

Gotta Catch Em' All: How the Rise of Augmented Reality Video Games is Satisfying our Society

Introduction

One of the most popular and relevant entertainment platforms today comes in the form of video games. Video games have become widely popular and appealing to many people since they come in many different genres. Some examples include action, simulation, RPG, and more. Video games are also highly accessible to all, being available on most smartphones. In addition, gaming consoles such as Nintendo Switch and Xbox can be purchased. Many people also play computer-based games on their laptops or desktop computers. The idea of video games has been around since 1941, with the first home television gaming console, Odyssey, being distributed to the public in 1972 (Campbell et al., 2020). As time has passed, video games have taken over the media industry, constantly satisfying their audience and leaving consumers wanting more. New technology has advanced video games to heights people didn't know could be reached. One notable new video game feature that has changed the video game world is augmented reality.

Literature Review

Augmented Reality (AR) immerses people into the video game world. Defined as placing virtual objects into our real world, AR heightens video game elements using sensory inputs (Parkeh et al., 2020). Advancing technology makes AR possible. Many people enjoy AR since it appeals to multiple populations and has many uses. AR features are included in shopping, health, and more, but the main focus of AR revolves around video games. AR and the rising popularity of mobile devices changes the way our society interacts with the media, specifically video games. AR gives gamers a game that is out of the ordinary, which motivates them to play.

AR technology works with different features on your cell phone to provide the optimal experience. In an AR video game, the mobile device tracks your location, so it shows you the features of your video game in your current location (Parkeh et al., 2020). The feature it works closest with is the Global Positioning System (GPS). AR works with the GPS to determine where the user is, what real world infrastructure and natural features are around them, and where the augmented objects should be placed (Parekh et al., 2020). This makes the user feel like their video game is right in front of them, and it provides a new type of authentic gaming experience.

The idea of AR began in 2000 with the purpose of giving gamers a new and more realistic gaming experience. By 2010, AR technology finally reached mobile devices, thus beginning the rise of AR video games. An AR video game that was popular for download at this time was "Zombies, Run" (Das et al., 2017). The game "Zombies, Run" was created in 2012 for Apple and Android devices. The game is based around "Runner 5", a character that is played by you. The goal of the game is for "Runner 5", the protagonist, to run away from the zombies during multiple missions that are a part of the story line based game. This game uses the GPS feature of AR to track how far people are running to see if they outrun the zombies (Witkowski, 2015). The "Zombies, Run" video game brought something new to the video game world, with the most notable portion being the fitness component that was new to the video game community.

Upon the recent success of the new AR video games, Nintendo decided to take a dive into this new way of playing video games, with the introduction of "AR Games" on the Nintendo 3DS. The Nintendo 3DS was released in 2011, around the same time of the rise of AR. In the "AR games", players had an opportunity to watch 2D animations come to life in front of their eyes (AR games, n.d.). When a consumer purchased a Nintendo 3DS, it came with a pack of AR

cards. These AR cards were to be used with the “AR Games” application on the 3DS. When the player wants to use the AR games feature, they hover the device's camera over one of the AR cards. Once the camera recognized which card it was, a notable Nintendo character would pop out of the card, onto the DS screen, into the player's “real world”. The characters displayed on these cards included Mario, Link, Pikmin, Kirby, Samus, and a question mark box character. The characters could play multiple different mini games with the 3DS owner, including archery, mini golf, fishing, and more (AR games, n.d.). This new feature for the 3DS made it stand out among other Nintendo games. Use of the AR cards was very popular, which inspired Nintendo and other companies to try and incorporate AR into more of their games.

Overall, AR is a rising technology that immerses people into a digital world by creating fictitious characters to be seen in real life (Laato et al., 2021). While AR is an amazing technology that has many different features, there are still some questions on why AR gained the popularity that it did in a very quick time span. Why do people want fictitious characters in their real world? Why are consumers and companies so quick to jump on the bandwagon of AR technology? In this paper, these questions and more will be examined and answered with the help of communication theories, and the analysis of one of the most popular AR video games on the market. How do AR features satisfy and excite consumers by providing the fullest and most engaging gaming experience possible?

