Questioning Popular Culture: Future Technology
In *Ready Player One*

Muhammad Iman Rafif, Achmad Munjid*
English Department, Universitas Gadjah Mada, Indonesia

*Corresponding Author: munjid@ugm.ac.id

ABSTRACT

This study investigates the impact of future technology products, as one of the parts of popular culture, on society in the science fiction novel *Ready Player One* by Ernest Cline (2011) and on our current society. The primary data of this study were taken from the novel. The results reveal that the effects of popular culture, specifically the products of technology, on modern society are enormous compared to the society in the novel. The similarities and differences between the technological aspects portrayed in the story compared to the current modern world are revealed to know what really happens and going to happen in the future.

Keywords: *dystopia, pop culture, Ready Player One, science fiction, technology.*

INTRODUCTION

Popular culture or pop culture has always been a significant aspect affecting our society, including our choices and mindset over particular things. It can change an individual's opinion regarding certain things. Pop culture also changes throughout its journey to the modern era. Following the shift of age, it manages to always keep itself up to date with people's tastes. Associated with the change of popular culture, technology as one of its categories (Storey, 2006) keeps changing to keep developing and to affect society to further assist people in their lives.

Popular culture has been a controversy in many different fields as to the exact definition. It may be hard to define or explain what popular culture is. Strinati, for example, states that "Although this is a book about popular culture, not much time will be wasted defining it in this Introduction" (Strinati,

2004, p. xiv). Bennett also argues that "the concept of popular culture is virtually useless, a melting pot of confused and contradictory meanings capable of misdirecting inquiry up any number of theoretical blind alleys" (Bennett, 1980, p. 18).

However, according to Storey (2012), there are six definitions of popular culture. Popular culture takes on a lot of different meanings depending on who is holding it and in what context it is used. Popular culture is generally recognized in society as a culture that is predominant at a point in time. It is clear that popular culture has a way to influence an individual's way of thinking regarding a particular topic that arises in mainstream media.

Technology is a category within popular culture (Storey, 2012). According to Barbour (2007), the word *technology* can be defined as "the application of organized knowledge to practical tasks by ordered systems of people and machines".

Technology is an aspect of culture that has existed for a long time. A form of technology, or in this case a product of technology, can be considered a popular culture, but not the concept of technology as a whole. Through its products and advancement, technology has a big impact on the life of individuals in society. Both the concept and the products have been constantly changing throughout history. They follow the stream of an era and are juxtaposed. This study attempts to investigate the impact of future technology products, as one of the parts of popular culture, on society in the novel *Ready Player One* and on our current society. In particular, it addresses the following questions:

1. How do the products of future technology influence the society in *Ready Player One*?

2. What are the effects of those fictional products of future technology on our current world?

LITERATURE REVIEW

There have been a small number of studies investigating technological developments and their impacts on society in fiction including the novel *Ready Player One* by Ernest Cline (2011). Hidayat and Munjid (2020), for example, investigate the domination of a large company, the Innovative Online Industries, over the people in the novel and the people's resistance to the company's domination. The study shows that conflict leads to class division. The capitalist in the novel seeks to increase its dominance by winning the easter egg hunt, but the proletariat opposes it. It is argued that class struggle and disputes brings the proletariat to work together to resist the capitalist's dominance.

In addition, according to Tapscott (1998), the generation at present is called the Net Generation which is quite similar to that in *Ready Player One*. Tapscott's definition and examples were used to find more similarities between our world and the world within the novel. As seen in the novel, the generation that has emerged in and dominated the world is the one with full immersion with technology.

Another study by Mar'ati (2015) examines James Thurber's novel entitled *The Secret Life of Walter Mitty*, focusing primarily on the main character, Walter Mitty, who is diagnosed with a narcissistic personality disorder. On the basis of the diagnostic criteria the American Psychiatric Association, Walter can be regarded as an individual with a narcissistic personality disorder with the following symptoms: having a grandiose sense of self-importance; being preoccupied with fantasies of unlimited success, power, and brilliance; believing that he is special and unique and should associate with other special or high status people or institutions; requiring excessive admiration; having a sense of entitlement; being interpersonally exploitative; lacking empathy; being often envious of others; and showing arrogant behaviors.

