VIDEO GAMES INFLUENCE ON HUMAN BEHAVIOR

Daniel Shin

Los Angeles, CA, USA

Video Games Influence on Human Behavior

From captivating virtual worlds to real-world consequences, the interactive and immersive nature of video games has propelled them into the forefront of popular culture, captivating millions of individuals across the globe. As these digital realms become increasingly sophisticated and widespread, the question of how video games shape and mold human behavior has emerged as a critical inquiry. From the intricacies of psychological

responses to the nuanced dynamics of social interactions and the cognitive processes engaged during gameplay, the influence of video games extends beyond mere entertainment. This research paper seeks to explain how video games affect an individual's behavior, focusing on the psychological, social, and cognitive aspects of influences.

Background

The first video game ever created was in the name of science. In October 1958, Physicist William Higinbotham developed the world's first game on a digital screen (Tretkoff, 2008). It was a simple game of tennis for two, akin to the modern game of pong. This defines a video game, and its official definition is: "a game played by electronically manipulating images produced by a computer program on a screen or other display" (Oxford Languages, 2023). Today, the video game industry and technology have advanced and are continually developing

daily. The gaming market is constantly changing, and different technological advancements such as cloud and virtual reality gaming are opening new immersive and engaging user experiences. In 2023, approximately 3.26 billion people worldwide will play some video game (Dimitrievski, 2023), allowing the video game market to reach a projected $249 billion in revenue in 2023 (Statista, 2023). The video game market is expected to grow at an annual rate of 9.83% between 2023 and 2027 (Statista, 2023). With the progression of video games and the ever-changing industry, several studies and scholarly studies have shown that video games have various effects on individuals, spanning psychological, social, and cognitive.

Psychological Influence of Video Games

Research reveals that video games can have a psychological impact; one example is enhancing motivation and goal-setting. Anderson et al. (2017) and Errázuriz (2017) highlight that video games can enhance motivation

and goal-setting abilities, encouraging players to pursue objectives in games and potentially in real life. Another example is its effect on one's emotions, evoking a wide range of emotions. For example, Minecraft is a world-building and survival game that can excite or relax players. The game helps players unwind and relieve stress by providing a positive emotional outlet. Games can include positive emotional attachments with compelling narratives and characters that foster positive emotional attachment, similar to engaging with literature and film. Additionally, drawing from studies conducted by NCBI and other sources, we can examine how exposure to violent video games might influence an individual's nature and empathy levels.

Negative Psychological Influence of Video Games

However, video games can also have the opposite effect. Violent or challenging games can cause a player to experience more intense emotions, such as frustration and

anger. This emotional carryover could lead to irritation or aggressiveness in real-life situations. Additional research by Errázuriz (2017) states that exposure to violent video games may lead to desensitization to violence and potentially affect one's empathy levels negatively. Gamers also use video games to escape from reality, where excessive use for emotional regulation might lead to avoiding real-life problems (Deleuze, 2019). It is an assumption that playing video games allows individuals to fulfill things they could never do in real life and escape real problems.

Social Influence of Video Games

The social impact of video games is multifaceted, especially in multiplayer online gaming. Online games are where many people play on the same server and can play together, help, or fight each other. Research shows it could help with one's communication skills because one has to communicate with teammates to complete the objective.

Another influence is virtual communities. As Konjin et al. (2019) discussed, virtual communities foster a sense of belonging, positively influencing real-life relationships. While online with other people, players can also learn from each other by discussing game strategies and each other's cultural backgrounds. Collaborating with friends or co-workers in cooperative and team games encourages collaborative problem-solving, thus promoting teamwork and a mutual and deeper understanding of one another (Keith, 2021). Players can also create avatars that represent a virtual player, potentially boosting confidence and self-perception. Gaming communities play a significant role in fostering social bonds and providing a sense of belonging among players.