Introducing Communication Theory & Artifact

There is a certain aspect of AR that makes people feel fulfilled while they are immersed into AR technology. This feeling of satisfaction can be explained by the uses and gratifications theory. The uses and gratifications theory serves as an explanation for why people engage with specific forms of media, such as listening to music or watching a movie. It also explains the science behind how media can satisfy a consumer's media based needs (Ibáñez-Sánchez et al., 2022). This theory was developed by communication scholar Elihu Katz in the late 1950's, to answer the question “what do people do with media”, versus “what does media do with the people” (Griffin et al., 2014, pp. 354). This means that people control what media they are exposed to, and media does not have all the control like we previously thought.

When Katz proposed the uses and gratifications theory, he proposed it with this assumption: “The study of how media affects people must take into account the fact that people deliberately use media for particular purposes” (Griffin et al., 2014, pp. 354). This means that when people use the media for their needs, they decide what form of media to use to best meet those needs, and they decide the effects that the selected form of media will have on them. When AR is analyzed using the uses and gratifications theory, it can be concluded that people choose to expose themselves to AR because it provides users with a sense of fulfillment and satisfaction.

According to the uses and gratifications theory, there are five types of human media needs that are satisfied by different forms of media. These include cognitive needs, emotional needs, personal integration needs, social integration needs, and stress release needs (Wang & Oh, 2023). For example, the social media platform Instagram meets emotional, personal integration, and social integration needs. Instagram provides its users with entertainment, an escape from reality, social connection with others, and a place to express yourself. All of these factors fall into different categories of needs, which explains why this form of media satisfies its users (Wang & Oh, 2023). A form of media that satisfies stress release and cognitive needs is books. Books satisfy cognitive needs because reading them makes your brain work and think, and books

satisfy stress release needs because reading a book can transport a reader into the book world, which decreases their stress levels and takes the reader away from their real life.

One form of media that is heavily examined by the uses and gratifications theory is video games. As technology advances, video games evolve into new consoles with new features, which results in popularity growth. With each new feature of a video game, researchers study it to figure out what about it is popular, and how the new features meet media needs. When AR video games were introduced, researchers were fascinated by the new features it included, and the quick popularity it gained. Researchers wanted to know what specific features of AR video games met the five needs of satisfaction. Due to all the popularity of AR video games, many companies and gaming franchises decided to take traditional game ideas, and adapt them to have AR features for increased popularity. One gaming franchise that executed this strategy was the “Pokémon” franchise.

The Pokémon franchise was created in 1996 by Japanese men Satoshi Tajiri and Ken Sugimori (Bainbridge, 2013). In the classic Pokémon game, the player plays as an avatar who follows a storyline that involves training and battling with mythical creatures called “Pokémon”. The avatar starts the game choosing a starter Pokémon, then journeys through whatever region the game is based on, catching more Pokémon and battling other CPU trainers in the process. There are also battle checkpoints, known as Pokémon gyms. In each storyline based Pokémon game, there are eight gyms, where each gym leader specializes in a different Pokémon type. After all eight gyms are defeated, the avatar moves on to the elite four and the region champion, vying for the title of “Pokémon Champion”. This game is captivating to all of its players because of the engaging storyline, and it is arguably one of the best storyline based video games ever (Bainbridge, 2013).

As a result of the high popularity of the Pokémon franchise, there have been numerous different games included in the franchise that are not the traditional storyline, also known as side series or spin off games. These games include Pokémon Stadium, PokémonPark Wii: Pikachu’s Adventure and Wonders Beyond, Detective Pikachu, Pokémon Mystery Dungeon, Pokémon Ranger, Pokémon Rumble, and many more (Bulbapedia, n.d.). Most of these games also have storylines, but they are not the traditional training Pokémon and battling gym leaders storyline. There was also a card game developed out of the franchise called the Pokémon Trading Card Game, where people can get together in person and online to battle it out with their Pokémon Cards (Bulbapedia, n.d.).

