

What is Responsible for Toxic Behavior in Online Games

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Currently, over 200 million Americans play video games, and 65 percent of gamers play socially either online or in person (ESA, 2020). While gaming subcultures are often healthy, many are afflicted by dysfunction, including aggression, bigotry, sexism, and racism. A survey conducted in 2019 found that 65 percent of online gamers have experienced severe harassment which includes “physical threats, stalking, and sustained harassment” and 74 percent have experienced some form of harassment (ADL, 2019). Of players who experienced harassment, over half reported being targeted on the basis of race, religion, ability, gender, gender identity, sexual orientation, or ethnicity.

Cyberbullying has been associated with diminished mental health, especially in children (Blair, 2003). In the context of online gaming, “male victims of cyberbullying were more likely to exhibit aggressive behavior in his daily life” (Yang, 2012). Because cyberbullying tends to be more detrimental to women than men, women are more likely to “avoid or leave a game due to cyberbullying behavior” (Fryling et al., 2015). While the online environment may be benign for many players, the hostility of online games has the potential to cause problems outside of the game. Thus, more attention is needed in tackling the issue of undesired behavior in online games.

A common trope used in discussions about hostility in video games is the link between violent game content and aggression. Yet, a strong correlation between violent video games and aggression has not been discovered. Therefore, more research attention is needed to understand players’ interpersonal behavior in online game settings. Norms and patterns of interpersonal behavior among players of online games vary by game type. A better understanding of this relationship may help game designers develop features that mitigate dysfunctional behavior in online games.

Review of Research

Models have been proposed to classify player behavior. Bartle's Player Types is an established player taxonomy for Multi-User Dungeons (MUD) (Bartle, 1996). In this taxonomy, players are categorized as killers, achievers, socializers, or explorers, and it is assumed that one style of play offsets another style of play. As an extension to Bartle's theory, Yee (2006) crafted a model that classifies players of online games by their motivations. In this model, motivations are classified as achievement, social, or immersion. Within each of these major classifications are multiple subcategories. Each of these major classifications has multiple subcategories. For example, a player that falls into the achievement category values advancement, mechanics, or competition. While these categorizations may be valid, they are mostly theoretical and represent a small subset of players.

Through a study of college students, Adachi (2011) evaluated the effects of violent game content and competition on player aggression, finding that competitiveness in video games "elevated aggressive behavior in the short-term, regardless of the level of violent content." In a diary study of player behavior in a Massively Multiplayer Online (MMO) game, Fox (2018) found that performance was a major motivator for online gamers. Many "reported feeling good as they improved over time," but poor performance was a major contributor to frustration in online play. In this study, Fox found that performance was a major motivator for online gamers as many "reported feeling good as they improved over time". Additionally, it was revealed that poor performance was a major contributor to frustration in online play. When team performance was poor, "insults and skill disparagement prevailed." Similarly, researchers at the University of Rochester found that "impedances of player competence satisfactions increase cognitive, affective, and behavioral aspects of aggression" (Przybylski et.al, 2014). Researchers have

established that game dynamics affects behavior, but further research attention is needed to components of online games that induce feelings of incompetence and how to improve them.

Okdie et. al performed a study to understand the difference in how impressions are formed via face-to-face interactions and computer-mediated interactions. One significant finding is that participants who spoke with their partner face-to-face had a higher “oneness and likeness for their partner (Okdie et.al, 2011)”. Okdie reasoned that this was likely due to the presence of social cues in face-to-face interactions which reduce ambiguity and force individuals to focus more on their partners than themselves. Another significant observation from this study is that those interacting via computer-mediated interaction “were more self-aware than those who interacted face-to-face” (Okdie et.al, 2011). This suggests that individuals may be more self-absorbed in online interactions.

