Will you be happier?

Designing a game that employs gifting to non-player characters

Sha Li
Computer Science
University of York
York, United Kingdom
sha.li@york.ac.uk

Marian Ursu
Theatre, Film and Television
University of York
York, United Kingdom
marian.ursu@york.ac.uk

Doug Williams
BT Applied Research
BT
Ipswich, United Kingdom
doug.williams@bt.com

Ian Kegel
BT Applied Research
BT
Ipswich, United Kingdom
ian.c.kegel@bt.com

Author Keywords

Gifting; Non-player character; Game design; Playtest

ACM Classification Keywords

Computer games; Participatory design; Heuristic evaluations

INTRODUCTION

Giving presents can have a positive impact upon the giver's mental well-being [1-4]. We wonder whether giving a present to an AI agent could have the same effect. We investigate this question in the context of video games with non-player characters (NPCs), because the rapid expansion of the game industry makes NPCs one of the most common ways in which we experience AI agents. We seek to understand whether players benefit mentally by giving gifts to NPCs in video games.

We intend to observe the behaviour of players and measure their psychological changes through a specially designed video game providing them with mechanisms for gifting to NPCs. We have taken an understanding of gifting from the real world and applied this understanding within a game. The game development has been an iterative process of *design-build-playtest*. Such a process helps us better understand the research space and to better describe the questions. This article reports the latest findings from the game development after playtesting with 12 participants.

BACKGROUND

Gifting has been described by Sherry as involving three stages:: *gestation* –the entire process of the gift transforming from a conceptual idea to the material item; *prestation* - the actual gift exchange; *reformulation* - repositioning of the relationship between the giver and recipient [5]. Mayet and Pine suggested that there are four core elements of gifting: the *giver*, the *recipient*, the *occasion*, and the *gift*; and it is the interaction

between them within the gift-giving process that forms the uniqueness of a particular gift exchange [1]. We use these two theories to structure gifting experiences within games.

Why does gifting make people feel good? Langer hypothesised that the act of giving enables the giver to feel more effective, valuable and generous [6]. Lyubomirsky et al. and Bekkers and Wiepking stated that kindness and generosity can benefit happiness in many ways. First, people who give may develop their self-image as altruistic, empathic, socially responsible, agreeable, or influential [2, 7], therefore, they feel more confident, effective, in control, and optimistic about their ability to help [2]. Second, giving may generate a positive mood, ease guilt, reduce aversive arousal, fulfil a desire to show gratitude, or appear a morally just person [7]. Third, giving can satisfy human's basic need for relatedness [8], contribute to peer acceptance as well as receiving appreciation, gratitude, and prosocial reciprocity [9], and increase senses of cooperation and interdependence [2]. According to Sahlin's typology on generalised reciprocity, the gifts we consider are putatively altruistic [10]. According to Sahlin, the ideal type of generalised reciprocity is Malinowski's 'pure gift', and other indicative ethnographic formulas are 'sharing', 'hospitality', 'free gift', 'help', and 'generosity'. One opinion regards it as giving without any expectation of a return, while another opinion regards it as giving with an expectation of a return which is unspecified in when, from whom, or what it consists of [11]. We tested both in our game design.

How can we encourage players to gift? We use the altruistic intentions [5], the anti-utilitarian view (the rationales of personal relations) [11, 12], and the relational gifting [13] for our design, as they fit generalised reciprocity. When considering players' motivations, behaviour and psychological outcomes we acknowledge that gifting is too layered and too complex to be confined to a one-dimensional perspective [12]. However, we take that social relationships are essential in gifting. Gifting is an important part in people's lives because gifts function as a medium for strengthening and maintaining social relationships [14-17]. Eliane suggested that people who feel more connected to the interpersonal and social environment tend to be prosocially motivated to engage in generous acts [18]. Therefore, relationship building is an important aspect of our game design.