There is one other Pokémon franchise game not mentioned above because it has a different concept and playing medium than other franchise games. This game is called “Pokémon Go”, an AR Pokémon video game. “Pokémon Go” was released in 2016 by Niantic to mobile devices everywhere (Vella et al., 2017). The concept of the game is to use AR features on your mobile device to catch Pokémon in your own backyard. The game also uses a mobile device's GPS, which shows players a map on their screen of exactly where they are, with Pokémon roaming on it. Along with just catching Pokémon, the game has other features that add a layer of nostalgia for “OG” players. There are “PokeStops”, which represent the traditional games “PokeMart”. “PokeStops” are placed at special geographic landmarks throughout someone's hometown, and in order to receive goods from the “PokeStop” you need to be in close proximity with it (Vella et al., 2017). Some examples of places that would be considered a “PokeStop” are parks, historic landmarks, and schools. There is also a competitive play element like in the traditional games. There are gyms in Pokémon Go as well, but they are not formatted the same way as they are in the traditional game. When you reach level five in the game, you get to choose

to join one of three different teams: Instinct, Valor, or Mystic. These teams compete against each other to have ownership of the Pokémon gyms throughout the community. You can battle someone's previously victorious team that are the champions of the gym at that time to try to take ownership of the gym for your team. Gyms have the same idea as "PokeStops", where you can only access them if you are in a close proximity to the area where it is housed. What is different in this game versus other Pokémon games is that players are encouraged to and rewarded for leaving their house in order to play the game. This adds an element to the game that has not been seen before for Pokémon gamers, adding extra fascination to the idea of it (Vella et al., 2017). In this paper, I will be analyzing my artifact, "Pokémon Go", and how the AR features in the game meet media needs proposed by the uses and gratifications theory.

Theory Application

"Pokémon Go" was one of the most popular downloadable mobile games in the year 2016, with over 100 million users from 30 different countries downloading within the first few weeks of release (Zsila et al., 2018). This game excited people because of the nostalgia behind Pokémon, the idea behind playing a Pokémon game outdoors for an element of realism, and the use of AR features taking Pokémon to a new level (Zsila et al., 2018).

Going more in depth with the five needs of the uses and gratifications theory, there are seven motivations specifically for video games that must be met in order to be popular. These motivations include social, escapism, competition, coping, skill development, fantasy, and recreation (Zsila et al., 2018). As stated above, the uses and gratifications theory suggests that consumers choose what type of media to be exposed to, rather than being passive receivers of the media. When selecting a video game to play, gamers select the type of video game they want to play, and what content they will be exposed to while playing. The features of AR video games fascinate gamers, which motivate them to play. These features are adored by all who use them because AR video games fulfill media needs and gaming motivations (Ibáñez-Sánchez et al., 2022). The aspects special to Pokémon Go are held because of the game's AR features, and the excitement that Pokémon brings to gamers.

The social motivation of Pokémon Go can be explained by two characteristics found in the game. The first would be the Pokémon gyms. As explained above, at Pokémon Go gyms people can battle other real life people that have been at that very location that are the reigning champions of that gym. People would meet other players at these gyms, and interact with them face to face while attempting to take down the reigning champion of the gym. This makes players feel connected with others while playing the game, opposed to feeling isolated while playing a video game alone in your bedroom. The gyms also satisfy competition motivations, as the purpose of the gyms is to compete with other players, which motivates players to keep playing so they can be champions of the gym (Kaczmarek et al., 2017). The AR and GPS features of Pokémon Go encourage social interaction through catching Pokémon with friends. In the game, Pokémon appear in certain locations in the town. The same Pokémon appear for each player in that area, no matter what mobile device they are using to play. This fulfills social motivations to play because players can play together with a sense of connectedness, since the Pokémon are the same on each device so each player has the same view of the Pokémon world (Vella et al., 2017).