Suler (2004, p.321) gives more insight into this observation through his discussion of the online inhibition effect, or the phenomenon in which people on the Internet express themselves more freely. According to Suler, there are six factors that contribute to the online inhibition effect: dissociative anonymity, invisibility, asynchronicity, solipsistic interjection, dissociative imagination, and minimization of status and authority (Suler, 2004, p. 322). The Internet allows users to conceal their identity, and this allows individuals to feel “less vulnerable about self-disclosing and acting out” as they “have the opportunity to separate their actions online from their in-person lifestyle and identity” (Suler, 2004, p. 322). People have the “courage to go places and do things that they otherwise wouldn’t” because others will not know (Suler, 2004, p. 322). This invisibility eliminates the fear of how others will react which gives individuals the freedom to speak without inhibition (Suler, 2004, p. 323). The asynchronous nature of text-based communication on the Internet means that people are able to avoid the immediate reaction that

others will have to their messages (Suler, 2004, p. 323). People will unconsciously assign characteristics to the people they are speaking to in online settings, even if they never met them (Suler, 2004, p. 323). Individuals also believe that the events that occur on the Internet have no relation to the events that occur offline (Suler, 2004, p.323). Offline social status and hierarchy also matters less on the Internet, which means that “people are much more willing to speak out and misbehave” (Suler, 2004, p. 324).

Stressful Components of Online Games

The tension created in online games contribute to the hostility in online environments. According to a survey of 1007 gamers, approximately 55 percent of online gamers experience stress while playing online games (ComfySacks, 2020). Roughly 55 percent of participants reported yelling at another player as a result of that stress. The survey also revealed that competitive genres such as first-person shooters, MOBAs, fighting games, and MMORPGs were some of the most stressful to play. The most stressful components of these games were found to be difficulty at over 61 percent and online players at over 46 percent.

Some of the difficulty of competitive games can be attributed to how tough they are to get into. In a discussion concerning the difficulty of fighting games, one Youtube commenter mentions that many people are not aware that fighting games are more than combos, or a set of actions performed in sequence (Little Funi Man, 2021). This realization may only occur after finding informative online resources (Little Funi Man, 2021). Another Youtube commenter noted that many fighting games lack a tutorial that teaches the game, require more mechanical skill than other genres, utilize a “trial-and-error mindset”, and do not provide feedback on how to improve (Kosmic Potassium, 2021). Consequently, fighting games require a great amount of dedication to be competent. A post by an anonymous Reddit user suggests that many players

spend months or even years to gain competency at fighting games (Anonymous, 2015). This trend appears to be consistent with other competitive genres. According to a NeoGAF user, competitive games usually entail a “long uphill battle to 'gitting gud’” to be able to compete with other players (Chezzymann, 2016).

Online gameplay features often exacerbate the stressful and difficult nature of online games. In a Reddit post discussing the stress of multiplayer games, one user mentioned that adding ranks to multiplayer games has increased the stakes which creates pressure and stress among self and teammates (Leoxcr, 2020). This ultimately makes losing feel worse (Leoxcr, 2020). Another Reddit user, Mepsi (2020) suggests that the byproduct of ranking systems is a culture that breeds “toxicity surrounding player performance.” An 8forty blog post addressing the flaws of ranked gaming argues that ranked modes are often ineffective at accurately matching people of similar skill levels (Struggle Siege, 2019). Furthermore, the author of the blog post suggests that a small increase in rank can inflate an individual’s ego to the point of blaming his or her teammates or the game itself (Struggle Siege, 2019). This includes bullying as well as intentionally killing teammates or picking unhelpful characters (Struggle Siege, 2019). A similar sentiment is expressed in a blog post by Cohen (2019) in which he recalls his tendency to “rage and attack” his teammates due to his obsession with ranks. Other metrics of player performance tracked in games also appear to be a problematic. A response to a Reddit post concerning statistic tracking in multiplayer games contends that stats such as kill-death ratio and win-loss ratio in team-based games are “entirely superfluous and serve to breed behaviors where players attempt to farm the system” (Shurikane, 2013).

