

Designing Social Dialogue Model for Human-Robot Interactions

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Research Background

- Social dialogue between humans and robots increase in diverse contexts.
- The need for social dialogue has also increased rather than simple fact-oriented dialogue (Bowden et al., 2019).
- To have more reliable social human-robot interactions, implementing the natural conversation of agents is crucial.



Overall Procedure



- Data Acquisition
 - A total of 80 participants recruited
 - 654 conversation data comprising about 13080 sentences
- Analyzing the data
 - We are currently in the process of tagging the collected conversation data.
 - **6 coders** will tag the data.
 - Each social cue was selected based on previous studies.

Social Cues
Self-disclosure elicitation
Self-disclosure
Acknowledgement
Shared Experience
Topic Shift
Topic of conversation
Non-verbal act
Suggestion

Expected Results

Speaker	Conversation data	Social cues
Robot	어서오세요. (Welcome.)	Greetings
	오늘 기분은 어떠세요? (How are you feeling today?)	Self-disclosure elicitation
Visitor	기분이 그저 그래요. (I feel so-so.)	Self-disclosure
Robot	그러시군요. (Oh I see.)	Acknowledgement
	그럼 상담을 시작해 볼까요? (How about starting the counseling?)	Suggestion
	오늘은 무슨 일로 오셨나요? (What brought you here today?)	Self-disclosure elicitation
Visitor	퇴근 후에 너무 심심해요. (I feel so bored after work.)	Self-disclosure
Robot	퇴근 후에 즐길 수 있는 취미를 찾아보시는 건 어떠세요? (How about finding some hobbies to enjoy after work?)	Suggestion, Topic shift
Visitor	어떤 취미가 있을까요? (What kinds of hobbies I could have?)	Self-disclosure elicitation
Robot	조깅 같은 건 어떠세요? (How about jogging?)	Suggestion
Visitor	조깅 좋네요! (Jogging sounds good!)	Acknowledgement, Non-verbal act
	집 앞에 산책할 만한 곳도 있어요. (I have a place to go jogging nearby my house .)	Self-disclosure
Robot	정말 좋네요. (That sounds really good.)	Self-disclosure, Acknowledgement

Thank You!