DEPAUL UNIVERSITY | OFFICE OF RESEARCH SERVICES

Scholarship Learning Community (SLC)

Title: Can We Trust the Data? Reasoning About Evidence Across Disciplines

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Description:

This Scholarship Learning Community (SLC) brings together researchers from across the university to explore a shared question: when should we trust the evidence we use to make decisions? Faculty in many fields rely on information whose validity may be uncertain, whether interpreting historical sources, analyzing survey data, evaluating business metrics, diagnosing patients, or working with scientific instruments. In each case, information is often treated as usable once it is available, even though its reliability may be uneven or context-dependent.

This challenge has become more visible with the rise of AI and automated systems, which act on data without direct human inspection. Errors, bias, or drift can propagate quickly and shape decisions at scale. While many current efforts focus on how to use or regulate AI systems, this SLC takes a step back and focuses on a more basic question: how to determine whether any information—whether produced by humans, instruments, or algorithms—should be trusted at all.

Across disciplines, there are established but often separate ways of approaching this problem. Clinical research uses sensitivity and specificity to balance false positives and false negatives. Social sciences rely on concepts such as construct validity and statistical error. Humanities fields emphasize source credibility and interpretation. Data science uses measures such as precision and recall. This SLC will bring these perspectives into conversation, with the goal of identifying shared principles and developing new ways of reasoning about trust in evidence.

SLC participants will work with examples drawn from their own research and professional contexts, examining cases in which evidence was uncertain, contested, or misleading. Through discussion and collaborative activities, the group will identify common patterns in how information fails and explore how different disciplines respond to these situations. The SLC will also provide a space to explore potential collaborations and connections to external partners or funding opportunities related to trustworthy data, decision-making, and AI-enabled systems.

As research, policy, and industry increasingly rely on data-driven decision-making, the ability to evaluate the trustworthiness of information is becoming more important across fields. This SLC will bring together faculty expertise from the humanities, social sciences, business, health, computing, and the natural sciences to address this shared challenge.

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SLC Group Goals

This learning community seeks to build long-term scholarly and practical impact by developing shared approaches to evaluating evidence and trust across disciplines. Through this work, participants will:

➢ Develop a shared vocabulary for discussing validity, reliability, and trust in evidence across fields.

➢ Identify common patterns in how information can fail (e.g., bias, drift, misinterpretation, missing context).

➢ Create a set of cross-disciplinary case examples that illustrate challenges in evaluating evidence.

➢ Explore opportunities for collaborative research and external funding aligned with topics such as trustworthy AI, data governance, and decision-making.

Planned Activities

Monthly meetings will combine discussion, case analysis, and collaborative work.

Months 1–3: Exploration and Shared Framing

➢ Goals: Identify how different disciplines approach questions of trust in evidence; introduce key concepts and frameworks.

➢ Activities: Discussion of short readings and examples drawn from multiple disciplines; participant "lightning talks" presenting examples from their fields; initial comparison of approaches.

Months 4–6: Case Development and Comparative Analysis

➢ Goals: Examine real-world cases where evidence is uncertain or misleading; identify common failure modes and disciplinary responses.

➢ Activities: Small-group analysis of participant cases; comparison across fields; identification of recurring patterns.

Months 7–10: Synthesis and Application

➢ Goals: Develop shared approaches for evaluating trust in evidence; explore applications to research, teaching, and collaboration.

➢ Activities: Collaborative framework development; case refinement; discussion of potential research directions and funding opportunities.

In Between Meetings

Participants will contribute short examples from their own work and reflect on how ideas from the group apply to their research or teaching. The group will also begin building a shared collection of case examples and references that can be used within the DePaul community.

Initial areas of focus may include, but are not limited to:

1. **Measurement and Data Reliability**
    - Instrument drift, bias, and calibration
    - Data collection and preprocessing issues
    - Uncertainty and model assumptions
2. **Interpretation and Context**
    - Source credibility and historical interpretation
    - Survey design and construct validity
    - Misinterpretation of metrics or indicators
3. **Decision-Making and Systems**
    - Use of dashboards and performance metrics
    - Diagnostic decision-making in health contexts
    - Automated and AI-driven decision systems
4. **AI and Emerging Challenges**
    - Bias and drift in machine learning systems
    - Overconfidence in automated outputs
    - Human oversight and limits of interpretability

This SLC will foster interdisciplinary dialogue and collaboration while helping faculty strengthen how they evaluate and use evidence in their own work. By connecting perspectives across fields, the group will also help position participants to pursue new research directions and funding opportunities related to trustworthy data and decision-making.