The escapism and coping motivations have the same idea behind them: wanting to do something else to avoid a real life problem. AR video games execute this perfectly, as they place you in a whole new world so you do not have to focus on your own. Playing as an avatar in a

virtual world that mirrors reality gives gamers the view that their video game is their alternative reality, which gives them a more realistic escape from reality. A feature that is special about Pokémon Go that is not in other AR video games is the nostalgia behind it. The nostalgia in Pokémon Go gives a whole new meaning to the game, because the Pokémon franchise is one of the most popular gaming franchises that shaped the childhoods of many people growing up in the late 1990's and 2000's. The nostalgia aspect of the game provides an extra layer of comfort to players, which aids them in escaping from reality and coping with life. The game brings them back to their childhood which was full of no stress and video games, which provides players with a distraction from their present day struggles (Laato et al., 2021).

The idea of AR is simply fantasy, which is why Pokémon Go and other AR video games fulfill the fantasy motivation. A fantasy world is defined as stepping outside of the limitations of the real world. AR makes this possible by breaking the divide between reality and fantasy by placing fantasy elements in our real world (Zsila et al., 2018). The addition of Pokémon into our communities through AR allows gamers to do things that they are unable to do in real life, which motivates them to play the game (Zsila et al., 2018). Nostalgia also plays a key component when researching fantasy motivations, as Pokémon Go provides gamers with a feeling of nostalgia when they see all their favorite Pokémon right in their backyard. Having a gamers childhood friend appear in their backyard because of AR, which is something that could have been seen as impossible back when they played the game in their childhood, adds more significance into playing the game. The fantasy elements of Pokémon Go transport the gamer back into their childhood, which makes gameplay more meaningful (Laato et al., 2021). In the fantasy world of Pokémon Go, the gamer also changes identities from themselves to a Pokémon trainer. Becoming somebody else for a while is another fantasy element introduced in video games in general, because you can play as an avatar. This element is heightened while playing AR video games, because you play as somebody else, but in the real world versus the limitations set in 2D video games (Zsila et al., 2018).

Playing Pokémon Go strongly motivates gamers to play for recreational purposes, but not in the way you would expect. Most video games meet recreational needs meaning that they are entertaining to play. An aspect that makes Pokémon Go stand out compared to other video games is the fact that you can play outside. This allows users to interact with the world around them while playing, which is a feature that was introduced alongside AR video games. In order to catch Pokémon, you need to leave your house, as Pokémon don't just spawn in one building. "PokéStops" and gyms are also only accessible by leaving your house, either by going on a walk outside or driving to a certain destination. Players can also earn rewards by walking certain distances. An example of this includes walking to hatch Pokémon eggs, in which players receive a new baby Pokémon when the egg hatches. Different types of eggs require players to walk various distances (e.g., 2km, 10km), and the eggs will hatch once they have walked this distance. This mirrors an aspect of the classic Pokémon game, as players could get Pokémon eggs and they would hatch when the avatar walked a certain number of steps around the fictional world. Players can obtain Pokémon eggs by visiting "PokéStops", finding a balloon, or defeating members of Team Rocket. Players enjoy the idea behind Pokémon eggs, because it encourages physical activity and increases time outdoors. In addition, users feel rewarded for their efforts upon receiving a new Pokémon (Vella et al., 2017). Being able to interact with the outside world, and enjoying physical activity while playing a video game, makes Pokémon Go and other AR video games appealing due to a different type of recreation.

Discussion and Conclusion

Based on my findings through research about Pokémon Go and other AR video games, the uses and gratifications theory can support why AR video games excite gamers so much, and why they choose to play them. The properties of AR video games align with the basic gaming motivations, and now I will discuss how AR video games meet the five uses and gratifications needs (Wang & Oh, 2023).