Furthermore, Vargolici (2011) examines the influences of popular culture and science fiction on society perceptions of technology, especially nanotechnology. Vargolici argues that the way the public perceive the idea of nanotechnology from many literature and movies is important as how they affect their mindset. Vargolicis investigates and assesses the role of literature and movies on nanotechnology and how they play the role of shaping the society's perception. This study assissts in understanding the depth of technology as popular culture.

Arris Team (2018) argue that for over a century, technology has shaped not only how we create but also how we consume popular culture. Ever since the existence of technology, every generation has been adapting and changing through the evolution of the technology itself. The society relate to the culture through the lens of technology in which it is depicted also within the novel.

THEORETICAL FRAMEWORK

Storey (2012) states that technological change which has created many more ways for people to do new things is a factor that is classified as one of the factors of convergence culture. Convergence culture itself is a process where both the affecting members of certain situations are changing one another. Where, for example, a media company is learning how to gain more benefits from their consumers using what is popular while at the same time the consumers are learning how to control the flow of the popular

culture in which it will bring more advantages for them to bring what they need or want. As technology can be defined as "the application of organized knowledge to practical tasks by ordered systems of people and machines" (Barbour, 2007), both parties are influencing each other in a way which would give them the best opportunities and profits using technological changes.

Popular culture is said to be manipulative, giving us the impression that it is influencing the society in a way that cannot be denied. However, Fiske (1989) argues that "between 80 and 90 per cent of new products fail despite extensive advertising . . . many films fail to recover even their promotional costs at the box office". This indicates that popular culture does not only affect the society as a mass culture but is also affected by the society itself. This study explores how popular culture, technology in particular, affects the life of the people in the novel by Ernest Cline, *Ready Player One*.

Tyson (2009) supports Fiske (1989) when she says that "Any given event—whether it be a political election or a children's cartoon show—is a product of its culture, but it also affects that culture in return. In other words, all events—including everything from the creation of an art work, to a televised murder trial, to the persistence of or change in the condition of the poor—are shaped by and shape the culture in which they emerge" (p. 284). This argument further suggests that those two correlating subjects (popular culture and society) are constantly changing and affecting each other.

In addition to the above mentioned theory, another theory adopted in this study is the objective approach proposed by Abrams (1953). The objective approach is an approach that emphasizes the work itself (Abrams, 1953).

Abrams (1953) argues that we can split any work into four parts: The connection between the universe and the work, between the audience and the work, between the writer and the work, or connections within the work itself. As it explores the impact of the future technological products in *Ready Player One* on the society in it as well as on our society, this study attempts to examine the relationship between the universe and the work.

METHODS

The primary data of this study were taken from the science fiction novel *Ready Player One* by Ernest Cline (2011). The data taken and examined were the occurrence and significance of popular culture, especifically the technological aspects within the story, which affect the life of the people in the novel. The secondary data are taken from various sources such as journals, books, and articles.

Close reading of the novel by Ernest Cline, *Ready Player One* was done to understand the story and the plot of the novel, as well as to comprehend the technological advancement in the novel. Close reading was done to fathom the progress of technology in the year of 2040s as the setting of the novel. In addition, close reading was done to help point out the popular culture scattered within the story to be later discussed and explained.

Furthermore, library research was conducted to gather information and knowledge regarding the novel, technology, popular culture, and the effects of those popular culture and technology on society. The impacts of technology and popular culture towards the real world as seen from the novel were also analyzed.

After the data were collected, they were analyzed by applying the objective approach proposed by Abrams (1953). The analysis focused on the correlation of the literary work with the universe using related sources within the story as well as the characters in order to stay true to the method and the goal of this research. After the analytical process is complete, a conclusion is drawn by listing the findings and articulating the answers for the research questions.

RESULTS AND DISCUSSION

The Impacts of Future Technology Products on the Dystopian Society in *Ready Player One*

Technology is something that cannot be denied, whether it is the existence of it or the effects it has on the society. In the dystopian world of *Ready Player One*, the products of the future technology

have significant impacts. They change the society in various ways. The discussion below focuses on the impacts of technological products on the fictional society in the novel.