Players Sabotaging the Experience for Others

Hostility in online games can also be credited to players who intentionally try to disrupt the game for other players. It is common to be exposed to trash-talking, or the use of insults to intimidate opponents, while playing online games. Many gamers believe that trash-talking is simply a part of the culture of online gaming. In a GameSpot post expressing disdain for online gaming, one user insists that similar to sports, “trash-talk is an integral part of the experience” that helps foster interaction in a community (Yusuke420, 2012). In a tweet, professional fighting game player Sonic Fox advocates for trash-talking as it is a way to “make the opponent crack” (Sonic Fox, 2017). Some games even include taunts as a non-verbal form of trash-talk. In a Reddit post, one user claims that in-game taunts can be used strategically by distracting opponents from the main objective of the game (xincasinooutx, 2013). However, there are other perspectives about trash-talking in the online gaming community. In a Kotaku article, D’Anastasio argues that context matters when it comes to trash-talking (D’Anastasio, 2017). According to D’Anastasio, trash-talking is “best in in-person social situations with several people around to check you and your opponents’ manners” (D’Anastasio, 2017). Trash-talking strangers online is inappropriate as it is impossible to know the boundaries of the other person (D’Anastasio, 2017). Some players do not enjoy trash-talking in any context. In a Reddit post discussing the line between being toxic and trash-talk, one user argues against trash-talking because “some people do not handle anger well” and adding trash-talk to the general frustration that online games cause can create dangerous situations (x-Sage-x, 2018).

Trolling can be even more problematic in online games. Trolling involves being intentionally annoying and offensive to other players. Trolls often engage in this offensive and potentially extreme behavior without being held accountable for their actions (Wheaton, 2021). According to Grayson, trolls enjoy provoking other players and do not care about the

consequences of their actions. Trolls find amusement in players responding to their actions even if the victim is “yelling back” or is “audibly in tears” (Grayson, 2021). From the perspective of trolls, it is not their problem if a player did not enjoy his prodding (Grayson, 2021). Similar to trolling, players also engage in griefing, or using aspects of the game to deliberately irritate other players. In a post on IGNBoards asking why people grief, one user contends that griefing is funny and “some people taking online gaming way too seriously” (amERICAN, 2011). Another response to this post takes an opposing viewpoint, arguing that “Griefing cannot be legitimately defended” and exists due to the anonymity of the Internet (fdsaf3, 2011).

Cheating is also negatively impacting the quality of online games, and it is especially prevalent in PC games. Players are becoming increasingly frustrated as cheaters are exploiting hacks and cheat software (Castro, 2021). Cheaters in PC games are using aimbots that “automatically lock onto opponents’ heads” and wallhacks that “expose everyone on a map” to gain advantages over other players in competitive first-person shooters (Castro, 2021). This is resulting in players leaving the game. For example, Vikkstar123, a popular Youtube content creator, has announced that he is quitting the game due to frustration (Castro, 2021). This phenomenon is not exclusive to first-person shooters. Cheaters are using speed hacks, “a type of cheat that increases the speed your avatar can run”, to win races in Fall Guys (Stuart, 2021).

Efforts to Address the Concerns of Toxicity

Many studios are beginning to listen to the concerns players have about hostile environments in online games. Riot Games was one of the major studios to lead the way in combating inappropriate behavior. In 2012, Riot Games created a division called Player Behavior tasked with handling misconduct. This team introduced the honor system to incentivize

positive behavior in the same year (McWhertor, 2012). This was in response to the negative reputation that their game, League of Legends, received for being toxic (McWhertor, 2012). In an interview with Engadget, Riot Games' head of Player Dynamics, Weszt Hart claims that the studio is able to ask better questions about how to deal with toxicity by looking at is "disruptive behavior" (Conditt, 2020). Riot has also made changes to the penalty system to deal with disruptive behavior. According to a Riot developer, modified penalties for being AFK (away from keyboard) and intentional feeding have led to a "30% decrease to recurring disruptive behavior" as of November 2020 (Codebear, 2020).

