

# SOCIAL SCIENCE

IR 155: Comparative Politics

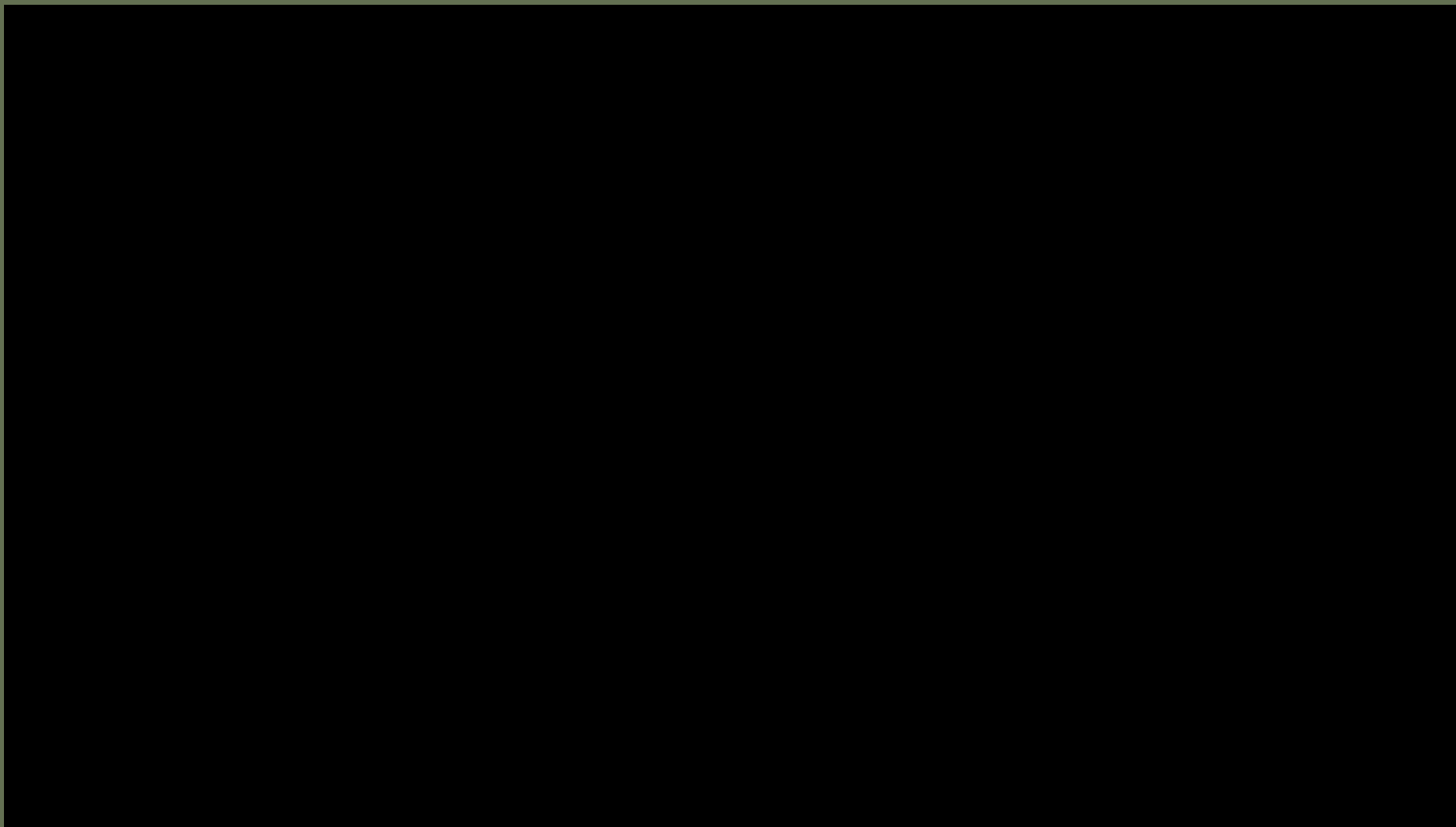
