

多文化共生社会への適応をめざした、日米の視線行動を表出する対話エージェントの実装と評価

INTRODUCTION

Role of gaze in social interaction

- Modelling realistic human gaze behavior to an agent resulted in more natural, humanlike, and smooth interaction

Cultural difference in gaze behavior

- Gaze patterns differ according to culture (Mayo, 78)

- Japanese had “more frequent and shorter lasting other directed gazes” than Australian. English-speaking participants looked at the other person to signal turns, while Japanese did not (Elizinga, 78)

- Swedes gaze at their conversation partner more than English (50% vs. 38% of the time) (Argyle, 76).

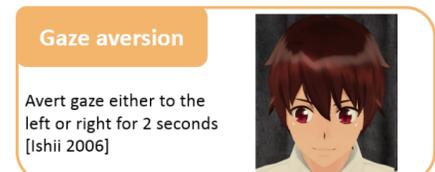
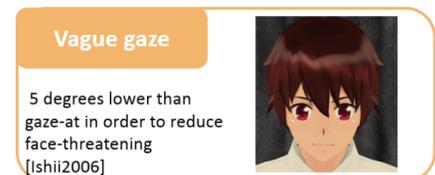
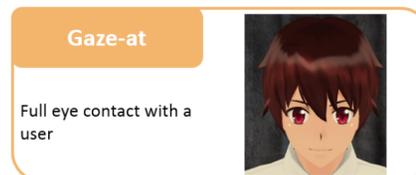
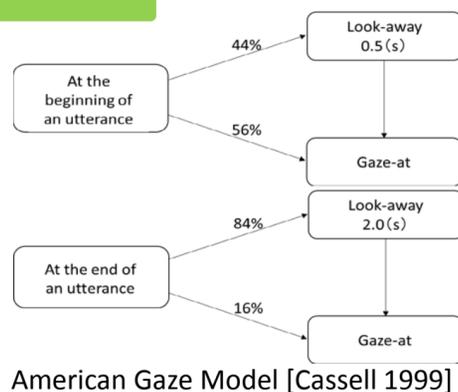
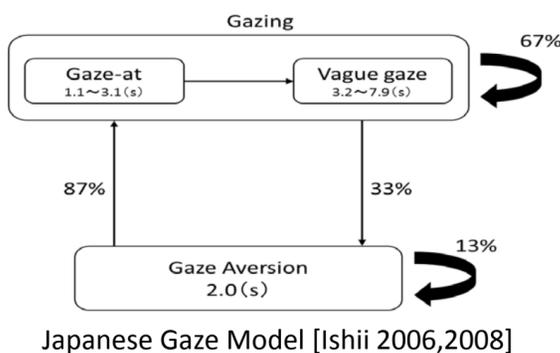
RESEARCH OBJECTIVE

to investigate cultural differences in gaze behaviors and their perception by developing virtual agents with Japanese gaze behaviors, American gaze behaviors, their hybrid gaze behaviors, and full gaze behaviors, and to compare their effects on the impressions of the agents and interactions.

H1) Shy people form worse impressions of agents whose gaze model does not originate from the same culture

H2) Non-shy people are more tolerant of gaze models from other cultures. This paper reports our experimental results with Japanese participants.

GAZE MODELS



EXPERIMENT

- Voice conversation with an agent four times ((American, Japanese, Hybrid, and Control (Full gaze))

- Questionnaire: agent's perceived shyness, perceived friendliness, their friendly feelings toward the agent, and comfortableness and naturalness of the conversation

- 18 Japanese students (high shyness:7, mid shyness 4, low shyness 8) Average score of engineering student = 47

RESULTS AND DISCUSSION

-H1 and H2 supported. American gaze model was perceived as least shy by Japanese participants.

-High shyness individuals are sensitive to the change of gaze patterns and perceived less friendliness from gaze patterns which they are not familiar with.

- Low shyness individuals are more tolerant to unfamiliar gaze patterns from different cultures because of their social skills.

- Impressions of the agent are affected by participants' shyness as well as the familiarity of the gaze pattern

- Applications: Cultural training for the typical gaze behaviors of different cultures in order to facilitate mutual understanding

