Expert Opinion for Fun or Profit:

A Perspective On Public Versus Private Sector Uncertainty Analyses

Presented at:: Aspen Global Change Institute

“Climate Scenarios and Projections: the Known, the Unknown, and the Unknowable applied to California”

(Co-chairs: Stephen Schneider and Richard Moss

Convenor: John Katzenberger

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Observed Difference Between Public and Private Uncertainty Analysis

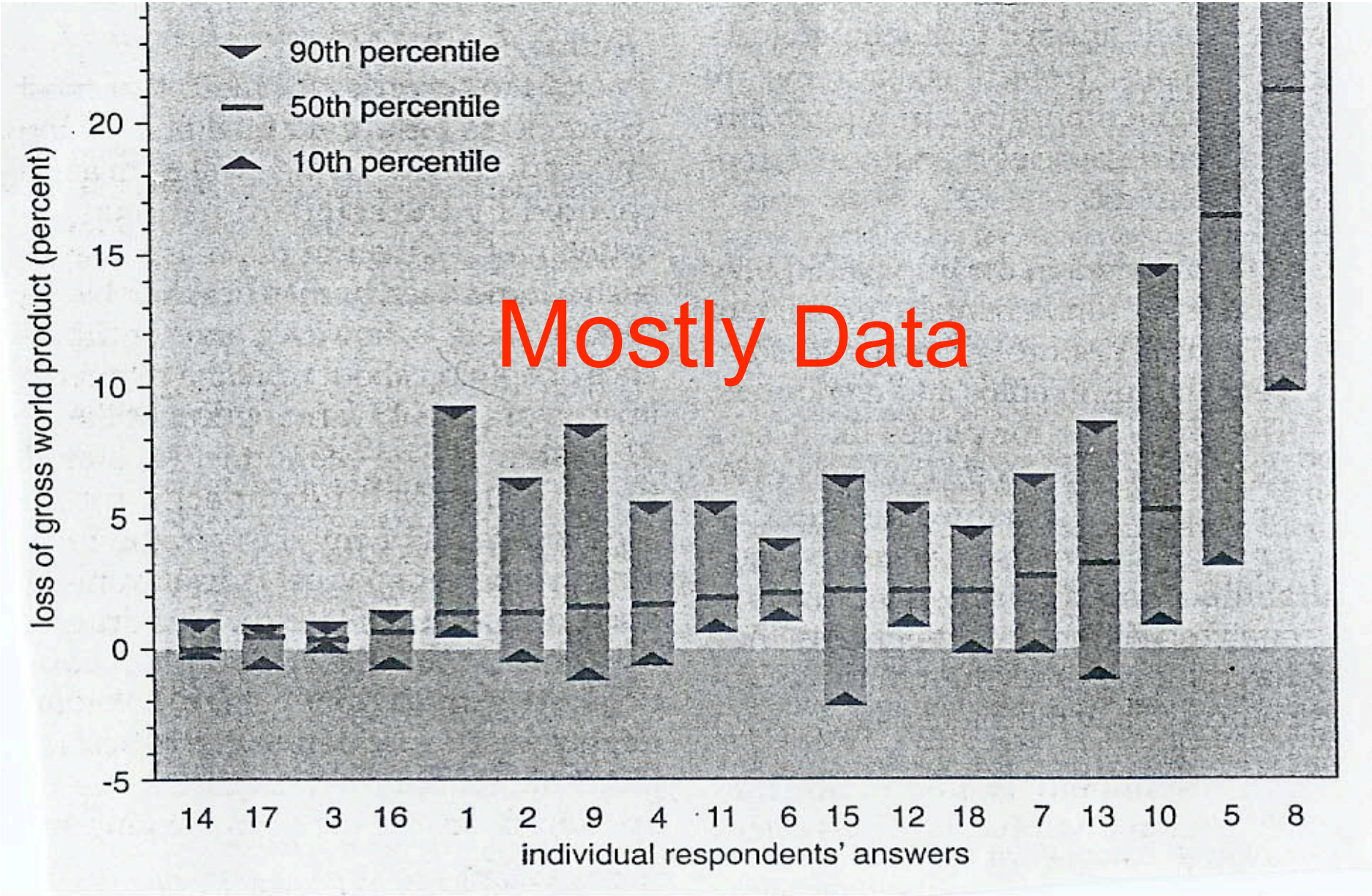
- Private Sector
  - ~80%Assessment
  - ~20% Modeling
- Public Sector
  - < 5% Assessment
  - >95% Modeling

Some Key Issues in Expert Assessment: Mining Information From Data

- Selection of Experts
  - Who Are These People Anyway?
  - What Expertise/Biases Do They Bring?
- Calibration of Experts
  - De-Biasing – Takes Substantial Effort
  - Evaluation – Do They Know What They Are Doing
- Combining Multiple Expert Opinions
  - Sit Down and Fight it Out (Preferred, Impractical?)
  - Assume Complete Independence
  - Full Maximum Likelihood Approach
  - Something In Between