AR video games meet cognitive needs because they force you to think and be aware about the world around you. In Pokémon Go, you engage with AR features to explore the Pokémon world which is a fragment of the real world. The need a player has behind exploring the fantasy Pokémon world is met more by playing an AR Pokémon game versus an ordinary 2D Pokémon game. AR not only allows you to explore a fantasy world, but it gives players the capability to explore their own world with fantasy aspects, which draws them into the concept even more. When players are exploring and thinking about the world around them while playing an AR video game, cognitive needs are met and satisfied (Ibáñez-Sánchez et al., 2022).

AR video games meet emotional needs because of the close attachment you form with the fantasy world, and the avatar you are playing as. When playing an AR video game, you still get immersed in the fantasy world that is present in other video games. However, the unique aspect of AR is that the fantasy world becomes intertwined with your own world, providing a gaming experience that involves more emotions than others. Seeing game features play out in your backyard adds another layer of meaning to the game itself, as it makes you feel that you are included in something in your world, even if it is just a video game. While playing AR video games, you can also develop parasocial relationships with the fantasy characters in your game. A parasocial relationship is having the feeling of friendship or emotional attachment with someone that is in a fantasy world (Griffin et al., 2014). Having characters in AR video games in your real world can force people to develop parasocial relationships with them, which meets their emotional needs for that video game. For example, in the game Pokémon Go, if you catch a Pokémon in a location that is special to you, or you just form a bond with that Pokémon for either nostalgic or companionship purposes, you may form a parasocial relationship with that Pokémon. Therefore, AR video games meet emotional needs because of the close attachment between the fantasy world and the real world, and the possibility of forming parasocial relationships through gameplay.

Playing AR video games can meet social integration needs. Social integration can be defined as something that brings people together, causing people to make new friends, while feeling satisfied with their social life in the process (Vella et al., 2017). As discussed above, AR video games have social aspects to them. The social aspects rise from the GPS features held by AR video games. While playing an AR video game, the GPS feature on your mobile device gives you a more interactive gaming experience, by allowing you to play the game while viewing your real life geographic surroundings. This feature motivates people to want to play with their friends, because if all of their friends are playing in the same geographic area, they will all have the same gameplay experience. This brings people closer together, and can even form new social relationships (Vella et al., 2017).

Playing an AR video game can meet stress release needs. AR features transport gamers into a world which is not their own, which shifts their focus from their real stressful world into a world that is filled with no stress, no problems, and all fun. This idea is true as well for a traditional video game as well, but it is emphasized more with AR video games. This is because in an AR video game, you are transported to a fantasy world that is combined with your real

world, which makes the idea of living in the fantasy world even more realistic because you still see your real world while playing the game (Laato et al., 2021). When gamers are playing an AR video game, it immerses them into a unique fantasy-realism world that gives them a unique outlet to destress, which satisfies the stress release need.

The research done on AR video games has given me more knowledge on why they are so popular. Using the uses and gratifications theory helped me analyze and dive even deeper into the true meaning of playing AR video games, and the psychology behind why they are so fascinating. The features that combine the fantasy world with the real world while gaming are unmatched, a phenomena that will never get old for years to come. These features keep gamers engaged with the game and satisfied with their overall gaming experience. This research is important because it educates people on why certain people choose certain forms of media. As media continues to grow and expand, there will be newer and more complex technological features to be researched using uses and gratifications. Media should continue to be analyzed through the lenses of uses and gratifications because it provides answers to consumers and researchers on why certain forms of media are so fascinating to their intended audience. The findings of this research show the importance of the uses and gratifications theory, as the uses and gratifications theory outlined the fascination behind AR video games. Overall, this research is beneficial to the communication community, because it shows the relevance of the uses and gratifications theory in our everyday lives, and it shows how people can choose to be affected by media, which is a growing force in today's society.

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