Blizzard Games has also enacted measures to deal with toxicity in its games. Similar to League of Legends, Overwatch is notorious for having a toxic community. In 2018, Blizzard developers implemented the Endorsements system, allowing Overwatch players to advocate for other players by voting at the end of each game (Richardson, 2021). The results have shown improvements with a decrease in the percentage of matches with abusive chat of over 26 percent in the Americas and over 16 percent in Korea (Richardson, 2021). The percentage of abusive players have also decreased over 20 percent in the Americas and Korea (Richardson, 2021). Blizzard developers are also using artificial intelligence to improve the quality of their chats (Nelius, 2019).

Electronic Arts (EA) revealed the Positive Play Charter which outlines acceptable and unacceptable behavior in online games (Dring, 2020). Electronic Arts (2020) contends that "being part of a gaming community should be positive, fun, fair, and safe for all." According to Chris Bruzzo, EA's chief marketing expert, "This is no-longer an ancillary area. Which means okay, we can no longer be a bystander" (Dring, 2020). Bruzzo cites the success of Apex Legends at retaining players as a source of inspiration for EA's efforts (Dring, 2020). He suggests that the

likely reason for the positivity surrounding Apex Legends is the “strong feature decisions” made by Respawn (Dring, 2020).

This new perspective on online gameplay can be seen through the changes EA has made to one of their sports franchises, FIFA, to deal with toxic behavior. Prior to the release of FIFA 21, EA announced that they would be removing the “Shhh” and “A-OK” celebrations (Lucchesi, 2020). According to Sam Rivera, lead gameplay producer for EA, the primary goal for instituting this change is to ensure that the “flow of the game is short and then just to the point: playing the game” (Lucchesi, 2020). Based on a FIFA forum discussion post about these changes, sentiments towards them were split. Some players believed that the removal was unnecessary. For example, one user commented that “people are sad if they get offended by a celebration on a video game” (Supermario911, 2020). In response, another user expressed an opposing viewpoint by insisting they “want to play the game, not wait 30 seconds+ after every goal” (nicitel32, 2020). Others found the actions taken by EA to be inconsistent and disingenuous, and “if they were serious they would remove all celebrations considered toxic” (Mc_chigby, 2020).

Activision has taken steps to address problems that exist with the Call of Duty franchise which has a strong association with harmful behaviors. Activision banned roughly 20,000 players from Call of Duty: Warzone due to cheating (Franceschi, 2020). Infinity Ward, developer of the Call of Duty franchise, issued a tweet revealing that over 200,000 players have been banned from Call of Duty: Warzone and Call of Duty: Modern Warfare and established their “Zero tolerance for cheating” (Cryer, 2020). Similar to Electronic Arts, Infinity Ward removed the “OK” gesture from Call of Duty: Modern Warfare and Warzone (Pin-Poole, 2020).

Conclusion

Some companies are making an effort to curb the disorder occurring in online games. Companies such as Activision are making a commitment to deal with players that cheat by banning them. Electronic Arts has made a pledge to make online games an inclusive space for all gamers by addressing the inappropriate behavior that has been prevalent in its games. Companies such as Riot Games and Blizzard are implementing new and better mechanisms to turn around the reputations their games have for being hostile. With this progression, there are still more issues to address when it comes to the dynamics created by online games.

A major observation from sampling online gamers was that the difficulty level of a game contributes to the level of stress that it creates. A deeper analysis into the experiences of players highlights that a source of stress in these games are steep learning curves and the inevitable loss that occurs as a result. This suggests that there is work to be done by developers in making these games more digestible to the average gamer. Theoretically, this would help make players more optimistic when playing online. Additionally, metrics tracked in online games were found to contribute to some of the aggressive behavior of players. This suggests that developers should reconsider how they go about providing useful feedback to players. Trash-talking and trolling were a divided topic among gamers. Some players believed that light-hearted taunting is part of the game while others did not enjoy it. How do developers ensure that they do not get rid of those elements of online gaming while being effective at mitigating toxicity? Considering these points could be useful as players and developers look to remedy some of the issues common in online gaming culture.

