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# **An overview of the effects of video games on prosocial behaviour**

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## Abstract

Because nearly everyone has the access to video games in the ever-digitalizing world, debates are rising and people are becoming more worried about, what kinds of negative and positive effects they might propose to the daily life of the individual. It seems people are more aware of the negative aspects that video games have on prosocial behaviour and there also seems to be more studies brought to the public about the negative effects than the positive ones. Due to these circumstances, I think it is important to research also the positive behavioural effects that video games have, and the studies conducted on them. Also, to review and bring out the different researches done to the prosocial effects that video games have for the prosocial behaviour of people in their life. To influence people's attitudes with video games, we need to introduce proof of positive effects and benefits they have on people and to society. In this research I will be studying influences of prosocial interaction, their effects and what kind of aspects can have a positive effect to the prosocial behaviour of players. This is done by reviewing researches and studies that assess these matters and by providing insight to the causality between these studies. This way we can have a basis on the study to the individuals benefits in organizational and social aspects. It also may influence people that might be demonizing towards video games to rethink their attitude and have a clearer image of the positive benefits of video games.

### *Keywords*

Video games, prosocial behaviour, violence, digitalization, prosocial effects, antisocial effects, altruism, egoism, schadenfreude

### *Supervisor*

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## Glossary

Schadenfreude can be distinguished by gaining pleasure in other people's misfortune. For example, when you see someone trip or lose something valuable you may feel good or pleased by that (Greitemeyer & Osswald, 2010).

Digitalization is one of the major identified trends changing society as we know it today. Digitalization is the conversion of analogue data (e.g. photos, text or videos) to digital form. Digitalization may also refer to the ability to turn existing products or services into their more advanced digital counterparts (Parviainen et al., 2017).

Cultural rhetoric is the testing of cultural ideas or ideologies of different people by not trying to persuade others to accept or adopt them, but instead by determining whether one of these ideas or ideologies could be worth holding (Bacon, 1998).

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# 1. Introduction

Video games have become a social norm in children's, adolescents and adult's leisure time. Nowadays there are fewer and fewer people who haven't at some point of their lives played video games. Video games' popularity is ever-growing, and they are played globally by billion people (Liu et al., 2013). These days it is becoming easier and easier to get your hands on a video game. This might be due to smartphones becoming available for the masses. So, it is not so uncommon anymore for people not to have the right resources in getting access to them. The wide variety of genres in video games is also making them increasingly interesting to the masses. There are games from simulating farmers or truck driver's life, teaching people to cook via recipes and even games where you can meet people in an actual virtual environment. Even if these games are usually just meant to be for enjoyment or an experience for individuals, they have one thing in common, they propose varying kinds of social and non-social behavioural effects on the players. These behavioural effects may vary from neutral, negative and positive based on the game's genre or the players' psychological stability or their life situation. There can be people who can develop feelings of anxiety or uneasiness or the feeling of accomplishment and self-confidence. The feelings and behaviours that video games propose to different individuals are in direct association with the individuals who play them, their experience while playing and the type of video game they play (Johnson, Wyeth, & Sweetser, 2013). These kinds of implications suggest that it is highly conditional on what kind of effects different video games propose to the individuals.

In this thesis there is discussion to the different positive effects that video games have on the prosocial behaviour of individuals. This thesis will include hindsight to research that has already been made on the negative, antisocial or violent results as this can help us understand the positive aspects as well. I will be addressing the effects of different games and their prosocial aspects and what kind of effects they propose to the everyday prosocial life; what implications can be drawn from them and can they have a positive impact on individuals' prosocial life. This thesis will also provide some insight to these areas of study and provide a basis of study to video games and their prosocial effects. I will not discuss different personalities and their differences in this scope as it could be a research on its own. I will also not be assessing insight to individuals' psychological behavioural effects that video games have, but instead provide a glimpse of what positive effects team working, cooperative tasks and social interactions prior research in video games have for the individual's social skills with other people or the society.

