Statistics without the agonizing pain

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Without the pain

With thanks to John Rauser: Statistics Without the Agonizing Pain

What we need

- Imagination.
- Add, subtract, divide.
- Some ping pong balls.
- A pen.
- A bucket.

Problem 1 - a biased jury?

Example inspired by the Berkeley data science course, with thanks.

- Around 1962: Robert Swain - a black man - sentenced to death by an all-white Jury in Talladega County, Alabama.
- Of the eligible jurors in the county, 26% were black.
- Swain appealed eventually to the Supreme Court on the basis that the jury selection was biased.
- What do you think?

Problem 1 - with a computer
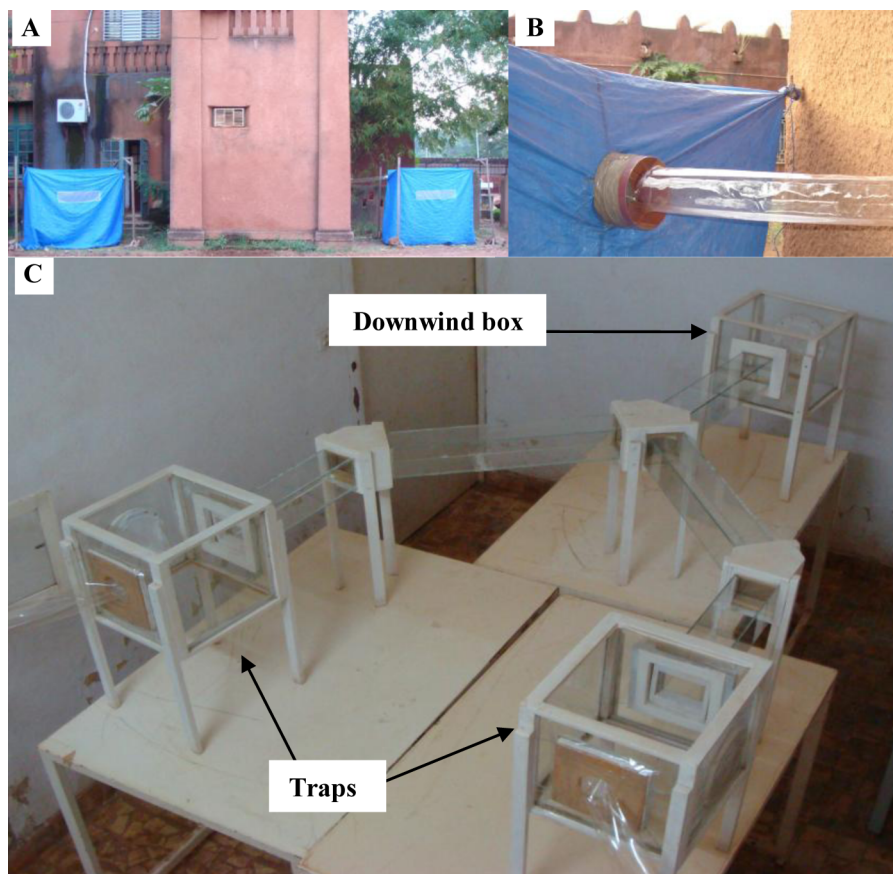
http://bit.ly/less-agony

Problem 2 - do mosquitoes like beer?

Beer Consumption Increases Human Attractiveness to Malaria Mosquitoes

Thierry Lefèvre ✉, Louis-Clément Gouagna, Kounbobr Roch Dabiré, Eric Elguero, Didier Fontenille, François Renaud, Carlo Costantini, Frédéric Thomas

The setup

Beer and water numbers

Mosquito numbers for beer drinkers:

27 20 21 26 27 31 24 21 2
19 23 24 28 19 24 29 18 2
17 31 20 25 28 21 27

Mosquito numbers for water drinkers:

21 22 15 12 21 16 19 15
24 19 23 13 22 20 24 18

Problem 2

What do you think?

Problem 2 - with a computer

http://bit.ly/less-agony

Problem 3 - were rescuers democratic?
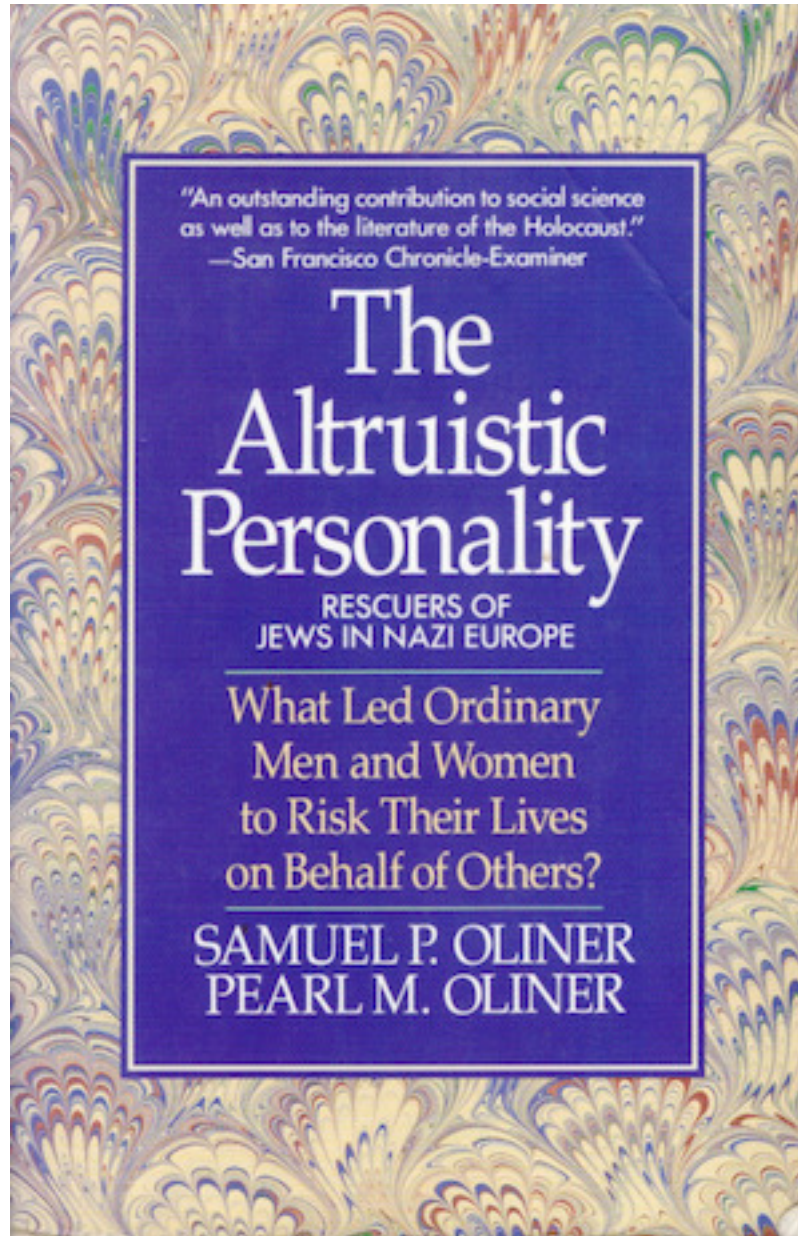
The numbers

	Democratic	Other	Total
Bystander	1	6	7
Rescuer	32	8	40
Total	33	14	47

Some percentages.

Problem 3

What do you think?

Problem 3 - with a computer

http://bit.ly/less-agony