References

- Adachi, P. J. C., & Willoughby, T. (2011, October 1). The Effect of Video Game Competition and Violence on Aggressive Behavior: Which Characteristic Has the Greatest Influence?. *Psychology of Violence*, 1(4), 259 - 274.
- american. (2021, April 8). RE: Why do people grieving in video games? [Online forum post]. IGN. <https://www.ignboards.com/threads/why-do-people-grief-in-video-games.205193108/>
- Anonymous. (2015, June 20). How long did it take you guys to get decent at fighting games? [Reddit post]. Reddit. https://www.reddit.com/r/StreetFighter/comments/3ah7t0/how_long_did_it_take_you_guys_to_get_decent_at/
- Anti-Defamation League. (2019). Two-thirds of U.S. online gamers have experienced severe harassment, new ADL study finds. <https://www.adl.org/news/press-releases/two-thirds-of-us-online-gamers-have-experienced-severe-harassment-new-adl-study>
- Bartle, R. (1996, June 1). (PDF) *Hearts, clubs, diamonds, spades: Players who suit MUDs*. ResearchGate. https://www.researchgate.net/publication/247190693_Hearts_clubs_diamonds_spades_Players_who_suit_MUDs
- Blair, J. (2019, February 23). New breed of bullies torment their peers on the internet. Education Week. <https://www.edweek.org/leadership/new-breed-of-bullies-torment-their-peers-on-the-internet/2003/02>
- Chezzymann. (2016, January 26). Anyone else get too stressed out with competitive games? [Online forum post]. NeoGAF. <https://www.neogaf.com/threads/anyone-else-get-too-stressed-out-with-competitive-games.1175081/>
- Conditt, J. (2020, March 11). How Riot Games' new team plans to curb trolling before it begins. Engadget. <https://www.engadget.com/2020-03-11-riot-player-dynamics-toxic-trolling-league-of-legends.html>
- Cohen, M. (2019, September 30). Why I don't play competitive games any more. Torte De Lini. <https://tortedelini.com/2019/05/09/why-i-dont-play-competitive-games-any-more/>
- Cryer, H. (2020, October 1). Infinity Ward bans over 200,000 total Modern Warfare and Warzone players. GamesRadar. <https://www.gamesradar.com/infinity-ward-bans-over-200000-total-modern-warfare-and-warzone-players/>
- D'Anastasio, C. (2018, January 3). How to trash talk. Kotaku. <https://kotaku.com/a-practical-guide-to-video-game-trash-talk-1795235044>