The number of people playing video games is on the rise, there seems to be also rising unrest on what kind of effects they might have on people's social behaviour. Video games are also becoming more common in health and therapeutic fields and have been seen to have a positive impact in addition to their entertainment value (Griffiths, 2004). Most of the research done on video game effects seems to still revolve around the negative or antisocial aspects they propose to the individuals who play them. Aggressive, addictive and antisocial behaviour have had an increased focus and they have been researched more (Griffiths & Hunt, 1998). The positive aspects and effects of video games are not as commonly known or researched upon. There are plethora of studies suggesting

that video games do not only possess malignant effects on people's behaviour and that there are studies that indicate they also have positive impact on people's reaction time, stress reduction, hand-eye coordination and the increase of individuals self-esteem (Johnson, Wyeth, & Sweetser, 2013; Griffiths 2002). It is important to assess both sides equally, so we can have an adequate amount of information and research done to make conclusions about the behavioural effects. This is also why the prosocial effects to individuals social and societal interaction of the video games must be addressed and researched. We need to have these kinds of researches, so we can influence the people who have only heard about the negative effects of video games.

To address this, I will be reviewing prior research done on video games that include teamwork, leadership, co-operation, common goal and social interaction with other players. These are also common in basic social interactions and the working environment. The study will also focus on how the experience that has been gathered of these activities reflect on the real-world activities and what kind of benefits they can have to prosocial behaviour.

## 2. Social interaction and motives

Antisocial behaviour is more commonly known when associating games and their effects on individuals. Anti- and prosocial behaviours can have some elements in common and elements that cannot be placed in the same phenomenological positions (Boehm 1993). From these two behaviours we are assessing the latter, prosocial behaviour and some of its subtypes in this paragraph. The inclusion of these different motivations and subtypes of prosocial behaviour are important for understanding the scope of this thesis. Prosocial behaviour is usually defined to be a voluntary act containing the intention of benefiting another individual or group of individuals by helping, sharing or comforting them. Prosocial behaviour can appear in a social context varying ranging from a casually helping others, e.g. giving someone space to merge in traffic, thanking the shopkeeper to volunteer work or donating to a charity (Lay & Hoppmann, 2017). Usually, this kind of definition is thought to be limiting to the different aspects of motivations that can lie beneath the prosocial behaviour. These can include a variety of motivations ranging from: the will to increase one another's welfare, obtaining the possibility to ingratiate themselves, inquire a social debt or a favour and act according to social norms or moral values integrated into the society (Eisenberg, Fabes, & Spinrad, 2014). So, the underlying motivational reasons beneath the prosocial behaviour can also be observed to be self-serving, mutually beneficial or simply socially acceptable.

Altruism is the kind of prosocial behaviour that is motivated commonly by the individual's care and concern for others. Not explicitly for the social or concrete reward they are awarded from the helpful behaviour but also because of regulated social norms and moral values underlying in their society (Eisenberg, Fabes, & Spinrad, 2014). These kinds of moral values also reside in virtually created worlds. In video games, moral values also fabricate the world and can have as much as an influence on the surrounding world as in real life. Many games usually develop a role for the player and some games will pose moral choices for the player in which the result is usually presented afterward. These moral choices may lead to the player learning new insights and moral code to uphold in their real life's prosocial interactions (Moore, 2011). In hindsight, the altruism taking place in a virtual world, will reflect the individual's level of practicing altruism in real life social situations and interactions. Altruistic and egoistic motivations are considered the opposites in prosocial context. This is because egoistic motivation is beneficial somehow to the individual and altruistic motivation non-beneficial when practicing prosocial behaviour (Lay & Hoppmann, 2017). Egoism is the type of prosocial behaviour, where the user somehow benefits from the prosocial activity be it helping, comforting or sharing with other individuals. The egoistic motivation behind a prosocial behaviour does not deem the intention less effective or powerful. When a person gains something from practising prosocial behaviour, it can influence them on keeping or even increasing their prosocial behaviour in different contexts (Lay & Hoppmann, 2017).

Both altruistic and egoistic motivation have a common result in the context of this article which is the rise in prosocial behaviour of individuals. The motivation behind the prosocial act is not important when assessing positive effects, they propose but it gives a footing on where it's easier to analyse different interdependencies and causalities caused by video games. By understanding the reason why people would help each other in video

games and what motives could lie beneath will help when handling the causality of prosocial behaviour to real life. The mutual benefit can also appear concealed to be egoistic by a third party which may possibly cause harm to prosocial activity in the future. Be it altruistic, egoistic or mutual motivation behind the act, in the end, the rise of prosocial acts should be the primary goal.