OASIS

OASIS, a virtual reality simulation, can be said to have the most impact in the lives of the people in *Ready Player One*. It is the source of information and the way people can connect with one another. In short, OASIS is the escape need.

As the greatest impact from future technology of the world in the novel, OASIS has given many merits as well as degradation. One of which is that OASIS is the source of information, yet the people seems to be shallow and forget that there are still many sources of information from the real world. This can be said as the fact that the people relies heavily on this technology rather than using something as simple as a book. Not many people in the novel utilize other technology such as books to gain knowledge.

The deterioration of using this technology can also be seen from how the people mainly use the OASIS to escape reality. They tend to use it not to connect, but to gain. It might not be a huge problem, but the morality of the people that rely heavily on technology to connect might make the dystopian world into something much worse. Therefore, the main goal of Parzival, the main character of the novel, is to make people realize that the real world is much more that the virtual reality they use every day. This goal is set at the end of the story and for the moral of it, seems to be what the author of the novel try to convey.

All in all, it is an undisputed fact that OASIS is the most impactful technology seen in the society of *Ready Player One*, changing and affecting their life in various ways, from gaining information to connecting with one another.

Virtual Reality Visor

In the novel, this particular device is an important piece of technology used by the people to access OASIS. A series of gears utilized by the user to dive into the virtual reality world have a certain impact in the society. Not only is it mandatory to have this,

people are also offered many varieties of visors to further enhance their experience in the OASIS.

The impact it has on the people is not much, compared to OASIS. However, without this device people cannot accessOASIS, making it crucial to obtain. Yet, the visor does not hold much value whatever the type is. This can be seen from the fact that most students attending school in OASIS is given a free VR Visor. This mass-produced visor have no advantages rather than just to be used to access OASIS. However, if players have extra money, they can purchase a variety of visors with much more benefits.

Along with that, a better and much pricier visor might give a better experience. This also gives rise to the significance of class and wealth in OASIS, where the poor can only obtain the free or much cheaper version of the visor, while the rich can get the best and boast it throughout their use in the OASIS.

Haptic Gloves

The haptic glove is a device used to pick-up, open, operate, or simply feel things within the virtual reality of OASIS. In using this glove, like any normal glove, the user can feel what they touch or handle in the computer-generated world even though the things are non-existent. Even though it is widely available in the world within the novel, the impact of it is no more than just the simple use of it.

Although the existence of this device itself have a great impact to our world. Being able to touch non-existent of simulated objects can truly change someone's perspective and mind. Yet, in the dystopian world of *Ready Player One*, it is used not much other than as a device to play games.

Omni-directional Treadmill

One of the biggest effects this particular technology has towards the people in the community of *Ready Player One* is the fact that this omni-directional treadmill can give them the physical training to maintain their health. Since this future technology is available widely, the people who can afford it can utilize the full potential of OASIS. The fact that it can help them move without going anywhere but in the

same one place is a great opportunity to get in shape without needing to run a mile from end to end.

Aside from the health aspect, this device might affect the mentality of the people. This is because without needing to go anywhere, they can actually arrive at a place and feel like being there, thus making them lazier. Although the benefit of walking or running without actually moving sounds great, the reality is that they do not actually go anywhere. This essentially put us in a dilemma where we try to get somewhere in the simulated world but we do not in reality.

Smell Tower

Since this particular technology is only an additional piece of device used by the user to have full experience in the OASIS, it does not have real impact. Although having the ability to smell something that does not exist might provide us with knowledge and experience that is new, nothing else has been discovered other than simply using it to fill the room with pleasant aroma. Furthermore, since it is optional to get it, not many people actually bother buying or using this technology unless it is truly necessary or the user is swimming in money. Otherwise, this device does not have much impact aside from the social stature it gives you.

Advanced Haptic Suit

The advanced haptic suit is merely an upgrade of the pre-existing device that consists of a full-body suit rather than just a pair of haptic gloves. The full-body suit works as a costume for the users which allow them to mimic every feel, touch, move, and impact they get while in the OASIS. It also comes with a higher level of visor for the users that can bring them more immersion and vision better than the regular visor. However, the impact that this device has is simply the higher experience for users that can afford it. Other than that, it is simply a way to show how much money the users have, showing other people that they are wealthier.

