

Departmental Research Seminar

The Trouble with Deviation Scores:
Misinterpreting Mean Shifts and Variability

By

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Date : 16 Mar 2026 (Mon)
Time : 10:30 am – 12 noon
Venue : M802, PolyU

Abstract

Deviation-based metrics (e.g., mean absolute deviations-MAD) are commonly used to assess anchoring effects, judgment accuracy, and related phenomena. However, this manuscript demonstrates that these metrics inherently conflate meaningful shifts in mean judgment positions with incidental changes in variance, potentially misleading researchers about treatment effects. Using intuitive examples, rigorous simulations, and reanalyses of past findings, we show that deviation scores frequently produce results that contradict the true underlying effects. We illustrate this conflation of mean and variance in the context of anchoring-effect and wisdom-of-the-inner-crowd studies. Ultimately, we argue for a conceptual and analytical separation of mean position from variance.

Prof. Dan Schley's general research interests revolve around the integration of psychology and economics within marketing. His work often straddles between experimental approaches (e.g., A/B testing) and complex statistical modelling. Prof. Schley studies the determinants of individuals' judgments and decision making (JDM), primarily with regard to how the mind processes seemingly objective information. For example, numbers should be objective, but people treat numbers in a very subjective manner.

All interested are welcome.