## 3. Research Background

The following chapter will focus on research that has already been made. The first paragraph will focus on prior research on violent behaviour and give examples of this kind of behaviour that has arisen in prior research. The second paragraph will, in turn, handle the positive effects on prosocial behaviour and research made in that regard. The reason that violent behaviour is included in the research background is to provide a solid base to compare the matter effortlessly. Because the matter being handled is prosocial behaviour and not positive effects, there is no need to handle the positive effects individually. That is why the second chapter focuses on prior research on prosocial effects instead of prior research on positive effects on video games.

General hindsight of prosocial behaviour that can be found in video games will be properly explained in the third chapter. To properly handle the subject and to understand the different nuances of how prosocial behaviour can be found in video games, the third chapter will bring forth examples found in both single-player and multiplayer games.

### 3.1 Prior research on violent behaviour

There has been prior research on the effects of the social behaviour of individuals and the effects on the psychological side. There are also implications that violent video games cause negative consequences to prosocial behaviour. There are also several studies suggesting that video games that are violent by nature will have effects on people's behaviour interdependent of age. This is most prominent in children that under strict environments shouldn't even have access to the most violent games because of age restrictions they suggest, they are also the ones that do not yet have the full understanding or comprehension of what consequences violence has (Anderson & Bushman, 2001).

Children who played aggressive video games became more aggressive and tended to show less prosocial behaviour. As an example, the children donated less money to a charity after being exposed to an aggressive video game (Wiegman & Schie, 1998). Violent video games have an apparent effect on teaching players on how to act violently and usually cause violent thoughts to appear to the player. Here we can draw implications that if the games are violent by nature, they also propose violent thoughts and acts in the players who play them (Anderson & Bushman, 2001).

### 3.2 Prior research on prosocial behaviour

As stated earlier, there are more studies implicating the negative and violent effects that video games have on the prosocial behaviours of players (Griffiths & Hunt, 1998). Despite the widespread usage of video games globally, there are surprisingly low amount of research and studies that are focused on the positive aspects and effects of video games, and even less on the positive prosocial effects they propose (Greitemeyer & Osswald, 2010). There has been a rise in good quality research that focuses on the positive

prosocial aspects and effects that video games have (Anderson & Bushman, 2001). To have a basis on the question, does prosocial activities in video games propose prosocial actions in real life, there was a study that assessed what effects on prosocial behaviour video games that are prosocial, neutral and violent had. The study proposed results as they expected, the prosocial video game had a direct effect on the players' prosocial actions' in real life (Greitemeyer & Osswald, 2010). Previous research has also proposed that the player's social interactions bear fruit to the birth of gaming communities. These kinds of communities can build everything from forums to fan sites and wikis that relate to their corresponding video games. And when these resources are readily available for anyone in the community, they are then usually used by the people who play games where the community thrives. These games that have a community are usually multiplayer games, but it is not uncommon to see gaming communities in single-player games too (Molyneux, Vasudevan, & Zúñiga, 2015).

In one study neutral and prosocial games' effects were compared, there was a positive impact on players' empathy and decrease in having pleasure in other players' misfortune (Greitemeyer, Osswald, & Brauer, 2010). It also appeared that there were positive effects to people's prosocial behaviour when they played games that are prosocial by nature (Cole & Griffiths, 2007). People who have played games where it is possible to simulate moral and social issues had more engagement in civic matters, such as donating to a charity or expressing their interest in politics (Raphael et al., 2010). People who had made prosocial interactions in video game communities and video games could be observed to have developed more of similar kinds of interactions in their real-world communities (Molyneux, Vasudevan, & Zúñiga, 2015). In multiplayer or cooperative games when people share a common goal or a common interest, they tend to have higher levels of positive prosocial interactions during the game as well as after the game (Baldwin-Phillippi et al., 2014). These prosocial activities can have different underlying motives behind; some may be by egoistic and others by altruistic reasons. Be it Egoistic or altruistic, both appear to increase the persons prosocial behaviour altogether. These studies possibly also provide some implications that games that contain violent content and have prosocial aspects could also be beneficial to the positive prosocial behaviour of people rather than only negative. The studies seem to limit themselves to only study either one, the violence and its impact on prosocial behaviour or the directly prosocial video games effect to real-life prosocial behaviour.