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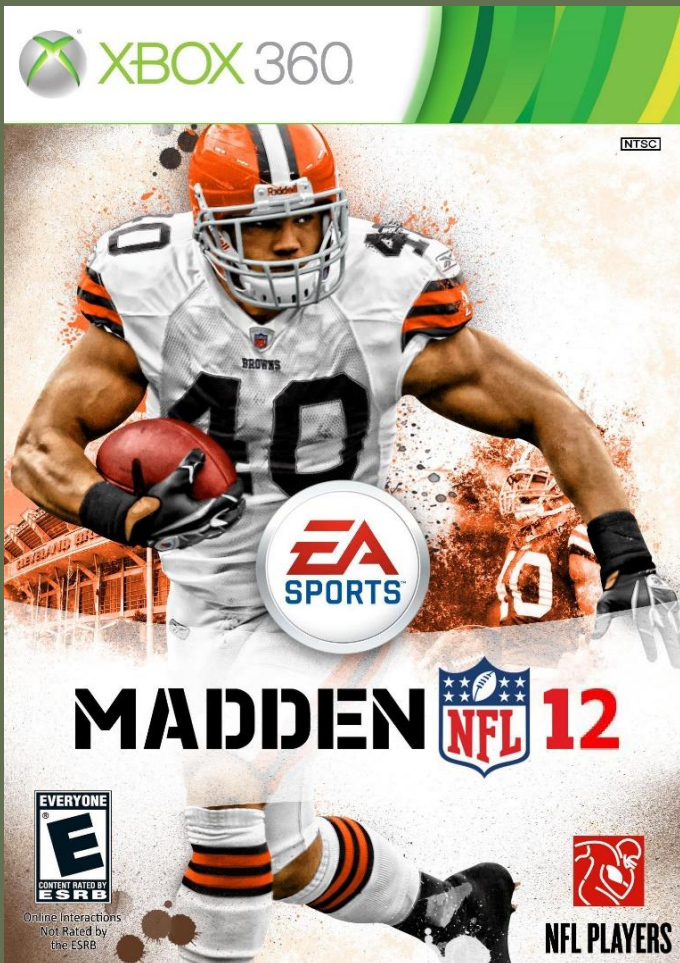
# I. WHAT IS SOCIAL SCIENCE?

