

Designing Agents to Induce Social Curiosity in Video Games: Rationale and First Steps

Most virtual agents are created to interact directly with a user. In video games, non-player characters (NPCs) can appear to be oblivious to the presence of a user, going about their pre-defined routines within the virtual environment or other agents. In doing so, agents can induce social curiosity in players, and thus convey information by letting users initiate any interaction based on their intrinsic desire to know more. Read on to find out why this is interesting, and what steps can be taken to study the potential of curiosity-inducing agents.

Social curiosity ..

... is defined as a “tendency to acquire information about what other people are doing through observation, probing questions, and gossip” [4]. It is thought to be a distinct dimension of curiosity [1, 3, 5]



Journey
(Thatgamecompany, 2012)

Animal Crossing
(Nintendo, 2001)

Rationale ...

Agents are often designed to express emotions for the purpose of conveying information to a user. The same can be said for agents in video games in the form of NPCs. In games, however, such expressions are frequently meant to also elicit an emotional response in the player, and thus support a player's suspension of disbelief in a fictional scenario. This is especially evident in NPCs that seemingly do not emote towards the player, but instead engage only with other NPCs. **The expression of affect in NPCs may indeed only convey one piece of 'information': the notion that they are complex characters, capable of possessing personal motivations and feelings.**

But why stop at creating believably affective automatons? Virtual agents could be designed with the expressed intention of inducing **social curiosity**.

Players may construct hypotheses about what an NPC believes, what it might do next, or what its intentions towards the player are. A player that is intrinsically curious about what an NPC is 'thinking about' is also more likely to pay attention to the actions of such an agent.

Designing agents with this goal in mind can benefit not only video games, but also support the development of playful devices such as virtual pets or social robots in general.

... and First Steps

In a previous study [2], players were surveyed about individual game titles and game genres regarding their ability to invoke curiosity. In the study, social simulation games emerged as a game genre that was most likely to invoke curiosity. A closer analysis of the individual game titles can serve to define common patterns that are conducive to invoking social curiosity in players.



The Sims 4 (Maxis, 2014)

Following such an analysis, identified patterns could be implemented in an experimental video game environment. The implementation effort itself serves to reveal practical considerations that need to accompany any guidelines for the design of NPCs. The actual implementation can then act as an experimental condition in which player behaviour is evaluated. Paired with qualitative measures such as player interviews, individual patterns can be evaluated regarding their efficacy of invoking social curiosity and further modified to better fulfil their purpose.

Taking these steps can provide insights into how to make the elicitation of social curiosity more likely, and would do so with similar challenges that developers are likely to face. There are certainly other affective states that can be induced more easily than social curiosity. Yet, the challenge is worth it, and would present an opportunity in making interactions with virtual agents feel more serendipitous and natural.

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