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Week 9

Review of "Establishing and Maintaining Long-Term Human-Computer Relationships"

In this paper, Bickmore reviewed previous work on the importance of relationships in emotional support, appraisal support, instrumental support, group belonging, ... (sec. 2, first paragraph), persuasion (sec. 2.1), peer cooperation, business-client relation (sec. 2.2), helping (sec. 2.3). He also reviewed models of personal relationships (dyadic models, provision models, economic models, dimensional models, stage models, etc.). This review of relational models is followed by a review on previous work of how to establish and improve personal relations, and non-verbal behaviors of relationships. Bickmore noticed from pervious work that in many conversations, there are propositional information (about facts) and relational information (about maintaining relations).He also noticed from previous work many ways to improve personal relationships, like self disclosure, reference to mutual knowledge, humor, etc. (This is not new for us MAS. 965 takers since we have already read them in "Interaction and Daily Life in Long-term Relationships", week 2's reading). This is followed by a review of several previous relational machines, including Tamagotchi, Hasbro's Furby, Sony's AIBO, iRobot's My Real Baby, etc. (sec. 5 paragraph 1), and REA system (sec. 5.1), all of them lacking mechanisms to maintain long-term relationships. Then the author reviewed the MIT FitTrack? system, with client-server architecture, speech output and menu input, all long-term relationship maintaining strategies implemented. He got data from adapted Working Alliance Inventory, and the experimental result is quite promising.

There are several things very interesting in this paper:

o the implementation detail: it used/considered REA, Augmented Transition Networks, and BEAT ttt system.

We might also consider these systems in our implementation.

o He used adapted Working Alliance Inventory, this might be useful for us as well.

o The reviews of previous works are also very helpful.