- The study of human behavior and interactions
  - e.g. Economics, Political Science, Sociology
- Differs from other disciplines
  - Natural sciences vs. social sciences
  - Humanities vs. social sciences

# SPORTS ILLUSTRATED COVER JINX?



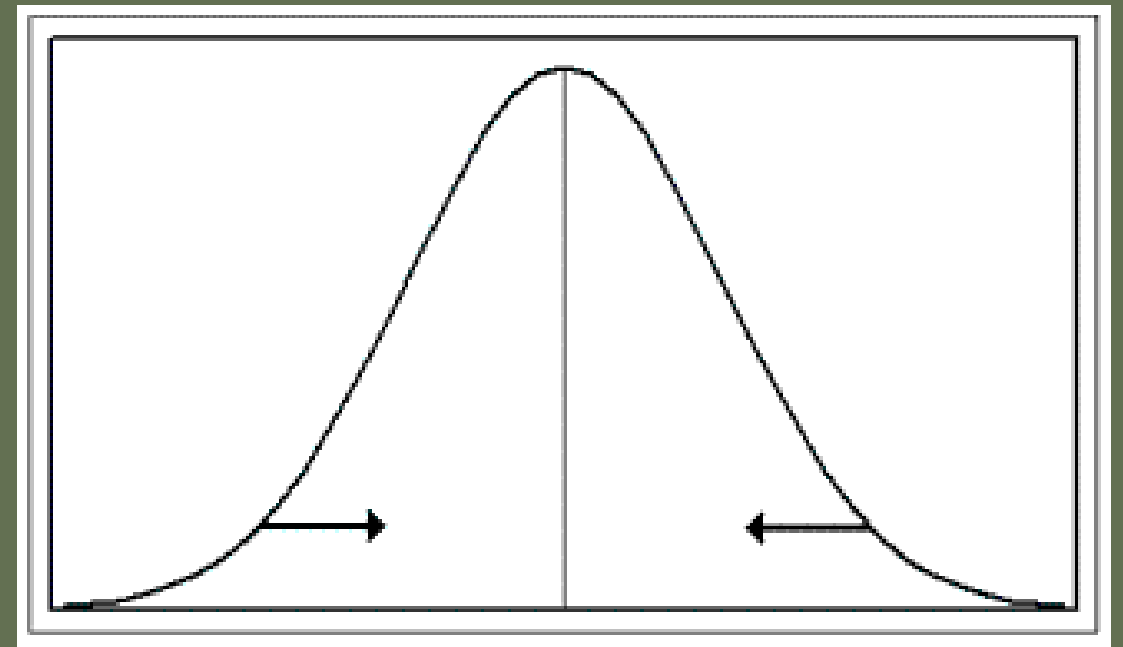
# THE MADDEN CURSE: CHALLENGING FALSE TRUTHS



- Claim: Players who appear on the cover of Madden football game perform worse in subsequent seasons.
- Evidence: Peyton Hillis
- Is this a valid claim?
  - i.e. Does appearing on the cover of Madden football *cause* worse player performance?

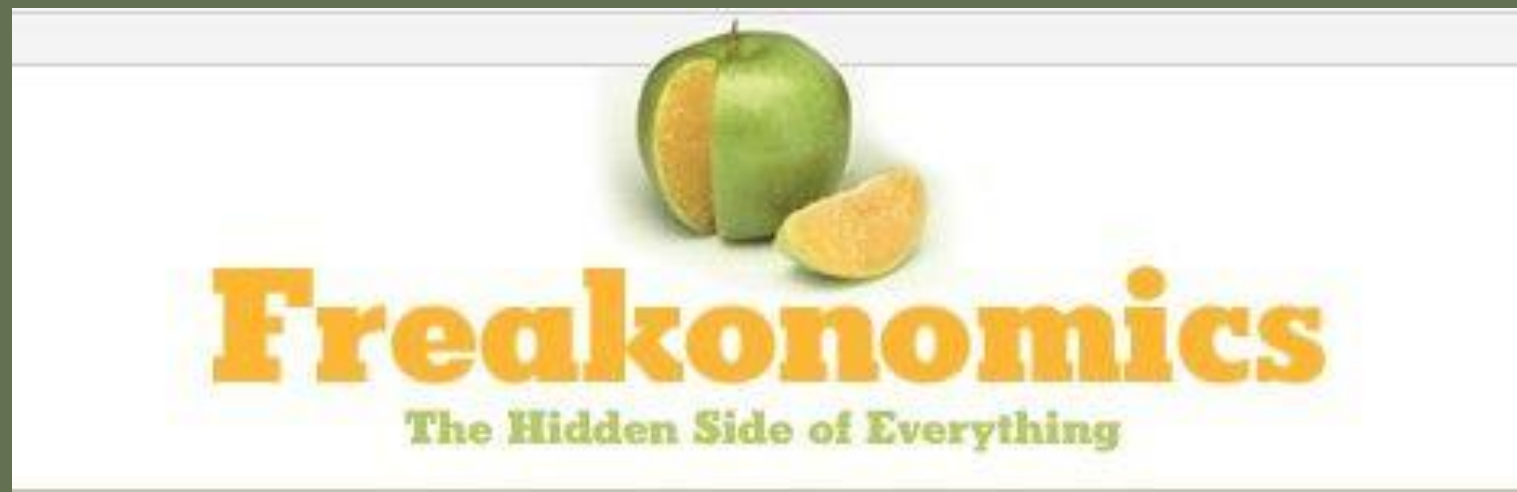
### III. REGRESSION TO THE MEAN: A SOCIAL SCIENCE EXPLANATION

- Unique events usually occur through a normal distribution
  - Majority of data points are clustered near the mean
  - Data points diminish with distance from mean
  - Some outliers at the extreme range
- Repeated events tend to converge toward the mean
  - e.g. Israel Air Force pilots



