Rabbi: exploring the inner world through stories

Marina Umaschi

MIT Media Laboratory
E15-320R, 20 Ames St.
Cambridge, MA 02139
marinau@media.mit.edu

In the oral tradition, stories were told by the elder sages in order to give indirect advice. Today most stories are told in order to entertain. While some research on storytelling systems has focused on drama/theater metaphors and adventure/mystery simulation games (Bates et al., 1995), my research emphasizes the counseling and self-awareness possibilities of storytelling.

I am exploring how storytelling systems can enable people to tell and listen to personal stories in order to learn about themselves. I am developing an authoring tool that allows children to create their own storytellers in order to start thinking about the complexity of meaning in communication.

In the light of this interest, I designed "Rabbi", a conversational storytelling system that simulates a rabbi with a repertoire of Hasidic stories to offer as indirect counsel. It approaches narrative through a psycho-social theory of discourse which looks not only at the linguistic structures of the text but also at the socio-cultural context in which the contract between teller and listener occurs. "Rabbi" uses rich interaction instead of complex matching and indexing techniques (Schank et al. 1981; Domeshek, 1992) to provide a meaningful experience for the user.

Research showed that the construction of emotional believable characters is requisite to maintain the suspension of disbelief (Weizenbaum, 1976; Bates, 1995). "Rabbi" constructs his "persona" through the conversational turns in order to set a socio-cultural context without limiting the interaction and breaking expectations.

System Design

The system parses user input and assigns prominence to keywords. To make the match with the Hasidic story, nouns and verbs in the user's story are augmented with synonyms, hyponyms and hypernyms found through WordNet (Miller et al 1993). Each Hasidic story in the data-base is indexed with a set of three descriptors: nouns, verbs and Commandments, that are weighted more heavily because they set up the story domain according to one of the universal values stated in the Ten Commandments. The

conversational interaction is built around seven phases of an encounter with a rabbi (Schachter-Shalomi, 1991) :
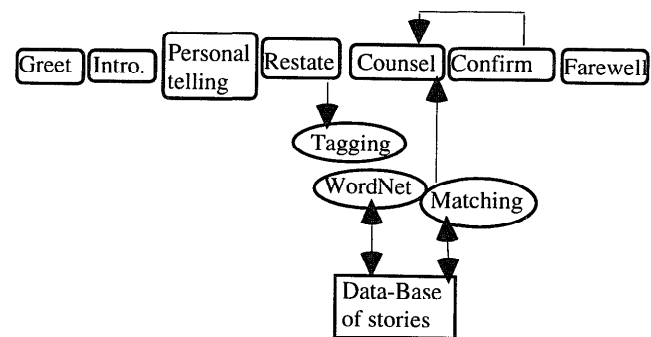
Conclusions

People using "Rabbi" expressed their need to tell personal stories. The fact that subjects found the Hasidic stories to be coherent with their own stories, in spite of the primitive matching technique, shows that given the appropriate socio-cultural context, construction of meaningful interpretation is possible. The system need not to be intelligent, but rather appears believable by projecting a personality to the user. Current work focuses on what kind of discourse structures the system should parse in order to abstract the point made by a personal story.

References

Bates, J. et al. 1995 Interactive Story Systems: Plot & Character,. In AAAI Working Notes Spring Symposium.

Domeshek, Eric. "Do the right thing: a component theory for indexing stories as social advice". PHD Thesis Northwestern University, 1992.

Miller, G. et al. 1993.WordNet: An On-line Lexical Database. (paper found through ftp claritz.princeton.edu)

Schachter-Shalomi, Z. 1991 Spiritual intimacy, a study of counseling in Hasidism, NJ: Jason Aronson.

Schank, R. and Riesbeck, C. 1981 Inside Computer Understanding. Lawrence Elbaum.

Weizenbaum, J. 1976.Computer power and human reason. SF: Freeman and Co.