### 3.3 Prosocial activities in video games

In video games, there are different possibilities for an individual to act. In single-player games the individual's prosocial interaction in the game world is narrowed down to non-player characters (NPC's) and predefined environmental aspects. There are games where the player may have chosen different moral choices given by the game world as well as a sense of the players' morality can be derived from those choices. Some examples of these kinds of games are the Fable and Mass Effect -series where the players are given moral choices and the consequences are presented in the game world (Moore, 2011). In single-player games the social interaction with NPCs is limited to dialogue options and a predetermined set of possibilities. In multiplayer games, there are several different kinds of social interaction between the individual and other people present in the game world

that is usually very similar to prosocial activities in real life. (Molyneux, Vasudevan, & Zúñiga, 2015) In multiplayer games, the players do not only socialize via messages or talking but instead, participate in shared objectives and tasks within the game world. Collaborating towards the same goal, teaching other players, solving problems or completing quests is only a small portion of different possibilities you can do in multiplayer games. This kind of interaction can include trading, working towards a common goal in the game, competing or social activities like parties (Molyneux, Vasudevan, & Zúñiga, 2015). These kinds of interaction can pose behavioural changes, improvements or in some other way affect the players and their real life's prosocial activities.

**Hypothesis 1.** *A player can have prosocial effects and benefits even when there are violent aspects present in the video games they play.*

In multiplayer video games or particularly in Massively Multiplayer Online Role-Playing Games (MMORPGs) in general there is a wide variety of prosocial behaviour present. Here I will propose some of them and will give examples of different positive effects they might have to an individual's prosocial behaviour. The games consist of different milestones you can achieve, these can vary from reaching the maximum level the game has set, gaining different levels of power, doing feats that can appear as achievements to the player or doing predefined sets of quests that then reward the player with in-game items, in-game currency, honour or experience points (Raphael et al., 2010). Some of these milestones can be accomplished individually but there are usually more milestones that need the help of other players. If the player desires to accomplish these milestones in which they need the help of others, they usually must communicate actively with other players who might also have the same goal in mind. This kind of social interaction can cause friendships to form (Cole & Griffiths, 2007).

Some milestones in video games are so hard to complete, that they might need a group of people that can vary from two to forty people. The sheer magnitude of social interaction and communication these massive groups of people need usually pose the necessity for prosocial activities. E.g. the forming of a guild where different people help each other and work toward a common goal. Being in a guild is so much more than being a part of something bigger. It automatically generates a community and a prosocial environment for everyone belonging to it. These guilds have tendencies to try and maximize the diversity of skill sets in the group. By reaching this goal the individuals residing in the guild must also achieve different aspects in the game. These kinds of achievements are for the good of the guild, and so the pressure to help others achieve them increases (Ahmad et al., 2011). Even if some of these tasks and feats include violent actions in the game, these actions are usually done to non-player characters that are evil by nature. Helping others in these kinds of situations can have a contrast to real-life prosocial actions. Giving a helping hand to a player in a virtual world can have a positive impact and influence the decision to help people in real life. In addition, working towards a common goal in a large group can have positive impact on people's prosocial behaviour associated with teamwork and group activities. Also, males that have played MMORPGs are more motivated to achieve things in real life and females have increased motivation to interact with others (Johnson, Wyeth, & Sweetser, 2013).

**Hypothesis 2.** *A player that works together with other people in virtual world and conducts prosocial acts will have benefits and positive effects to his prosocial activity in real life.*

## 4. Discussion

There appear to be many misconceptions about video games' effect on the prosocial activities of individuals and groups. This can be easily observed when dwelling into the popular media outlets and peering into people's opinions who have neither played themselves and who base usually base their opinions on popular mindsets. Especially news is a media source where the media usually only highlights the negative aspects of video games in general or the positive effects they propose are not as commonly brought up as the negative ones. Several of the most known studies suggest that video games are causing negative effects on people's lives and can cause violent intentions toward others in real-life environments. These kinds of studies usually are polarly implemented, this means that their goal is to find relationships between negative themes and negative social effects. The researchers are usually also keen on trying to find negative aspects because they possess a preconceived idea of them. This also means that the research lacks neutrality and does research both sides equally (Ferguson, 2008). The point is not to neglect these studies that have preconceived ideas or that study one side but to bring forward more neutral and less objective research.

