


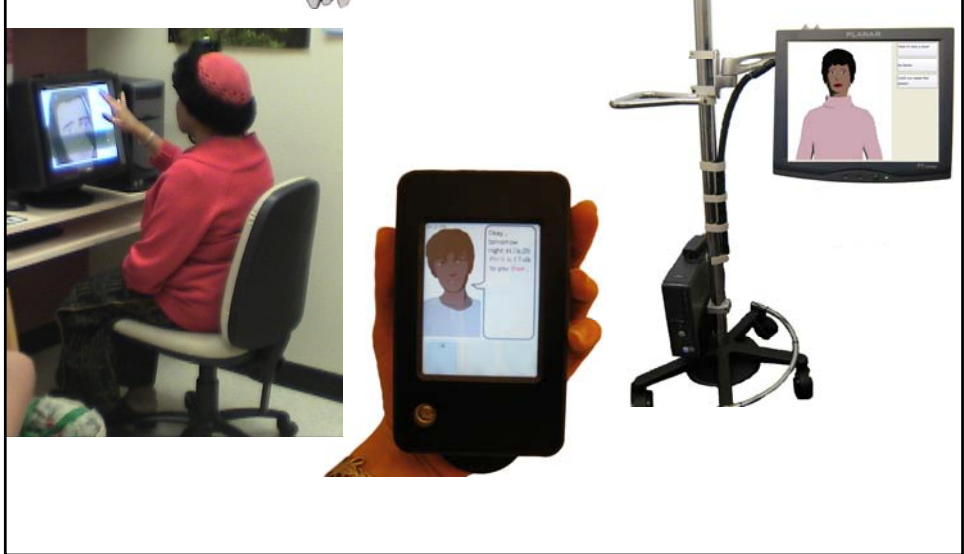



Framing and Interpersonal Stance in Relational Agents

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Health Counseling Agents






What's going on?

- Conversational Frames
- Interpersonal Stance




Conversational Frame

- Repositories for sociocultural norms of how to do different types of conversation (Tannen)
 - Frames are to conversation as modes are to HCI
- What's in a Frame? Everything!
 - topics that can be taken for granted, talked about, or excluded
 - required conversational elements (as in ritual greetings)
 - initiative or turn-taking strategies (e.g., entry transitions in storytelling)
 - obligations one has in a given situation
- Example: social chat
 - Obligatory turn-taking, agreement, light topics
 - Propositional content is largely irrelevant
 - Even the rules of grounding change!




Contextualization Cues

- “Contextualization Cue” (Gumperz)
 - The meta-message itself
 - any aspect of the surface form of utterances which can be shown to be functional in the signaling of interpretative frames
- Common nonverbal channels:
 - intonation, posture




Frames can be nested

Angry rant
Storytelling
Small Talk
Business Meeting




Interpersonal Stance

- aka “Social Deixis” aka “relational contextualization cues”
- Aspects of language that encode relationship
- Linguistic examples:
 - Forms of address
 - tu/vous
 - Politeness theory
- Nonverbal cues:
 - Immediacy behavior (smiling, close proximity, facial animation, etc.)
- More than just interpersonal attitude




How have we survived without these functions?

- Conversational frames
 - Just maintain a task-oriented frame.
- Interpersonal stance
 - Assume a fixed relationship with the user.
- These functions are only important to represent if they change over the course of one or more interactions.
- Anecdotal evidence: people *do* notice



Functional Markup


- Frames & Stance can span any stretch of dialogue from a word to an entire conversation.
- However, more typically:
 - Frames vary by utterance (or discourse segment, joint activity)
 - Interpersonal Stance varies even more slowly



Health Counseling Domain

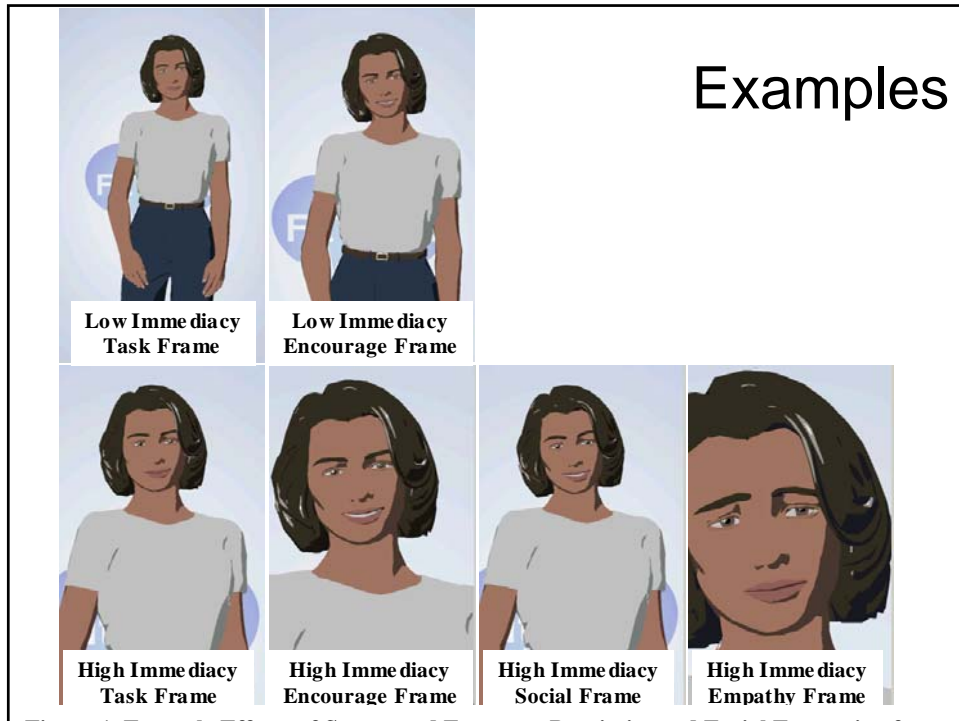
- Conversational Frames
 - TASK, SOCIAL, EMPATHY, ENCOURAGE
- Interpersonal Stance
 - DISTANT, CLOSE
- Function tags at Utterance level

`<SOCIAL>So, how about this weather?</SOCIAL>`
OR
`<SOCIAL/>So, how about this weather?`



Health Counseling Domain

- Relational Stance implementation
 - Frequency of gaze-aways, brow raises, head nods, hand gestures
 - Proximity
- Conversational Frame implementation
 - Proximity
 - Facial display
- Effects combined in a pre-determined, ad hoc, manner



Conclusions

- Conversational frame and interpersonal stance may be important functions to model for some applications.
- These are representative of a larger class of conversational functions which serve to convey information beyond propositional content.
 - May be possible to identify a common mechanism for representation and combination of effects.



Parting Shot

FML as text annotation

- My reality:
 - Large stretches of dialogue dictated verbatim by healthcare experts
 - Medication warnings
 - Psychological assessments
 - Patient education messages
 - Challenge is to weave these chunks into an engaging, “natural” conversation