or expect to do statistical consulting someday?

## Syllabus

Themes of this Course

- Communication
- Professional Practice
- Technical Tools
- Ethics
- Teamwork

Grading

- Class Attendance, Preparation, and Participation
- Group Assignments: Presenting and Writing
- Role-Playing, Short talk on a new topic, Computing analysis

## An Example

Here's an example of (the beginning of) a statistical consultation.

- What happened that you expected? . . . that surprised you?

Write down at least one observation of each kind.

Thanks to Pat Zimmerman for playing the role of the consultant.

## What is Statistical Consulting?

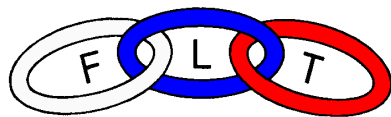
- ASA: “solve a practical problem”
- Janice Derr: “work with people in other professions and disciplines”
- Cabrera/McDougall: “communication”
- Gary: “essentially anything statistical that isn’t sitting alone in your office doing research or teaching/taking a class”

## Why Are Statistical Consulting Skills Important?

based on Sandy’s talk:

How to Talk about Statistics...  
to Smart People who don’t know the difference between  
an **Odds Ratio** and an **Odd Fellow**

## An Odd Fellow?



The Sovereign Grand Lodge  
Independent Order of Odd Fellows

- Social and mutual-aid society started in 17th century England to “... benefit all mankind in Friendship, Love and Truth.”
- Established in the US in 1819.
- Included women, an innovation, in 1851.
- Established homes for senior members and for orphaned children; still runs nursing homes.



Local chapter at Raymond & Hampden, about 1 mile from St. Paul campus

### 1974 New York Births

	Dead	Alive	Total
Low Birth Weight	618	4597	5215
Normal Birth Weight	422	67093	67515
Total	1040	71690	72730

Odds ratio:  $\frac{618/4597}{422/67093} = 21.4$

- Odd fellows, and groups like them, seek to help themselves and others, thereby repairing the world.
- Odds ratios, and other statistical methods, can help us understand the way the world works.
- This knowledge should be used by us to repair the world.

## Michael Ball

a “human rights statistician”



- testified against (and was cross examined by) Serbian dictator Slobodan Milosevic
- helped show ethnic cleansing in Kosovo
- has also worked in South Africa, Haiti, Guatemala, East Timor, and Peru