Professional training 'in the wild' overrides laboratory decision preferences

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Many simulation-based studies have been conducted, and theories developed, about the behaviors of financial market traders. New work by human factors/ergonomics (HF/E) researchers suggests that decision-making research on the behavior of traders conducted "in the wild" (i.e., real-world situations) can offer an alternative lens that extends laboratory insights and provokes new questions.

In their article in the *Journal of Cognitive Engineering and Decision Making*, "Understanding Preferences in Experience-Based Choice," authors Claire McAndrew (University College London) and Julie Gore (University of Surrey) examined the gap between the decision-making preferences of financial traders "in the wild" compared to laboratory experimentation where the probabilities of outcomes are known (prospect theory).

The authors conducted in-depth interviews about past financial trading decisions with eight traders to understand how decisions were made. All participants were employed by firms authorized and regulated by the UK Financial Services Authority and had, on average, 10.9 years of experience. The traders' decision-making processes were tracked step by step, focusing on their risk-seeking or risk-adverse behavior with respect to the probability of gains and losses.

"What we found is that professional training provides distinct objectives and goals that override preferences generated in the laboratory," said McAndrew. The study found that traders were risk adverse to three of

the four scenarios compared with only two of four in the same scenarios suggested by prospect theory.

"Recognition of the interplay of the professional, task, and environment are clearly documented, which is often simply not possible in laboratory settings," said McAndrew. Whereas laboratory studies can be designed to emulate real-world conditions, trading markets are complicated and dynamic systems. The shifting, ill-defined, or competing issues that characterize trader environments are difficult to reproduce in laboratory studies. Many previous lab-based studies on financial traders could be augmented by "in the wild" examination.

This insight into real-world decision-making behavior has consequences for the design of instructional training for novices and has the potential to minimize costly mistakes. Changes in professional training might extend to other complex sociotechnical systems, such as aviation, the military, and nursing – domains where experts, like stock traders, are similarly risk averse except when faced with large-probability gains.

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