

Statistics for Innumerate Journalists

Stephen K. Doig
 Cronkite School of Journalism
 Arizona State University

Journalists hate math

- Definition of journalist: A do-gooder who hates math.
- “Word person, not a numbers person.”
- 1936 JQ article noting habitual numerical errors in newspapers
- Japanese 6th graders more accurate on math test than applicants to Columbia's Graduate School of Journalism
- 20% of journalists got more than half wrong on 25-question “math competency test” (Maier)
- 18% of 5,100 stories examined by Phil Meyer had math errors

Bad examples abound

- Paulos: 300% decrease in murders
- Detroit Free Press (2006): Compared ACS to Census data to get false drop in median income
- KC Star (2000): Priests dying of AIDS at 4 times the rate of all Americans
- Delaware ZIP Code of infant death
- Almost any political poll

Common problems

- Numbers that don't add up
- Making the reader do the math
- Failure to ask “Does this make sense?”
- Over-precision
- Ignoring sampling error margins
- Implying that correlation equals causation

Dangers of journalistic innumeracy

- Misleads math-challenged readers/viewers
- Hurts credibility among math-capable readers/viewers
- Leads to charges of bias, even when cause is ignorance
- Makes reporters vulnerable to being used for the agendas of others

Necessary newsroom skills: Bad news and good news

- Basic math
- Percentage change
- Rates and indexes
- Descriptive statistics
- Z-scores
- Probability
- Sampling and polls
- Correlation and regression

Numeracy efforts

- Some j-schools require media research methods, including statistics
- Precision journalism courses in j-school
- IRE/NICAR: Training in computer-assisted reporting
- Newsroom math test at www.ire.org
- NewsU "Math for Journalists"
- "Numbers in the Newsroom," by Sarah Cohen
- "News and Numbers" by Victor Cohn
- Statistics boot camp at ASU

What you can do

- Gently but persistently point out errors in your local paper
- Understand the differences between academic research and journalistic research
- Offer self as an expert source on statistical questions (looks good on the activity report!)
- Consider developing a half-day newsroom math/statistics training session