- Dev Codebar. (2020, October 30). Behavioral systems: November 2020 update - League of Legends. League of Legends. <https://na.leagueoflegends.com/en-us/news/dev/behavioral-systems-november-2020-update/>
- Dring, C. (2020, June 23). EA and the war against toxicity. GamesIndustry.Biz. <https://www.gamesindustry.biz/articles/2020-06-23-ea-and-the-war-against-toxicity>
- Entertainment Software Association. (2020, July 28). 2020 essential facts about the video game industry <https://www.theesa.com/esa-research/2020-essential-facts-about-the-video-game-industry/>
- fdsaf3. (2021, April 8). RE: Why do people griefing in video games? [Online forum post]. IGN. <https://www.ignboards.com/threads/why-do-people-grief-in-video-games.205193108/>
- Fox, J., Gilbert, M., & Tang, W. Y. (2018, November 1). Player experiences in a massively multiplayer online game: A diary study of performance, motivation, and social interaction. *New Media & Society*, 20(11), 4056 - 4073.
- Franceschi-Bicchierai, L. (2020, September 29). Activision Bans Around 20,000 ‘Call of Duty: Warzone’ Cheaters. Vice. <https://www.vice.com/en/article/3azg9n/activision-bans-20000-call-of-duty-warzone-cheaters>
- Fryling, M., Cotler, J. L., Rivituso, J., Mathews, L., Pratico, S. (2015). Cyberbullying or normal game play? Impact of age, gender, and experience on cyberbullying in multi-player online gaming environments: Perceptions from one gaming forum. *Journal of Information Systems Applied Research*, 8(1) pp 4-18. <http://jisar.org/2015-8/> ISSN: 1946-1836.
- Grayson, N. (2016, September 29). I met a video game troll in real life and he really pissed me off. Kotaku. <https://kotaku.com/i-met-a-video-game-troll-in-real-life-and-he-really-pissed-me-off-1575282798>
- Kosmic Potassium. (2021, April 5). Re: What Is Difficult About Learning Fighting Games? [Comment on the video “What is Difficult About Learning Fighting Games?”]. YouTube. <https://www.youtube.com/watch?v=IRiz0WzSpr0>
- Leoxcr. (2020, July 29). Multiplayer gaming too stressful? [Online forum post]. Reddit. https://www.reddit.com/r/truегaming/comments/hzwz5/multiplayer_gaming_too_stressful/
- Little Funi Man. (2021, April 5). Re: What Is Difficult About Learning Fighting Games? [Comment on the video “What is Difficult About Learning Fighting Games?”]. YouTube. <https://www.youtube.com/watch?v=IRiz0WzSpr0>
- Lucchesi, N. (2020, August 7). “FIFA 21” ‘toxicity’ and goal celebrations: Here’s what’s changing: Shushing and A-OK hand are gone. Inverse. <https://www.inverse.com/gaming/fifa-21-goal-celebrations>

- Mc_chigby. (2020, September 22). Yep if they were serious they would remove all celebrations considered toxic! [Online Forum Post]. FIFA Forums.
<https://fifaforums.easports.com/en/discussion/564531/removal-of-hush-celebration-for-toxicity>
- McWhertor, M. (2012, October 13). The League of Legends team of scientists trying to cure “toxic behavior” online. Polygon. <https://www.polygon.com/2012/10/17/3515178/the-league-of-legends-team-of-scientists-trying-to-cure-toxic>
- Mepsi. (2020, July 29). Multiplayer gaming too stressful? [Online forum post]. Reddit.
https://www.reddit.com/r/truегaming/comments/hzwza5/multiplayer_gaming_too_stressful/
- Nelius, J. (2019, April 10). How Blizzard is using machine learning to combat abusive chat. Pcgamer.
<https://www.pcgamer.com/how-blizzard-is-using-machine-learning-to-combat-abusive-chat/>
- nicitel32. (2020, September 22). maybe you are happy when someone tries to insult u or make fun of u. .i am not. . i want to play [Online Forum Post]. FIFA Forums.
<https://fifaforums.easports.com/en/discussion/564531/removal-of-hush-celebration-for-toxicity>
- Okdie, B. M., Guadagno, R. E., Bernieri, F. J., Geers, A. L., & Mclarney-Vesotski, A. R. (2011, January 1). Getting to know you: Face-to-face versus online interactions. *Computers In Human Behavior*, 27(1), 153 - 159.
- Przybylski, A. K., Deci, E. L., Rigby, C. S., & Ryan, R. M. (2014). Competence-impeding electronic games and players’ aggressive feelings, thoughts, and behaviors. *Journal of Personality and Social Psychology*, 106(3), 441-457. <https://doi.org/10.1037/a0034820>
- Richardson, K. (2020, June 5). Blizzard Announces Toxicity is Down in Overwatch. GNL Magazine.
<https://genelmag.com/article/toxicity-down-in-overwatch>
- Sajam. (2021, April 4). What Is Difficult About Learning Fighting Games? [Video]. YouTube.
<https://www.youtube.com/watch?v=IRiz0WzSpr0>
- Shurikane. (2013, April 4). RE: Are statistic tracking in multiplayer games killing the “fun” and “social” aspect? [Comment on the article “Are statistic tracking in multiplayer games killing the ‘fun’ and ‘social’ aspect?”]. Reddit.
https://www.reddit.com/r/truегaming/comments/1bnyrh/are_statistic_tracking_in_multiplayer_games/
- SonicFox. (2017, January 23). I often use tбaggin as a way to make the opponent crack or get angry as well too. [Tweet]. Twitter. <https://twitter.com/SonicFox/status/823609183555698688>
- Stuart, K. (2021, February 24). Medal of dishonour: why do so many people cheat in online video games? *The Guardian*. <https://www.theguardian.com/games/2021/feb/24/medal-of-dishonour-cheating-video-games>

