AGENDA
LEARNING FROM THE SCIENCE OF COGNITION AND PERCEPTION
FOR DECISION-MAKING: A WORKSHOP
January 24, 2018

Keck Center, First Floor
500 Fifth Street, NW
Washington, DC
Room 100

8:30 a.m. Workshop Registration Opens

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<th>9:00 a.m.</th>
<th>Workshops Commence</th>
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9:00 a.m. Welcome and Overview of Events
Sujeeta Bhatt, Study Director
Audience information
Paul Sackett, University of Minnesota, SBS Decadal Survey Chair
Welcome
William “Bruno” Millonig, Acting Director of National Intelligence for Science and Technology, Office of the Director of National Intelligence
Sponsor perspective and context for study and workshops

9:30 a.m. Opening Remarks
Jeremy Wolfe, Harvard Medical School, Workshop Committee Chair

9:35 a.m. Data and Analysis in the Intelligence Community
Thomas Fingar, Stanford University

Research Panel Presentations and Discussion

9:55 a.m. Panel 1: Forecasting and Anticipatory Thinking
This panel will discuss methods of improving the accuracy of human forecasts from large dispersed crowds. In addition, it will cover research on anticipatory thinking or mental simulations, planning, and preparing for events. What differentiates experts from novices in both of these domains? What aspects of these skills can be trained? How can people be prepared to forecast and think about a broad range of possible futures, especially low probability, high impact events?
How is research in this area likely to progress in the near future? What research questions need to be addressed? What new methodologies and tools are available?

Moderators: Sallie Keller, Virginia Polytechnic Institute and State University

Barbara Mellers, University of Pennsylvania  
Title: Returns to Precision  
Gary Klein, Macrocognition  
Title: Challenges for Engaging in Anticipatory Thinking  
Alyson Wilson, North Carolina State University  
Title: Prediction and Anticipatory Thinking

10:45 a.m.  
Discussion and Q&A  
Moderators, Presenters, and Members of the Committee on a Decadal Survey of Social and Behavioral Sciences for Applications to National Security

11:45 a.m.  
LUNCH (cafeteria is on the 3rd floor or food trucks are on 7th St, NW between F and G Streets)

12:45 p.m.  
Panel 2: Trust

This panel will consider the state of the science on trust in three respects: What is known about an individual’s level of trust with respect to data and sources; with respect to automated analyses – output of machines and models; and with respect to people.

How is research in this area likely to progress in the near future? What research questions need to be addressed? What new methodologies and tools are available?

Moderators: Fran Moore, CENTRA Technology, Inc.

David Dunning, University of Michigan  
Title: Interpersonal Trust: Current Findings and Mysteries  
Roger Mayer, North Carolina State University  
Title: The Importance of Interpersonal Trust: Now More than Ever  
Adam Waytz, Northwestern  
Title: Humans and Machines  
Victoria Stodden, University of Illinois  
Title: Trust in Research Findings

1:45 p.m.  
Discussion and Q&A  
Moderators, Presenters, and Members of the Committee on a Decadal Survey of Social and Behavioral Sciences for Applications to National Security

2:30 p.m.  
BREAK
Panel 3: Perceptual and cognitive constraints on and aids for analysis and presentation

This panel will consider the state of the science on perception and cognition as it applies toward how individuals make sense of information. How do they deal with massive amounts or high dimensional data? What techniques can be used to reduce or analyze data to information that can be used for anomaly detection or decision making? What is known about presentation to make information more memorable? Do certain forms of presentations play into people’s biases?

How is research in this area likely to progress in the near future? What research questions need to be addressed? What new methodologies and tools are available?

Moderators: Barbara Dosher, University of California, Irvine

Edward Awh, University of Chicago
Title: Capacity Limits in Online Memory and Attention

Danielle Albers Szafir, University of Colorado, Boulder
Title: Visualization and Perception across Scales

Remco Chang, Tufts University
Title: From Vision Science to Data Science: Applying Perception to Problems in Big Data

Peter L.T. Pirolli, Florida Institute for Human and Machine Cognition
Title: Integrated Cognitive Models for Collaborative Human-AI Sensemaking

Discussion and Q&A
Moderators, Presenters, and Members of the Committee on a Decadal Survey of Social and Behavioral Sciences for Applications to National Security

Closing Remarks from Workshop Committee
Jeremy Wolfe, Harvard Medical School, Workshop Committee Chair
Barbara Dosher, University of California, Irvine
Sallie Keller, Virginia Polytechnic Institute and State University
Fran Moore, CENTRA Technology, Inc.
Alyson Wilson, North Carolina State University

5:00 p.m. ADJOURN

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