Negative Social Influence of Video Games

Nevertheless, video games, such as social isolation, can influence individuals more negatively than positively. Many had associated excessive time playing video games

with loneliness with people. This may be because those playing video games excessively have fewer face-to-face interactions, contributing to social isolation and strained relationships (Herbert, 2021). Furthermore, video games could lead to exposure to players with negative behaviors, which can result in cyberbullying or toxic interactions, causing depression or even influencing behavior to become more toxic during a virtual interaction or the real world (Stopbullying, 2021). There are times when excessive gaming could result in dependency on social connections, leading to withdrawal from in-person interactions. One could also get distorted from social reality by spending an extended time in virtual worlds that distort an individual's perception of social interactions, potentially affecting their real-world social dynamics.

Cognitive Influence of Video Games

The cognitive effects of video games are equally noteworthy. Games incorporating puzzles and challenges

enhance cognitive abilities, particularly problem-solving and decision-making. Video games with puzzles and challenges can enhance one's cognitive skills, as noted by Green and Bavelier (2019). Players must strategize and think critically to overcome obstacles, improving problem-solving abilities. Another positive influence is the educational value of video games. According to Granic et al. (2014), educational games could offer engaging learning experiences. These games can enhance cognitive development while providing information on various subjects. Some other games, such as sandbox games, incorporate design elements and a range of game systems that encourage freely playing the game or construction game, which can inspire people with creativity and innovation as players build and design their virtual worlds. There are also games with dynamic environments or complex challenges that can enhance adaptability, preparing individuals for rapid changes in real-life

scenarios. Though this may be the case, excessive gaming can lead to reduced time on academic pursuits.

Negative Cognitive Influence of Video Games

Although video games provide positive cognitive development, they could also result in a narrow skill set and neglect other important cognitive areas. It could reduce one's focus on academic pursuits, including a short-term focus (Sun, 2023). Games can lead players to a preference. Another impact is overemphasizing gaming, which focuses excessively on gaming, which might result in a narrow skill set and neglect of other important cognitive areas, especially for educational purposes (Luker, 2022). Therefore, games can rely heavily on digital solutions within games, which reduces one's ability to solve real-world problems without technology.

Discussion

Studies show that playing video games can result in beneficial and adverse outcomes to an individual's overall

psychological health, social skills, and cognitive abilities. The effects of playing videos will vary from person to person, but many effects show a positive influence, sharpening different traits. From a psychological standpoint, video games offer stress relief for some individuals, enhancing productivity and motivation (Anderson et al. (2017) & Errázuriz, 2017). However, prolonged use of video games can result in adverse effects, which can have a significant impact on one's health, resulting in a more vital expression of emotions such as anger and frustration, predisposing individuals to be more violent (Yao, 2019). This can be attributed to several reasons, but more specifically, video games that portray violence can be easily addictive and can influence violent behaviors to arise more often than not. Those more susceptible to outside influences should be more wary of the effects of video games.

Video games can contribute significantly to the improvement of communication skills. Participating in team-based objective games and conversing with teammates can boost communication skills. It will sharpen an individual's social skills; however, being closed off within team-based games can lead to adverse effects. Some effects can be social isolation, as video games can dramatically decrease face-to-face interactions and allow an individual to stay in their house indefinitely (Nebel, 2022). Even if communication occurs, there may be instances where it can become toxic or harmful due to a teammate's or the individual's action (Stopbullying, 2021). This could potentially affect one's mental health and a tremendous increase in not socially interacting.

Lastly, regarding cognitive ability, one can argue that it is the most beneficial trait that video games can help develop. They can boost problem-solving abilities, planning, awareness, and quick decision-making processes

(NIH, 2022). This allows an individual to sharpen their creativity and constructive processes, which they can use daily. It is essential to know that video games are not a substitute for other activities, such as school, to boost cognitive areas. Spending less time on video games can lead to less time on different pursuits such as academics (Sun, 2023).