There appears to be also a kind of "demonization" of video games which probably also affected by the sheer nature and number of articles that only focus on the negative aspects and effects they might have on individuals. The assessment of research done in regards of prosocial benefits that video games have provided a basis for the study of what kind of effects prosocial attributes in video games have. And it's particularly important to study the effects those video games have that propose both; violence and prosocial aspects. It also appears that people who do not understand the different kinds of violence video games propose, tend to think that the violence is focused on harming the society or other people, rather than in some cases hunting game for survival or self-defence (Ferguson, 2008).

A valuable data was collected by analysing how the players' personal stories and their activity in real lives reflected to their corresponding posts in video game forums. This data gives an insight into positive experiences and provides us with valuable data for further research beyond the usual negative effects researched (Bourgonjon et al., 2015). In this thesis a several representational keywords for positive effects in video games was used and inserted to the Google search engine to crawl video game forums. This research yielded data of 32 threads and 1615 messages. After removing all messages, not including cultural rhetoric's from the data gathered, the study was left with 964 messages that were included in the research. These results were then analysed, and this qualitative content analysis resulted in data on how the players talk about these video games and their reflect on broader cultural rhetoric's. This study allowed for a broader perspective and a wider view on different impacts of video games. Players referred to cultural rhetoric's, such as self-improvement, civilization and personal well-being that are usually also a central philosophical impact of art. The conclusion of the data and its implications furtherly provide us with proof on not only the clear positive effects of video games but the underlying effects that violent video games can also have an effect to the individuals' life (Bourgonjon et al., 2015).

A good example of negativity associated with video games is The Entertainment Software Review Board (ESRB) and the review it gives for every game. ESRB reviews the games before they are published for the masses. This review consists of determining if the game is suitable for what age group by categorizing it and this makes it easy to determine if this game is applicable for you or your child. For example, the ESRB rating also determines if the game contains violence, drugs, and alcohol. Although there are positive themes in video games, ESRB focuses mainly on the negative aspects of the games it rates and it can't directly imply the positivity of a video game. So, the ESRB rating system rates how negative the video game is and the positive aspects that might have been reviewed are not brought to the consumer. For example, a game that contains mild violence and gore could have positive themes also included. These kinds of themes can vary from the players' ability to affect where the dialogue is going by presenting him with options in dialogue and these can lead to cause and effect relationships as the game progresses. and other normal social interactions that have positive themes (Ghattas & Reyes, 2019).

In the research done to video games prosocial benefits the key issues are usually listed or discussed, but there seems to be no accurate research done on how the nature of the video game or the content it proposes affects the player. As a matter of fact, the studies and research usually tend to select the game they want to assess by choosing a game with limited possibilities. If they want to study the effects in violent behaviour, there seems to be a tendency of choosing a game solely filled with violent actions or prosocial effects are studied with a game that is intended to be solely prosocial by nature. (Ferguson, 2008) To get the most accurate results the studies should study several different games from the whole spectrum of genres. This way the results would appear less biased to either side and provide a more accurate overview of the effects. So, the research is still limited, and further research should be implemented to understand the big picture of video games' prosocial effects in an individual's behaviour (Ferguson, 2008). The findings suggest that there are prosocial effects to people's real-life behaviour independent by the nature of the video game. Suggesting that the study made for the video games' usually point to a designated pro-violence or social and not the interrelationships of these two.

