Re-Embodying Agents in Socially Complex Environments John Zimmerman, Aaron Steinfeld

How should a **single** home agent embodied within a **single** body interact with **multiple** people?







Key Problem

Embodied intelligences and agents are becoming ubiquitous. How should they manage socially complex environments that include many users and many agents that need to communicate and collaborate?

Impact

Managing data, social dynamics and roles as part of interaction are vital to establish trust in agents. This work sets out to enable agent integration in workspaces and services by identifying the initial social challenges they will face and proposing next steps mitigating them.



Ann and Taylor are two siblings age 16 and T 17. One day, their parents leave for the night. b

Their friend comes over to hang out and he brings beer with him.

The friend persuades Ann and Taylor to have a drink with him. The agent detects that they are consuming alcohol.



Findings

- Intelligences should be able to indicate social roles and match their responses.
- 2 Users would like to understand who the agent is accountable to when multiple stakeholders are involved.
- **Broader Impact**

- Intelligences can manage many low-stake tasks, but should be designed as expert intelligences for more critical tasks.
- People expect their agents to be proactive or responsive according to the social context: who is present, what is the data, and what is the task at hand.

Learning about people's values for agents that are socially embedded and designing them to behave accordingly is critical to build trust in agents and enable them to make socially-smart decisions. These decisions may include how to share medical data, handle diverse classroom dynamics and secure personal data around people's colleagues and families.

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