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Decision Making and Rationales

How does information issued by autonomous agents influence decision making?

Decision making for human and autonomous agents is becoming increasingly interchangeable, where either can take the lead in collaborative tasks. One of the key challenges for HCI/CSCW research is establishing how to coordinate the efforts of human and autonomous agents in a flexible manner.

Our research considers the interactions between human and autonomous agents by exploring how people make decisions when issued with information from autonomous agents.

Research Questions

- Do decisions differ according to the source of information (human or autonomous agent?)
- What are the underlying reasons (rationales) for decisions made?

In our studies, we examine different types of information

- Data – Factual information
- Data interpretations – What a human or autonomous agent thinks or believes about an event/situation
- Data and interpretations

Research Domains

Plagiarism and Social Welfare

Our research has examined decision making across 2 domains. In both, an autonomous agent provides the decision maker with data, interpretations, data + interpretations and the human must make a decision regarding the best course of action to take. These domains are as follows:

1. Plagiarism detection

- The human must decide whether they believe students have committed plagiarism or not
- The information provided provides evidence which may clearly suggest that plagiarism is likely
- The main consequences of the decision would impact a student's degree/ place of the course

2. Social Welfare

- The human must decide whether or not a child needs to continue to be monitored by social workers
- The information provided presents a 'wicked problem' – there is no obvious right or wrong answer
- The consequences of making a 'wrong' decision can be severe

Decision rationales

Our research also examined rationales for each decision. This allowed us to explore the causal factors behind any differences between information provided by human and autonomous agents.