

SYMPOSIUM

Decision Making in Real World Emergency Situations

- Organizer: Vimla L. Patel, Ph.D.
Cognitive Studies in Medicine:
Centre for Medical Education
McGill University
1110 Pine Avenue West, Room 203
Montreal, Quebec, Canada H3A 1A3
- Chair: John Bruer, Ph.D., President
James S. McDonnell Foundation
- Participants: Earl Hunt, Ph.D., University of Washington
Who keeps cool when things get hot? A study of rapid decision making
Vimla L. Patel, Ph.D., McGill University
Decision making strategies in emergency triage situations
Richard Horst, Ph.D., Man-Made Systems Corporation
Decision making by anesthesiologists during trauma treatment: Effects of stress on team interaction
Jack Whalen, Ph.D., University of Oregon
Deciding as situated practice: The work of public safety 9-1-1- call-takers
- Discussant: Reid Hastie, Ph.D., University of Colorado at Boulder

Abstract

This symposium is concerned with models of decision-making under time constraints. While decision making has been the subject of considerable investigation in cognitive science for a number of years, the earlier work tended to concentrate on abstracted decontextualized laboratory models. More recently, however, a number of approaches have evolved that attempt to study real-world, real-time cognitive behavior in complex dynamic environments. All four participants in this symposium will focus on decision-making under emergency and/or time constrained real-life circumstances such as 9-1-1 emergency assistance, air traffic control, and trauma management. These studies involve rapid judgments using partial and sometimes unreliable information that affect public health and safety.

The presentations bring together multidisciplinary approaches in cognitive science and a large range of theoretical perspectives, from standard models of information processing to models of situated cognition. These different perspectives make a considerable difference in the kinds of phenomena that we need to examine in empirical research.

The study of real-world dynamic environments necessitates the use of complex methods of data collection and analysis, from the use of videotapes to actual participant observations. These various theoretical and methodological approaches are used by the participants (Hunt, Patel, Horst, and Whalen) to study decision-making in "messy", realistic activities, requiring immediate intervention. The approaches are relevant to other areas where similar issues of complexity and urgency must be dealt with.