The Effects of Future Technology Products on our Current World

Technology has been assimilated and has changed the society for a long time. It has also been changed by the society itself in all of the history of its creation. From the very first start that a technological advancement emerge in effort to help ease the tasks of human, technology has become a crucial and determinant facet of our culture.

Over the last decades, many devices and advancement made by human have further develop the progress of our thinking and how we interact. Most prominently the computer, along with the internet, have become the things that affected us in many important ways. Technology implementations have bring changes and growth towards our society and that is the absolute truth.

However, despite all of the positive effects it has given us, there is no doubt that it still have parts in regressing the future society, if not handled with care. Looking at the effects the technology have given to the society in the novel *Ready Player One*, the present author will look for its' potential consequences towards our current society. Those effects towards our current world can be divided into two sections, in which they will be categorized as positive effects and negative effects.

Positive Effects of Future Technology Products

Throughout the most recent couple of years, innovation has put an extraordinary contact with a massive speed. Regardless of whether it is with the creation of the phone or web, innovation is advancing towards advancement as time passes. Those advancements bring us many possibilities and opportunities, those positive effects are what we ought to recognize and utilize to the fullest. The following are some of the positive effects of future technology advancement in accordance to the novel *Ready Player One*:

Equitable Education

Without a doubt, the existence of OASIS is a mighty figure that is able to help the people in the society of *Ready Player One* to be able to access the knowledge and information in the vast and wide range of variety without any hassle. Cline, through Wade Watts, in the story states that, "I was more or less raised by the OASIS's interactive educational programs, which any kid could access for free" (Cline, 2011, p. 15), giving the readers the impression that the education

through the OASIS is free, easy, and widely accessible for every kids.

This particular example form the novel can also be seen from our modern society. The most relevant technology in relation to the OASIS that the current world have is the internet. The existence of the internet, paired up with another technology such as Virtual Reality, might give us the best possible opportunity yet in order to access and give education throughout the world.

Innovation in technology gives various chances in making education and how the students perceive it as something fun. As seen from how the students go to school in the OASIS, they tend to do it by seeing it as something like a game.

> My avatar had a slightly smaller nose than me, and he was taller. And thinner. And more muscular. And he didn't have any teenage acne. But aside from these minor details, we looked more or less identical. The school's strictly enforced dress code required that all student avatars be human, and of the same gender and age as the student. No giant two-headed hermaphrodite demon unicorn avatars were allowed. Not on school grounds, anyway (Cline, 2011, p. 28).

Wade, the main character of the story explains his avatar when he is going to school in the OASIS, though there are some restrictions regarding the use of avatar and name within the school ground, having to create your own image of self in the virtual reality world can be something exciting and amusing to do, especially if you are using it to go to school.

Through gamification in giving lecture and studying, the teachers can utilize this opportunity to give them knowledge using virtual world or utilizing internet based learning assets. Furthermore, technology can become one of the reason for the students to partake in cooperation within class better than using normal conservative methods and tools. Which might be difficult to accomplish through a customary oral lecture condition.

Wade says that besides helping the students learn and study better, the OASIS also helps the teacher in maintaining the teaching sessions.

> It was also a lot easier for online teachers to hold their students' attention, because here in the OASIS, the classrooms were like holodecks. Teachers could take their students on a virtual field trip every day, without ever leaving the school grounds (Cline, 2011, p. 47).

This shows that this particular way of teaching might be superior and if utilized correctly can help a lot of students to gain better and more knowledge.

It is no secret that the implementation of technology in education is demonstrated to be powerful and accepted in most age and gatherings. It is likewise demonstrated to be useful for understudies with exceptional adapting needs (i.e. special needs students or disabled students). To emphasize, those innovation towards education can help us in giving inspiration to study, opening more learning opportunities, expanding students effort and commitment, giving the students the chance to learn in all levels, and providing them the ability to understand both the learning materials and the use of technology therefore attuning them to get accustomed with technology and its products.

Ease of Communication

One of the most noticeable advantage of technology is the way it connects people. Along with technological advancement, the hassle of communicating with people in faraway lands is getting obliterated. Nowadays, with a push of a button you can connect yourself with your significant others, even when they are miles away from you.

