Videogame Rewards and Prosocial Behaviour

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1 CONTEXT AND MOTIVATION

Prosocial behaviours are actions that can have a positive impact on others. The potential increase in prosocial self-concept from these acts is related to positive wellbeing outcomes [6]. Playing prosocial videogames can increase prosocial behaviour in real life. Research has shown that players who help Non-Player Characters (NPCs) in videogames perceive themselves as having performed prosocial acts [2, 8] and that in-game prosocial behaviour can transfer into real-world prosocial behaviour [2–4, 10]. The mechanisms behind this transfer is less well known, but rewards have been shown to have an impact [4].

Rewards are a common element in modern videogame design and can change the way people reason about their prosocial behaviours. Receiving a reward for prosocial behaviour can reduce moral and value-based reasoning, diminishing the likelihood of follow-up prosocial behaviour [4, 7]. If a reward is perceived as controlling, this can undermine autonomy, and reduce intrinsic motivation [1]. Rewards with authoritarian language or that emphasise extrinsic factors (e.g., "I expected you to perform up to my standards, here is your reward.") can be perceived as controlling. If a reward is perceived as informational this can support competence and intrinsic motivation [1]. Informational rewards provide ‘effectance relevant’ information (e.g., “Good. You did very well on this game. You were right on almost all the puzzles”). It is possible that informational rewards could positively impact follow-up prosocial behaviour through intrinsic motivation [9], however, informational and controlling rewards have not yet been studied in videogames.

2 RESEARCH QUESTIONS & METHODOLOGY

The aim of this research is to better understand how videogame rewards affect prosocial behaviours. I will address the aim through three online experimental studies utilising a custom made videogame to collect data from paid online participants from ProLifc (https://www.prolific.co/). A mix of qualitative and quantitative data will be collected.

Study 1 will replicate the only existing study on the effects of videogame rewards on subsequent prosocial behaviour [4]. This will provide further empirical evidence for using rewards as a prosocial behaviour manipulation and an established methodology with which to conduct further research. It will extend the work by measuring intrinsic motivation post-gameplay.

- H1 - Rewards of facility for in-game helping reduces moral reasoning and prosocial self-concept.
- H2 - Moral Reasoning for in-game prosocial behaviour, regardless of reward condition, increases follow-up prosocial behaviour.
- RQ - How will in-game rewards for prosocial behaviour affect the relationship between moral reasoning, intrinsic motivation, and follow-up prosocial behaviour?

Study 2 will address the informational and controlling rewards in videogames literature gap and determine if different in-game reward types have differing impacts on follow-up prosocial behaviour.

- H1 - Informational rewards will have a positive impact on perceived competence
- H2 - Controlling rewards will have a negative impact on perceived autonomy.
- H3 - Rewarded participants will experience lower prosocial self concept than non-rewarded participants.
- RQ - How do informational and controlling rewards for in-game helping affect subsequent real-life prosocial behaviour (e.g., donation)?
  - RQa - What is the relationship between informational and controlling rewards for in-game helping and Prosocial Self-Concept?

Study 3 will build on Study 2 by determining if additional rewards beyond an informational one, making the total reward for the prosocial behaviour larger, makes a difference to post gameplay prosocial behaviour. Larger rewards have been linked to more enjoyment, a common measure of intrinsic motivation [5]. This will also be representative of commercial videogames that often provide multiple reward types at once.
• RQ1 - How does reward size affect subsequent real-life prosocial behaviour (e.g., charity donation)?
• RQ2 - How does videogame reward type impact subsequent real-life prosocial behaviour (e.g., charity donation)?

3 CONTRIBUTION
This research, drawing on literature from persuasive technology, rewards, prosocial behaviour, and SDT, has implications for researchers across various fields such as Human-Computer Interaction, Social Psychology, and Games User Research. The contribution of knowledge regarding the impact that rewards can have on people is valuable to researchers seeking to further understand mechanisms impacting prosocial behaviour. Thus, the contribution extends to research into philanthropy, volunteering, and behavioural science. Furthermore, videogame developers would also benefit from this research due to the design implications for in-game and after-game player behaviour. Understanding how rewards impact players can help developers achieve their design goals and may have financial impacts. Lastly, given serious videogames are usually intended to have some positive behavioural outcome, understanding how rewards can help achieve this goal is of direct and potentially significant importance.

4 DISSERTATION STATUS
An initial literature review and methodology for all three studies has been completed. The ethical clearance for Study 1 has been obtained. The questionnaire and videogame that will be used throughout the research has been created. Further playtesting and a pilot study will be conducted while awaiting approval of my confirmation of candidature report and ethics variation before beginning Study 1. The next steps include conducting each study and ultimately publishing the write-ups for my thesis.

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