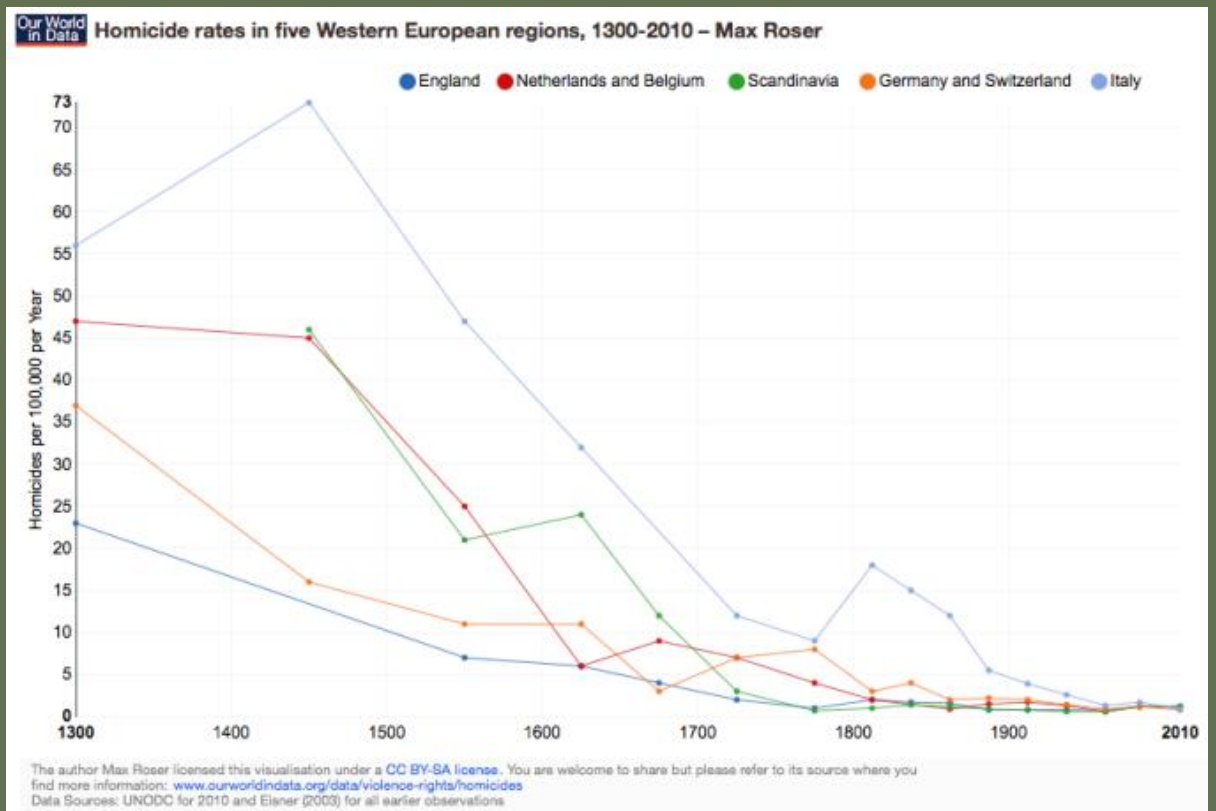
Normal distribution

*FREAKONOMICS*  
*CHAPTER 1: CHEATING*



## IV. SOCIAL SCIENCE AND “CAUSATION”

- Social science explains relationships through isolating patterns and correlations
- Problem of inferring causation
  - There are no naturally occurring experiments.
  - We rely upon correlation
    - Attempt to control for alternative explanations
- Social science allows us to dispel myths
  - e.g. decreasing crime rates in 1990s



# WHAT IS THE VALUE OF SLEEP?



- Does more sleep promote greater wages?
- Social scientists may use existing “natural experiments”
  - Time zones provide arbitrary divisions in sleep schedules (i.e. sunset time differential)
  - Analyze similar cities on far opposite edges of a time zone
- Studies show a 4.5% city-wide wage increase for one-hour per week
  - Does this study prove causation?