In the novel, it is stated that the OASIS changes how everyone communicates with each other, it alter many other aspects aside that such as the entertainment, social networking, even within the political field. Although the OASIS was advertised to be a brand new way of gaming at first, it then quickly changes the people and the culture around it, creating a new way of life for the society (Cline 56 2011). The relations between people altered in the manners of virtual reality.

The advancement of technology nowadays has strongly affected the manner in which society deliver their means of connecting, especially with how fast they are developing over the most recent couple of hundred years. From the innovation of the broadcast and phone to the approach of the Internet,

these products and innovation has given many individuals instruments to stay in contact with one another, yet in addition express their emotions and assessments to a more extensive crowd than would some way or another have been conceivable.

Furthermore, by the creation of these advance technological products, many people are using it in many aspects in their life. Since the creation of connecting line and telephone, people has been using it to keep themselves in contact with their relatives of people on the other side of the Earth. Both phone, radio, and internet has helped people in creating wider board of audience and community all over the world.

Use for the Disabled

Another aspect that truly helps is the way these technological advancement might assist people with debility or health deformation to still be able to live their live in a way that people without disability does. Cline states that the function of the haptic gloves is

> to directly control the hands of their avatar and to interact with their simulated environment as if they were actually inside it. When you picked up objects, opened doors, or operated vehicles, the haptic gloves made you feel these nonexistent objects and surfaces as if they were really right there in front of you (Cline, 2011, 58).

In a way, the creation of this particular product, alongside the advanced haptic suit, from *Ready Player One* such as the virtual reality world can be used to help the people with disability live their life in a way that people without disability lives. The use of the haptic gloves or advanced haptic suits to help those with disabilities to overcome their weakness and to live as how they want to be is certainly an amazing feat to accomplish.

In our current world, the creation of hearing aids, speech generating devices, or the advanced use of high-end computer in order to help people with brain disability to be able to communicate again, as well as to repair the broken part of their minds are some example of the positive effects of advancement of technological products for the disabled.

Health Assignation

The advancement in health treatment have tremendously increased thanks to the technological aspect that keeps moving forward. Nowadays, the well-being of people within society has been helped in a lot of way using technology. For instance, the using of many devices to determine sickness, to help people in assessing themselves, and to solve many diseases.

From the perspective of *Ready Player One*, the use of future technology products to help in increasing the health of the people can be seen from the use of such devices like the omnidirectional treadmill. By using this product, people can keep their stamina and fitness in check, running around without actually going anywhere can be an option when we can't do exercises outside or simply to keep ourselves in good physical shape. Like what Wade Watts expressed in the story, "I usually got a little exercise while logged into the OASIS, by engaging in physical combat or running around the virtual landscape on my (omnidirectional) treadmill" (Cline, 2011, p. 196) when he has his personal virtual trainer to assist his work out in the virtual reality world. This is indeed a convenient way to stay healthy.

Another use is by using advanced haptic suit where we can determine diseases within ourselves without actually going to the doctor. Although within the book, the use of this product is not determined to be capable of doing so, with imagination and more advancement in our current world, adjusting to the fictional device of that particular advance haptic suit, it is not something impossible that such product is to be used in that way for us to gain accessible health care.

The possibility and opportunity to asses such technology in order to gain better health is a vision that can only be produced using imagination and fiction, thinking forward and figuring out the best way to actually gain it. Indeed, fiction, along with imagination, can be a way for us to acquire new thinking, products, and many other things. In such, and in conclusion, fiction, in this case, the future technological products from the dystopian novel of *Ready Player One*, affects us in many sort of ways and can be our vessel to create better future.

Negative Effects of Future Technology Products

Many of the use of products of technology might affect a lot of aspects in our life. Those aspects include health, mentality, physical capabilities, even social activity. Future technology that has been researched and discussed in previous chapter, related to the novel, might also be able to give some negative results to the users. Regardless the use of it, this section of this thesis exists to remind us that alongside the benefits those technological products, whether it has existed or not, also presenting certain negative aspects. Those negative effects include:

Health Deterioration

Although having many technology and devices that allow the user to further use them in attempt to gain better health, the opposite might also happen if they are used in the incorrect way. Health deterioration might happen in many cases, including the eye strain of prolonged use of the devices, the changes in skeletal form, or even in mental health. How can these phenomenon happen from using technology?

