

Common Strategy Patterns of Persuasion in a Mission Critical and Time Sensitive Task

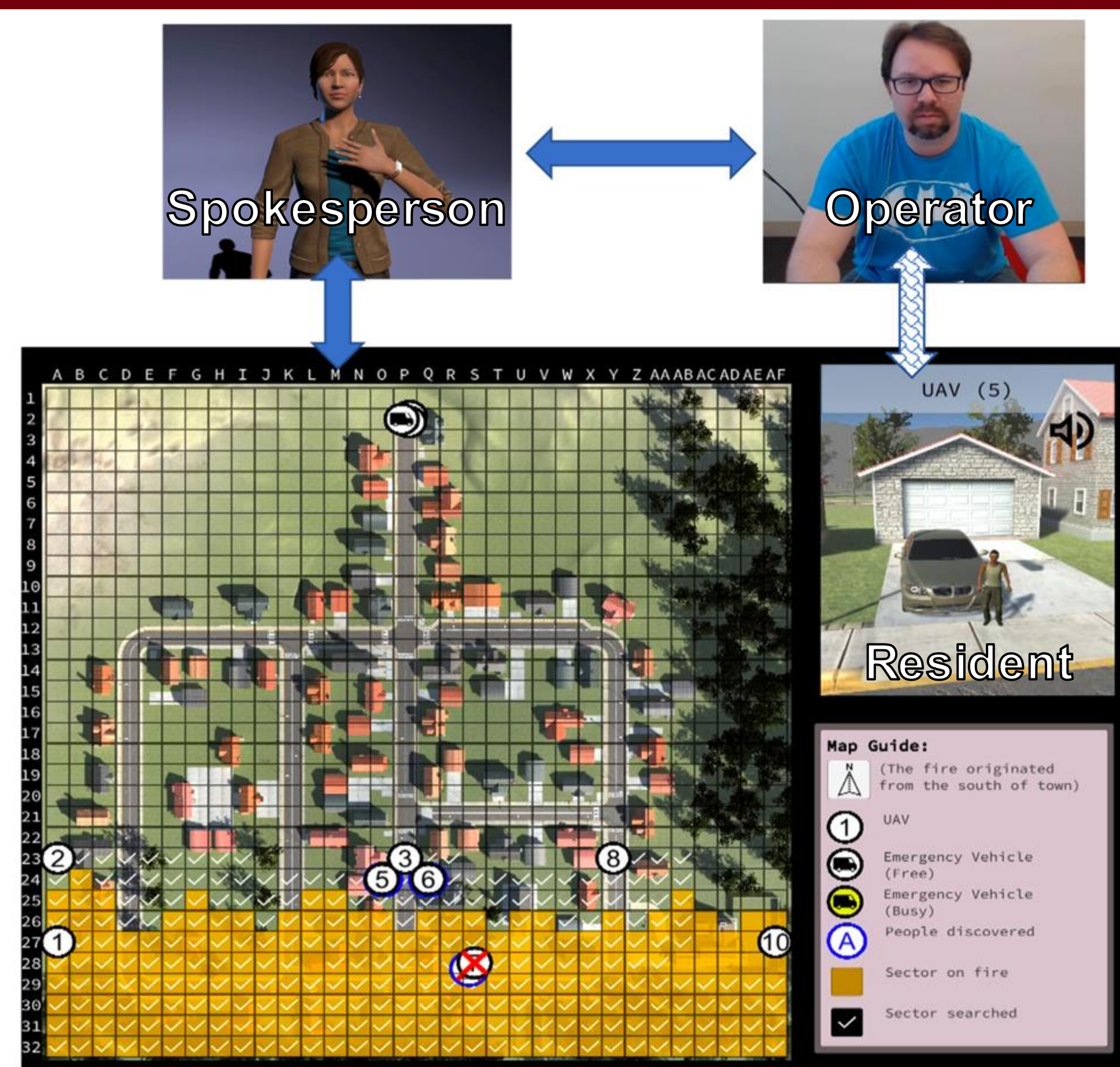
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Overview

- **Research Question:** Under high-stakes and time-critical situations, what persuasion strategies and patterns do people use to achieve their goals?
- The data used is from an experiment involving a fire rescue simulation (31 participants, 2 attempts each) introduced by Chaffey et al. (2019).
- We annotated the speech acts and identified **4 initiation patterns** from 104 dialogues between the participant and residents to study persuasion patterns.

