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Week 3

Self-Report Methods in Studying Personal Relationships

This paper summarizes approaches and pitfalls in accumulating relationship data through self-report methods. Self-reporting is a primary data source in relationship work for a number of reasons, and it is easy to encounter potential traps if rigorous methods are not applied. Of particular interest to our work are the areas on communication, conflict and relationship satisfaction -- love and sexuality will have to wait for further technological advances. Reporting methods that we are most likely to use are questionnaires and behavioral self-report. We are in an interesting situation in that we only have one member of the relationship (the human) who is able to answer questionnaires etc, but at the same time we have an increased automated capacity for data recording on the part of the synthetic agent. However, that data cannot at present be as sophisticated as a self-report might be. So while it is important to keep in mind the issues with self-reporting, we must consider new ways to use the automatically harvested data that we are capable of accumulating throughout the interaction. Having a careful methodology and minimizing confounding aspects of subject and experimenter subjectivity (e.g. self-presentation concerns, insiderness) remains of high importance.

The Analysis of Data from Two-Person Relationships

This paper is an extended discussion of the issues associated with gathering data from relationships that are two-sided, in which both of the participants are data sources. In one sense this is a cause for concern in human-robot relationships, where we cannot retrieve the same kind of data from the robot that we can from the human. However this situation also resolves some ambiguity, such as the task of distinguishing between dyad members when performing certain statistical analyses. Some of the paper was not relevant at all to the simple synthetic agent case, such as multiple partner designs - for most HRI experiments, each human subject will be paired with the robot individually, but the robot will typically not (yet) be paired with other robots. The time series designs are of particular interest due to the robot's automatic data acquisition capabilities - it can assemble certain kinds of timed, progressive data without experimenter participation (though it is important to manage the error levels appropriately).

The Measurement of Trust and its Relationship to Self-Disclosure

This paper looks at the interdependence of felt trust and the amount of personal information a human releases to a relationship partner. In particular, the amount of self-disclosure was not strongly related to trust of people in general, but to trust in the specific partner. This has particular implications for HRI work in terms of extracting the amount that a human trusts his or her synthetic agent. Trust of the computer/robot is an important indicator of how "well" the relationship is proceeding, but asking the human to self-report in this area is not the only method we would have to assess this - we could also monitor

the interactions between the human and the agent (particularly as the interaction becomes more conversational) and look for self-disclosing events. The correlation was weak, but showed that trust was a prerequisite for disclosure, so approaching from the reverse direction (looking for disclosure) would be a valid assessment of trust.

Development and Validation of the Working Alliance Inventory

This paper presents results of studies conducted in the development of a self-report instrument for measuring the perception of the "working alliance" between a therapist and a patient, from the points of view of both participants. The notion of a working alliance is very important in the development of relational agents, particularly of the type that involve a therapeutic collaboration. The interaction between a human and a relational agent is primarily to benefit the human, as with therapist-patient relationships, but it is easy to imagine that this will be well-served by having the human feel as if he or she is part of a "team effort" in this regard. And similarly, there will be a need to evaluate the efficacy of the working alliance which has been intended to set up, for which such self-reporting instruments will be necessary. Once again there is an open question of whether this self-reporting instrument is valid for an interaction which involves a non-human partner, and if not, how and under what circumstances it should be modified.