Conclusion

Video games significantly influence various aspects of human behavior, including learning, emotion, motivation, and more. Their impact extends across people's psychological, social, and cognitive dimensions. By understanding these aspects, individuals can make informed decisions about their gaming habits, maximizing the benefits while minimizing potential negative consequences. Striking a balance between responsible gaming and other aspects of life remains essential for harnessing the positive potential of video games while

maintaining overall well-being. When considering the influence of video games, it is crucial to weigh these factors against individual preferences, habits, and goals for personal development and well-being.

References

"Cyberbullying and Online Gaming." StopBullying.gov, 7

    Apr. 2021,

    www.stopbullying.gov/cyberbullying/cyberbullying-

    online-gaming.

Deleuze, Jory, et al. "Escaping Reality through

    Videogames are linked to an Implicit Preference

    for Virtual over Real-Life Stimuli." Journal of

    Affective Disorders, vol. 245, Feb. 2019,

    pp. 1024–1031, www.uclep.be/wp-

    content/uploads/pdf/Pub/Deleuze_JAD_2018.pdf,

    https://doi.org/10.1016/j.jad.2018.11.078.

Errázuriz, Francisco. "Exploring the Psychological Impacts

    of Video Gaming, Benefits and

    Challenges." Medium, 5 Aug. 2023,

    medium.com/@ferrazurizf/exploring-the-

    psychological-impacts-of-video-gaming-

    Benefits-and-challenges-e0dc83a683ce.

Herbert, Deanna. "Exploring the Relationship between

    Social Gaming, Anxiety and Loneliness."

    News, 8 June 2021,

    www.unco.edu/news/articles/social-gaming-anxiety-

    and-loneliness.aspx.

"How Childhood Trauma Affects the Brain."

    www.medicalnewstoday.com, 30 Sept. 2017,

    www.medicalnewstoday.com/articles/319566#Conn

    ectivityof-key-brain-areas-impacted.

"Gaming Statistics 2023." TrueList,

    truelist. co/blog/gaming-

    statistics/#:~:text=Approximately%203.26%20billio

    n%20people%20worldwide.

Keith, Mark J, et al. "Team Building through Team Video

    Games: A Controlled Experiment

    (Preprint)." JMIR Serious Games, vol. 9, no. 4, 17

    Mar. 2021,

    https://doi.org/10.2196/28896.

Luker, Edward. "Video Games and Screen Addiction."

Mayo Clinic Health System, 1 July 2022,

www.mayoclinichealthsystem.org/hometown-

health/speaking-of-health/are-video-games-and-

screens-another

addiction#:~:text=Excessive%20video%20game%20

use%20can.

National Institutes of Health. "Video Gaming May Be

Associated with Better Cognitive

Performance in Children." National Institutes of

Health (NIH), 24 Oct. 2022,

www.nih.gov/news-events/news-releases/video-

gaming-may-be-associated-better-

cognitive-performance-children.

Nebel, Steve, and Manuel Ninaus. "Does Playing Apart

Really Bring Us Together? Investigating

the Link between Perceived Loneliness and the Use

of Video Games during a Period of

Social Distancing." *Frontiers*, 24 Jan. 2022,

www.frontiersin.org/articles/10.3389/fpsyg.2022.6

3842/full.

Oxford Languages. "Oxford Languages." Oxford

Languages, Oxford University Press, 2023,

languages.oup.com/google-dictionary-en/.\

Statista. "Video Games - Worldwide | Statista Market

Forecast." *Statista*, Nov. 2022,

www.statista.com/outlook/dmo/digital

media/videogames/worldwide.

Tretkoff, Ernie. "October 1958: Physicist Invents First

Video Game." Www.aps.org, American

Physical Society, Oct. 2008,

www.aps.org/publications/apsnews/200810/physic

history.cfm#:~:text=In%20October

%201958%2C%20Physicist%20William.

Yao, Mengyun, et al. "Violent Video Games Exposure and

Aggression: The Role of Moral

Disengagement, Anger, Hostility, and

Disinhibition." Aggressive Behavior, vol. 45, no. 6,

22 Aug. 2019,

www.ncbi.nlm.nih.gov/pmc/articles/PMC6790562/,

https://doi.org/10.1002/ab.21860.