Simulation



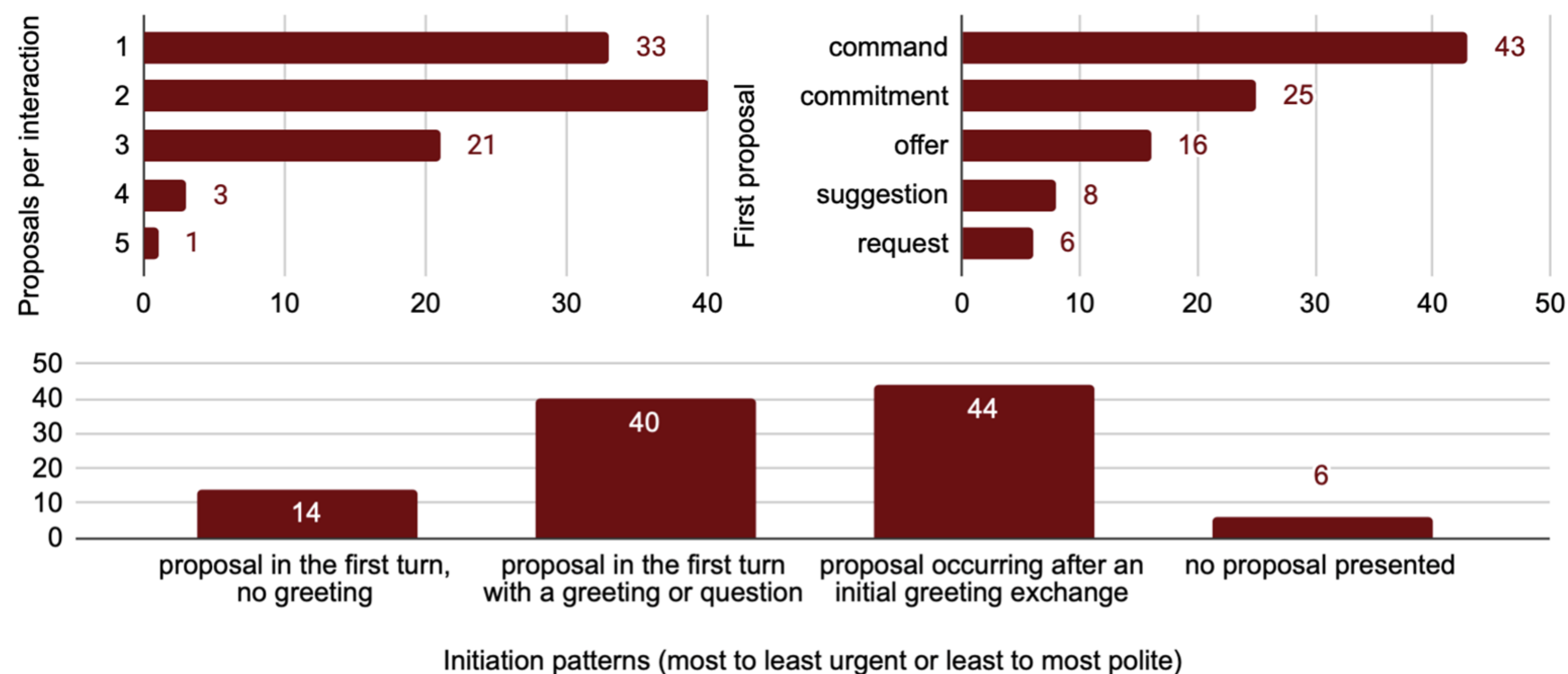
- **Objective:** to evacuate a town threatened by an approaching wildfire and save as many residents as possible.
- **Operator (participant):** coordinates a search & rescue through interaction with a **virtual spokesperson**.
- **Residents:** virtual townspeople with different personality profiles (stubborn, cooperative, and compliant).

Speech Act Annotation

- **Greeting:** initiation of conversation
- **Question:** inquiring the current status or information
- **Proposal:** presenting a course of action or plan
- **Statement:** providing insight, reason, justification, or information
- **Concession:** withdrawing a proposal.
- **Closing:** refers to end of the conversation
- **Command:** resident is ordered to perform a task.
- **Request:** resident is asked to perform a task.
- **Suggestion:** resident is advised to perform a task.
- **Offer:** persuader may perform a task at the residents' choice.
- **Commitment:** persuader will perform a task.

id	participant 1 with stubborn resident (proposal in first turn with greeting or question)	annotation
0	Hi.	
1	Hi. Do you need assistance in leaving?	greeting, proposal-offer , question
2	I'm not leaving my home. I have too much work here to just leave it all behind.	
3	It is required for you to leave. It's not safe.	proposal-command , statement
4	You really think it's that bad?	
5	It is that bad and you will have to leave at once. Do you need assistance with a vehicle?	statement, proposal-offer , question
6	No. Alright, I'll follow the drone now.	
7	Thank you.	closing
id	participant 6 with stubborn resident (proposal in first turn, no greeting)	annotation
0	Yeah, I'm going to need you to leave that area. There's a fire coming from the south. Yeah, I'm going to need you to leave. You're in danger. That area.	proposal-command , statement
1	I have too much work here to just leave it all behind.	
2	Sir, you're in danger. There's fire coming. I can't assure your safety unless you leave right now, sir.	statement, proposal-suggestion
3	OK, I'm not stupid. Just let me grab my bag and I'll have it.	
id	participant 2 with compliant resident (proposal after initial greeting exchange)	annotation
0	Hello?	
1	How many people are in your residence?	question
2	I'm here with my partner.	
3	OK. Are you aware that there is a fire approaching and both of you need to evacuate?	statement, proposal-command
4	We were just how serious the fire was.	
5	Well, it's very serious. That's why I'm on here talking to you. So I need for you to get out of the house right now and follow the drone so he can direct you to the emergency vehicle.	statement, proposal-command
6	Great, we'll follow the drone out.	

Analysis and Results



Next steps:

- Examining how proposals relate to other actions and how they are distributed across initiation patterns.
- Looking at correlation between types of patterns and other factors. Do various factors influence the resulting persuasion pattern?
 - Individual participants
 - Personality of the resident
 - Facial expressions
 - Success rate
 - Urgency