- Struggle Seige. (2019, April 24). Ranked gaming is flawed. 8forty. <https://8forty.ca/2019/04/22/ranked-gaming-is-flawed/>
- Suler, J. (2004). The Online Disinhibition Effect. *CyberPsychology & Behavior*, 7(3), 321–326. <https://doi.org/10.1089/1094931041291295>
- Supermario911. (2020, September 22). I think people are sad if they get offended by a celebration on a video game !! Celebrations are [Online Forum Post]. FIFA Forums. <https://fifaforums.easports.com/en/discussion/564531/removal-of-hush-celebration-for-toxicity>
- Warren, T. (2021, February 2). Cheaters are ruining Call of Duty: Warzone. The Verge. <https://www.theverge.com/2021/2/2/22261947/call-of-duty-warzone-cheaters-hackers-aimbots-wallhacks-problem>
- We surveyed more than 1,000 gamers about one of the effects of gaming: stress. (n.d.). ComfySacks.com Retrieved April 8, 2021, from [https://www.comfysacks.com/most-stressful-video-games#:~:text=For%20the%20majority%20of%20gamers,battle%20arena%20games%20\(MOBA\).&text=Over%20three%2Dfifths%20of%20people,51.7%25%20of%20people%20playing%20daily.](https://www.comfysacks.com/most-stressful-video-games#:~:text=For%20the%20majority%20of%20gamers,battle%20arena%20games%20(MOBA).&text=Over%20three%2Dfifths%20of%20people,51.7%25%20of%20people%20playing%20daily.)
- Wheaton, W. (2014, November 11). Wil Wheaton: Anonymous trolls are destroying online games. Here's how to stop them. Washington Post. <https://www.washingtonpost.com/posteverything/wp/2014/11/11/anonymous-trolls-are-destroying-online-games-heres-how-to-stop-them/>
- xincasinooutx. (2013, July 11). What is the design purpose behind player taunts in PVP games? [Reddit post]. Reddit. https://www.reddit.com/r/truegaming/comments/1i3wdr/what_is_the_design_purpose_behind_player_taunts/
- x-Sage-x. (2018, April 14). How fine is the line between being toxic and a trash talker? [Reddit post]. Reddit. https://www.reddit.com/r/truegaming/comments/8c780l/how_fine_is_the_line_between_being_toxic_and_a/
- Yang, S. C. (2012). Paths to Bullying in Online Gaming: The Effects of Gender, Preference for Playing Violent Games, Hostility, and Aggressive Behavior on Bullying. *Journal of Educational Computing Research*, 47(3), 235 - 249.
- Yee, N. (2006, December 1). Motivations for Play in Online Games. *CyberPsychology & Behavior*, 9(6), 772 - 775.

Yin-Poole, W. (2020, July 7). Infinity Ward quietly removes OK gesture from Call of Duty: Modern Warfare and Warzone. Eurogamer.Net. <https://www.eurogamer.net/articles/2020-07-07-infinity-ward-quietly-removes-ok-gesture-from-call-of-duty-modern-warfare-and-warzone>

Yusuke420. (2012, March 31). Does anyone else find online gaming to be. . . not fun at all? [Online forum post]. GameSpot. <https://www.gamespot.com/forums/games-discussion-1000000/does-anyone-else-find-online-gaming-to-be-not-fun--29117697/>