Societal Risks and the Law

Stats/CS/PoliSci C79

Philip Stark, David Wagner, Jasjeet Sekhon, Cathryn Carson, Nicholas Jewell, Stephen Mahin

Which is riskier?

(a) a 1000-mile car trip

(b) flying 1000 miles by jet plane

Which is riskier?

(a) a 1000-mile car trip

(b) flying 1000 miles by jet plane

Which is riskier?

(a) a 1000-mile car trip

(b) flying 1000 miles by jet plane

3 times riskier

Which is riskier?

(a) living one year in a brick building

(b) a one-day ski trip

Which is riskier?

(a) living one year in a brick building

(b) a one-day ski trip

Which is riskier?

(a) living one year in a brick building

(b) a one-day ski trip

6 times riskier

Which is riskier?

(a) a scuba dive

(b) a one-hour canoe ride

Which is riskier?

(a) a scuba dive

(b) a one-hour canoe ride

Which is riskier?

(a) a scuba dive

(b) a one-hour canoe ride

2 times riskier

Which is riskier?

(a) living near a nuclear plant for 5 years

(b) a parachute jump out of a plane

Which is riskier?

(a) living near a nuclear plant for 5 years

(b) a parachute jump out of a plane

Which is riskier?

(a) living near a nuclear plant for 5 years

(b) a parachute jump out of a plane

7 times riskier

Which is riskier?

(a) flying in a 2-engine jet plane

(b) flying in a 4-engine jet plane

Which is riskier?

(a) flying in a 2-engine jet plane

(b) flying in a 4-engine jet plane

Which is riskier?

(a) flying in a 2-engine jet plane

(b) flying in a 4-engine jet plane

about the same!

Why am I asking these questions?

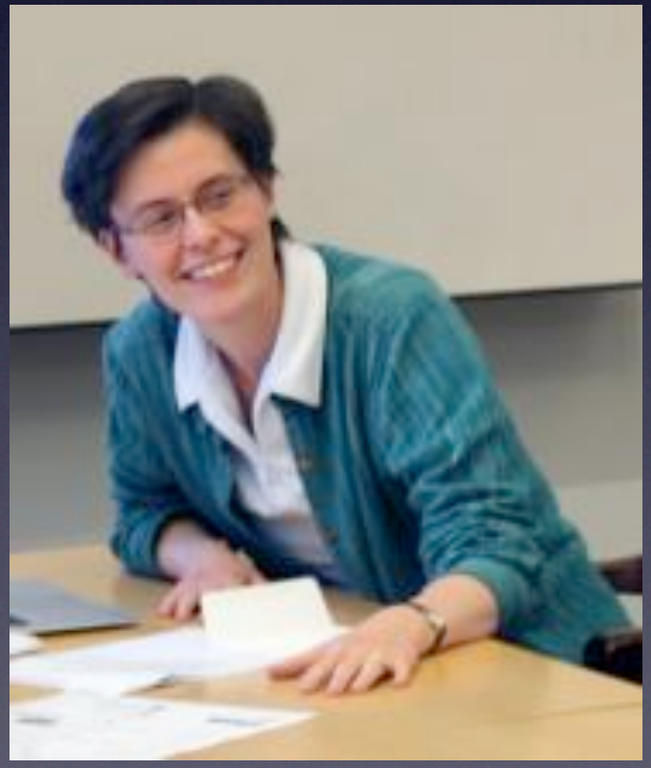
Why is it hard to estimate risks?