There is research done that propose different kinds of prosocial effects on players of video games. These researchers have found out evidence of a positive impact to the players' social life and their improvement in interaction in different social interactions. One example is the research done by (Greitemeyer, Osswald, & Brauer, 2010) which also does prove this explicit supposition. In this research a classic video game called Lemmings was played by the test subjects. The objective in this game is to guide as many lemmings as possible towards the level's exit where they will be safe. Many different stages propose different kinds of challenges that you need to solve to get to the end of the level. To achieve this the player may have to sacrifice some of the lemmings by giving them different tasks that benefit the greater good. As this game is not intentionally violent by nature it still proposes some violent aspects to sacrifice oneself for the common good. In this kind of study, it is important to consider the violence and sacrificial side of the game. As even the research suggested that this game had a positive impact on players empathy, decreases schadenfreude and promoted behaviour to help others (Greitemeyer, Osswald, & Brauer, 2010). Other studies suggest that the prosocial ideas behind actions in different type of video games have and positive effect for the individual's actions in

civic attitudes and engagement and that the type of engagement in the video game have far more heavy influence in the player (Anderson, 2014; Johnson, Wyeth, & Sweetser, 2013).

## 5. Conclusion

This research does not try to downplay or belittle the effect of violent video games and their effects on children, adolescent or adults. Instead, this research seeks to raise awareness into the positive aspects that video games have in the prosocial context, provide motivation for further study and research, motivate people to study and understand the positive impacts of video games, and to clarify their impact on the society. The continued exposure of violent video games and what kind of psychological or physical effect it possibly proposes, and its consequences are not to be belittled with. Furtherly the research to be done should study the whole plethora of different effects so that the different effects can be highlighted and that simple cause and effect studies that might easily lead to biased opinions could be avoided.

There are studies suggesting that violent video games have negative consequences on prosocial behaviour and can rise the behaviour of violent acts and thoughts (Anderson & Bushman, 2001). Both sides of the coin are important, and they should not try to downplay each other. Obviously, both sides are also important to study, but without wide view studies that include them both, it is hard to grasp the big picture and the effects they may cause. The research that is done today usually appears in two different basic forms: experimental and correlational. Commonly in these studies, the research focuses on only one side of the coin, either to the positive or negative side and its correlation to that side's effects. This is limiting the study of their effects and does not usually provide accurate data to both. Instead, they should continue to research both sides to get a comprehensive grasp on what effects video games have altogether (Ferguson, 2008).

Whatever the case may be, the research done to the positive side of the coin is lacking. This is can be observed even since the research to the positive side is on the rise (Griffiths, 2004). These positive effects are suggested in the different researches reviewed in this research. There is research implicating that playing MMORPGs can cause positive effects on the players motivation for achieving more and can increase motivation to their social interactions in the real-life (Johnson, Wyeth, & Sweetser, 2013). Based these different researches done to the positive aspects, we may come to a conclusion that video games that have both prosocial activities and violent aspects still had a positive impact on the players, this is which the study with the Lemmings game also proposes (Greitemeyer, Osswald, & Brauer, 2010).

These studies appear to back up my initial hypotheses. A player had prosocial effects and benefits even when there were violent aspects present in the video games they played. This hypothesis was backed by the study with the Lemmings video game as well as in the study on MMORPGs. Both studies backed up that a player that worked together with other people in the virtual world and conducted prosocial acts had benefits and positive effects on his prosocial activity in real life. Prosocial activity in people who played MMORPGs was affected by continued social interaction within video games. This kind of social interaction developed less antisocial tendencies and significantly raised their social and physical attraction to other players (Cole & Griffiths, 2007). People that play with each other online for a long time, tend to meet and socialize with each other in real life (Cole & Griffiths, 2007).



It appears that there are studies that back up the initial idea of this literature review and support the hypotheses that have been made. The hypotheses bear value to the future research of this subject and provide an insight that there is research needed in this area. We can propose that this kind of research needs more attention on the basis how important of a subject this is for the children's and adolescent's evolution in growth to working members of society.

## 6. Limitations

This thesis suggests that there are limitations in the study of the benefits that video games have on the individual's prosocial behaviour. The drawn implications that this research suggests are limited to the slim number of researches done. To appear more convincing that there is a positive outcome of playing video games to the prosocial context of everyday life, it should be researched with a quantitative study with the right methods. Other limitations that are present in this research is the amount of studies reviewed. The statistical power of assessing a handful of reference researches done to this case should be abundant. The interdependencies of prosocial behaviour in video games and in real-life are reviewed only superficially and the conclusions are drawn about the effects without a real assessing method, this limits the credibility of this research.

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