DESIGN OBJECTIVES AND CHOICES

In our design we intended players to: (1) be aware of their self-image; (2) be emotionally engaged; (3) have a sense of social presence in the game; and (4) have an awareness of the effective value of the gift. We have created a game world where players are members of a social group and build social relationships with NPCs. When a gifting opportunity arises, players could gift to the NPCs without the expectation of a return or assuming a return which is unspecified during prestation. In addition, we aimed to make players understand time and money inside the game world, thus providing a context for analysing their decisions on gifts and the psychological outcomes of the gifting event.

We designed a business simulation game with role-playing elements. We made a prototype (the Fairy game) capturing some original ideas which was useful as a foundation for comparison and iteratively develop another prototype (the Resident game). _Fairy version:_ Players do tasks e.g. watering and sell products with negotiated prices. A neighbour fairy cooperates with the players during the tasks and crisis. Gift-occasion is a thank-you gesture to the fairy's help. _Resident version:_ Players plan production and development and sell products with fixed prices. A neighbour resident ('Daniel') who either gives the players bonus tokens or ('Betty') who talks about what happened. The gift-occasion is the resident's birthday. The gifting process is similar in both games; players are free to gift or not and to choose a gift, a packaging and a way of delivery.

METHOD

We invited 12 participants to playtest the game individually at different stages of development. The concept evaluated is consistent. Each participant played the two prototypes and was interviewed about their gaming experience and invited to compare the different design. The research purpose and the design objectives of the game were not revealed until a late stage of the interviews, after which the participants were asked to give their opinions on how the game could be improved.

DISCUSSION

Time and money: Participants understood the business simulation part and it established their sense of time and money inside the game world. When given a set of gift options, participants could understand their value, such as "this dress is too cheap, I can make this much money by selling three bottles of milk". Besides the game mechanism, we found that players' gaming strategies had an obvious influence, too. For example, some participants "considered the navigation between different locations as effort" because "it takes time to move around thus it impacts my strategy on planning which product to make first". Another example, most participants preferred to quote the price themselves and be able to negotiate with customers, because "you know the effort you put in each product" and "it makes you think more of the money".

Social relationship with NPC: The fairy version received better effect as aimed than the resident version. Participants found the fairy was "very cute" and "helpful", and "I see a friendship between me and the fairy"; they described the interaction as "engaging" and "interesting". While some participants found Betty was "annoying"; they described the interaction as "interrupting", some were going through the dialogues quickly without reading them. When the gifting event occurred, participants realised the fairy's help and considered this in their decision to gift but were less able to recall the character in the resident version (e.g. "I don't know who this Daniel/Betty is"). Fairy's facial expressions and animations contributed to her popularity as well. Some participants said, "it would be nice to see the happiness level of the NPC". We summarise that interacting with an NPC, whose emotions can be gauged by players, through cooperative events rather than conversations alone is more effective for building a close relationship with the NPC.

Motivation: Some participants wanted to gift or to gift well but did not do so because they "did not make good money before that" or "it was still early in the game, I wanted to save some money for later use". Those who chose to gift or gifted well had different motivations too. Some participants said they regarded the NPC and the gifting event as "part of the game mechanism" that "gifting well will help me progress in the game"; some gifted because "the NPC helped me"; and some gave gifts because they "cared about the character". One participant said that the reason she chose a teddy bear was because "it's like a friendship type". Therefore, how participants felt about the NPC could not be told from their decisions on gifting unless they were asked about it.

Gifting process: The gifting process itself was well received by the participants. No one reported that the occurrence of the gifting event was out of place under either occasion. Those who noticed the NPC's favourite colour during their conversations tended to choose the colour for the gift package. Most participants claimed that they were more conscious of making money after giving a gift to the NPC.

CONCLUSION

It is only a matter of time until the world will be a place of human and artificial intelligence cohabiting. It is important to understand how we can interact with AI agents in a positive way, and, in particular, how this can enhance our subjective wellbeing. We are exploring such a topic in the context of video games, through a typical social activity: gifting.

ACKNOWLEDGMENTS

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