This class: Societal Risks and the Law

Philip Stark

David Wagner

Jas Sekhon



Cathryn Carson

Nicolas Jewell

Stephen Mahin

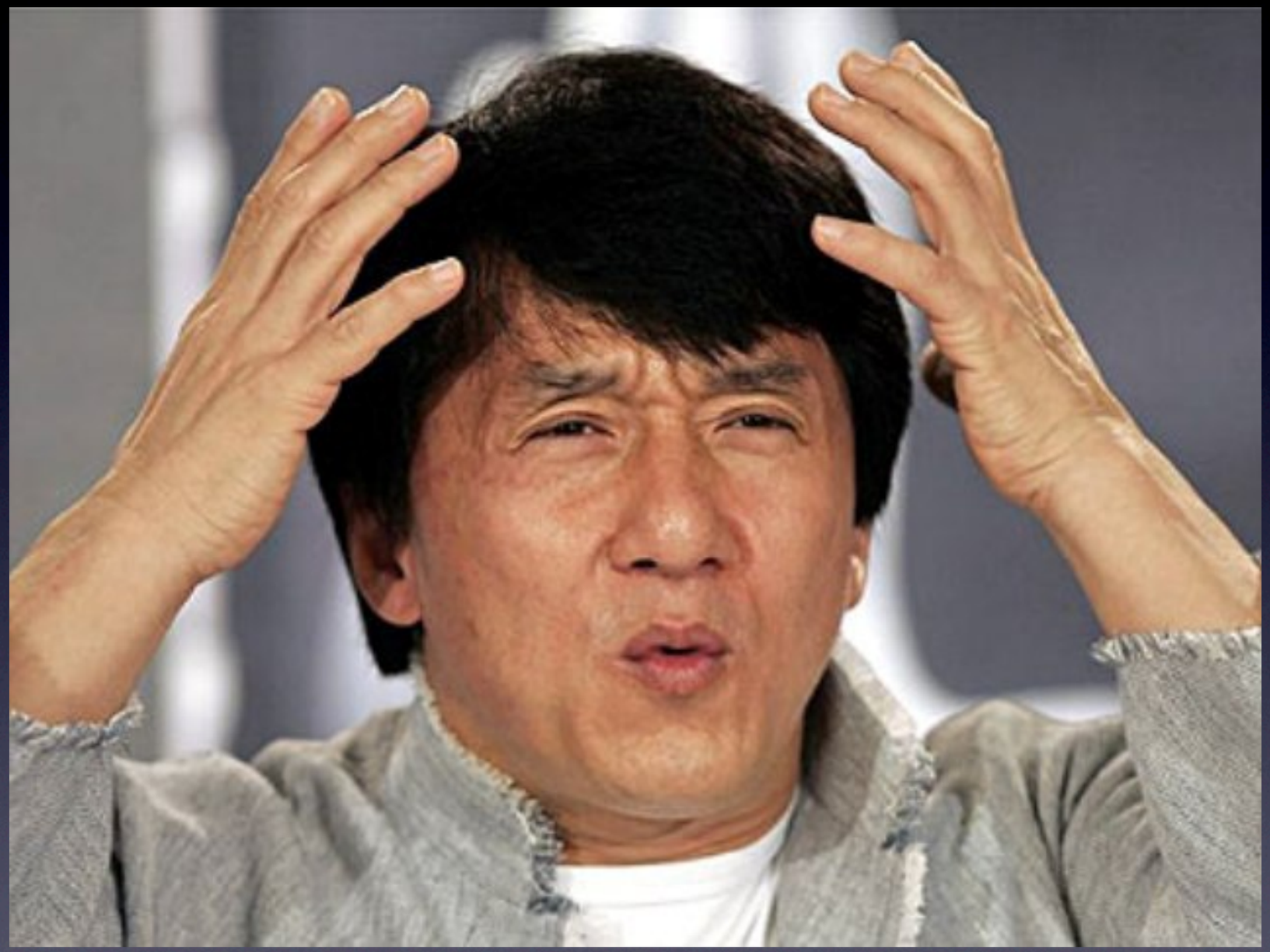
Your fearless GSIs

Wally Abrazaldo

Wayne Lee

- Homeworks (due Mondays), midterm (March 14), reading quizzes (due Tuesdays), group term project
- Read the assigned readings before lecture
- Break 45 minutes through. Remind me!
- Questions? Piazza or office hours
- See course webpage: http://www.cs.berkeley.edu/~daw/teaching/c79-s13/

This is an experimental course; please bear with us.



Please ask questions!

- This course is about risk
  - How to measure risk
  - How people think about risk
  - How people, and society, live with risk
  - How many fields deal with risk

risk:

the possibility of bad stuff happening

risk = probability × damage

risk = probability × damage

risk = probability × damage

chances of the bad thing happening

how much harm is done if bad thing happens

probability is hard


Give up and go fishing?


Give up and go fishing?

probability is part of the language of risk

Linda is 31 years old, single, outspoken, and very bright. She majored in philosophy. As a student, she was deeply concerned with issues of discrimination and social justice, and she also participated in an anti-nuclear demonstration.

Linda is 31 years old, single, outspoken, and very bright. She majored in philosophy. As a student, she was deeply concerned with issues of discrimination and social justice, and she also participated in an anti-nuclear demonstration.

Which is more likely?

(a) Linda is a bank teller.

(b) Linda is a member of the League of Women Voters.

Linda is 31 years old, single, outspoken, and very bright. She majored in philosophy. As a student, she was deeply concerned with issues of discrimination and social justice, and she also participated in an anti-nuclear demonstration.

Which is more likely?

(a) Linda is a bank teller.

(b) Linda is a bank teller who is active in the feminist movement.

Was Gandhi older or younger than 9 when he died?

How old was Gandhi when he died?

- “Was Gandhi older or younger than 9 when he died?”
  “How old was Gandhi when he died?”
  $\Rightarrow$ average answer: 50

- "Was Gandhi older or younger than 9 when he died?"
  "How old was Gandhi when he died?"
  ⇒ average answer: 50
- "Was Gandhi older or younger than 140 when he died?"
  "How old was Gandhi when he died?"
  ⇒ average answer: 67

let’s make a deal