Workshop on Modeling the Perception of Intentions

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Abstract

Attributing intentions to others based on observations of their behavior is a core cognitive ability. It is also a necessary precursor to social judgments such as judgments about responsibility and morality. The seminal work of Heider and Simmel (1944) highlighted the spontaneity, richness, and range of intention attributions that can be elicited by a stimulus as impoverished as moving geometric figures. Subsequent research has revealed a wide range of visuospatial cues that suggest specific intentions as well as observer attributes that influence judgments. How are such cues and observer attributes integrated into an inferred specific intention? A handful of processing models have used frameworks such as schema-matching or probabilistic inference to integrate such cues. This workshop will address two questions: 1) How have different fundamental paradigms fared in the quest for a model of human intention perception? and 2) What questions about this topic are most in need of answers?

Goals

- To foster on-going communication, and perhaps coordinated research, across disciplines among researchers on this topic.
- To provide an overview for the audience of how different disciplines have approached this topic.

Why a workshop?

Perception of intentions has been studied by cognitive, social, and developmental psychologists, philosophers, anthropologists, artificial intelligence researchers, and computer vision researchers. Apart from its intrinsic interest, there is the prospect of different approaches informing each other. Because there are several lines of research to cover, and because we want to encourage speakers not just to cover their own lab's work but propose ways of linking with others, a symposium or half-day workshop would not afford enough time.

How it is relevant?

The topic has drawn much interest across disciplines, and the confirmed speakers represent many of those disciplines. The event could provide a useful example the value of exploring a complex cognitive activity from different disciplinary perspectives.

The Organizer

While trained as a computer scientist myself, I have led a project on this topic for two years, collaborating closely with cognitive and social psychologists. Together we have completed a literature review spanning the disciplines listed above, designed and built a computational simulation furthering the schema-matching line of research, and published that work in a journal article last year:

Pautler, D., Koenig, B.L., Quek, B.K., Ortony, A. (2011). Using modified incremental chart parsing to ascribe intentions. *Behavior Research Methods 43(3), 643-665*, DOI: 10.3758/s13428-011-0128-2.

Target Audience

The workshop will be most relevant to those working in high-level perception, theory of mind, and plan recognition, but we expect it to be of general interest to many researchers in cognitive, developmental, and social psychology, as well as artificial intelligence, anthropology, and philosophy. It is hard to predict the number of early arrivals at the first CogSci conference to be held in Asia, but we expect approximately 30 people in the audience.

Confirmed Speakers

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Publicity

The most relevant mailing lists we know of are: [Plan Rec Psychonomics](#), and [ACT-R](#). All of those listservs are commonly used for announcements of such events. Furthermore, [CASA](#) (conference on Computer Animation and Social Agents) will be held here in Singapore in May, and we will advertise there.

Archiving and Special Requirements

If videotaping will be available at the conference site, we would like to use the workshop budget of US$1200 to cover that cost. Videos might be hosted by the organizer's institutional website, http://cogsys.ihpc.a-star.edu.sg/.