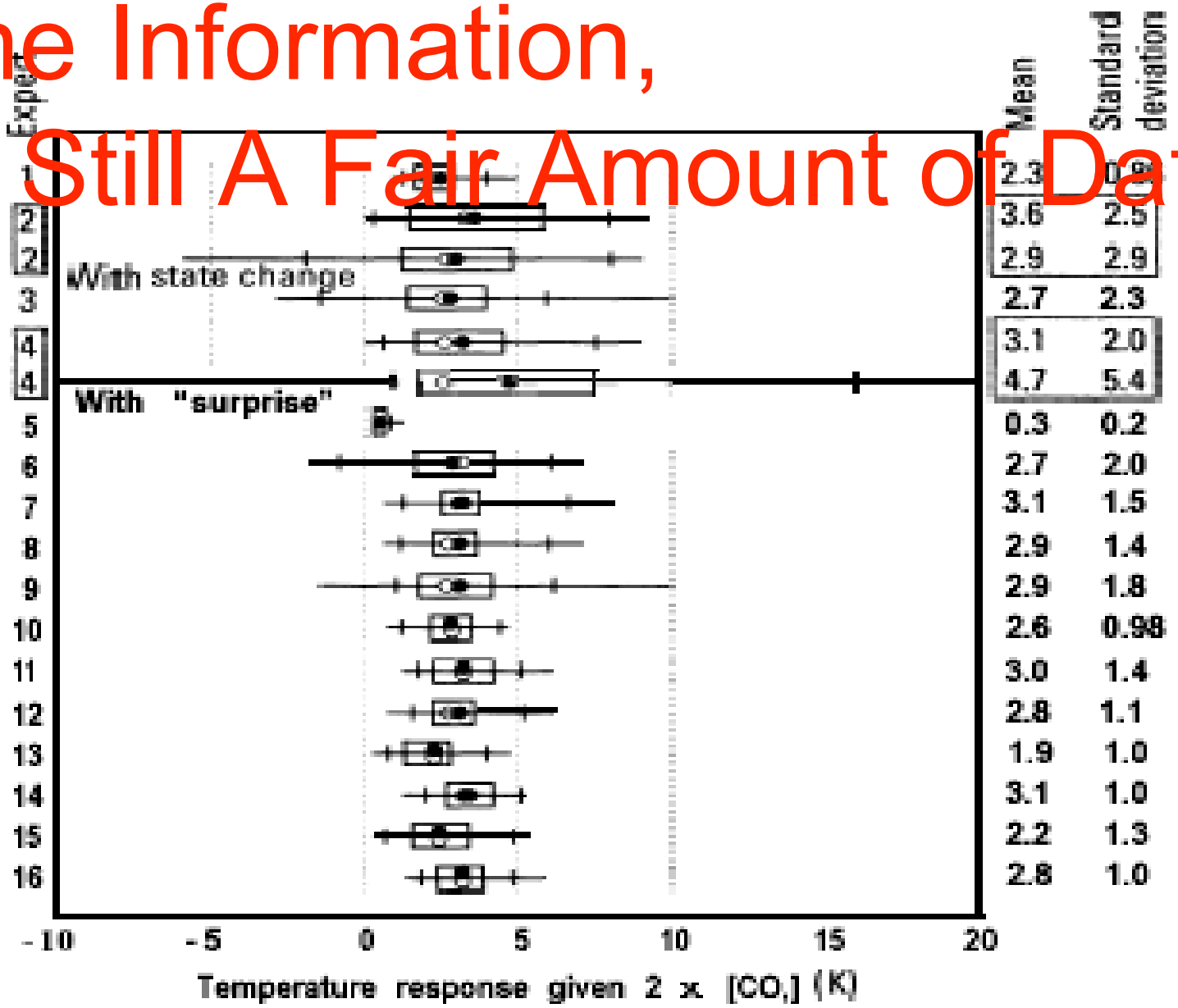
Quality of Experts

- Competence
  - Coherence
  - Regularity
  - Calibration
- Accuracy
  - Need Competence
  - Measures “Tightness of Distribution
- Dependence
  - Measured Via Conditional PDFs
  - Value of Expert is in Refining Joint PDF



Source: "Expert Opinion of Climatic Change," William D. Nordhaus
American Scientist, January-February, 1994.

Some Information, But Still A Fair Amount of Data



From: Morgan and Keith, "Subjective Judgements By Climate Experts," Environmental Science and Technology, Vol. 29, No. 10, 1995, pp. 468-476.

An Interesting Reference on Uncertainty Analyses

Approaches for Performing Uncertainty Analysis in Large-scale Energy/Economic Policy Models

Antje Kann and John P. Weyant

Environmental Modeling and Assessment,

Vol. 5, No.1, 2000, pp. 29-46

Types of Uncertainty Analyses