First, from the discussion of the findings in the future technology found in the book, the use of *Virtual Reality Visor* may possibly have some downside to it. The use of it might cause a problem for the user's vision since using the visor requires the user to directly place it in front of the eyes. Wade states in the novel that the visor "…fit snugly around my eyes like a pair of swimmer's goggles, blocking out all external light" (Cline, 2011, p. 26). Therefore, making it possible for the users to suffer from eye strain or worse, blindness.

Our current virtual reality visor, or *VR goggles*, might cause this problem seeing how it is still undeveloped and how it might causes injuries compared to other devices. However it is still debatable as the future visor from the novel might gain more upgrade from the ones we have in the current era.

This argument, however, can be backed by the research done by American Optometric Association (AOA) in which they describe a syndrome of using a modern device for too long. *Computer Vision Syndrome* or *Digital Eye Strain* is a problem described as a syndrome of prolonged used of computer, tablet, e-reader, cell phone, or modern devices. Numerous people experience feelings of unwell in their eyes and vision issues when seeing advanced screens for a long period of time. The degree of the discomfort seems to increase with the measure of computerized screen use.

Therefore, clarifying the argument that using this device, or any similar devices in our modern world (gadgets with screen e.g. smartphones, computers, or tablets), for a long time might cause several problems and diseases related to the use of the device.

Second, when we use the technological products within the world of *Ready Player One*, we might also suffer from other physical health deterioration. One example from the book is the continuous use of *Omnidirectional Treadmill* or *Advanced Haptic Suit.* Using these future techs in excessive time might causes many problems such as skin deterioration, musculoskeletal problems, or excessive fatigue.

Human bodies are designed to withstand a various amount of forces and work given, however, an excessive use or even unnatural position in doing some exercise or action in using these future technologies are prone to be a source of problems for physical health. Wade says after using his advanced full-body haptic suit, he pulled off his visor and began removing his haptic suit slowly in order to not damage the components. However, he also states that as he "peeled" the suit, the contact patches made "tiny popping sounds" as they pulled free of his skin, leaving tiny circular marks all over his body (Cline, 2011, p. 197). This particular action might ruin or harm his skin in the future with the extreme use of the product.

Another problem is the musculoskeletal problem, a worsening in human skeleton in which occur from either extreme use or unnatural way of doing things. In our current world, the use of omnidirectional treadmill or advanced haptic suit might not be possible yet, but as simple as using a smartphone or computer in disproportionate position and lengthy time might result in these problems too. According to the research done by Al-Abdulwahab, Kachanathu and Al-Motairi (2017) state that the addiction in smartphone is correlated to the strain of neck problems. Therefore, it is clear that any use of devices, future technology or not, if

used in unnatural ways or prolonged period of time might cause problem in physical health for human. It is recommended that we avoid the excessive use of it in prolonged time and inappropriate position.

Mental or Emotional Problems

Another problem that is as important is mental health. The use of *OASIS* in the novel might be a way to connect each other and to access various information in better and advanced ways. However, there are some jigs that might causes problems for the users.

As it can be seen from the story, the dystopian society in the world of *Ready Player One* relies heavily in the use of OASIS in order to escape their real world. One example can be seen from one of the character, Toshiro, a famous gunters in OASIS. The story says that Toshiro is a

> …hikikomori, young people who had withdrawn from society and chosen to live in total isolation. Hikikomori locked themselves in a room, read manga, and cruised the OASIS all day, relying on their families to bring them food (Cline, 2011, p. 243).

Hikikomari exists in our modern world and not only within the novel. This certain personality and particular manner in life has been going on in Japan for a long time. Along with the existence of OASIS, their way of life might actually get worse and might impact more towards their own mentality and the way society progress.

In the story, instead of tending the already wrecked world, they escape into a virtual world using the advanced technology. In some ways, OASIS is similar to the internet of our world, and like the internet, it has the capabilities of connecting people, as well as disconnecting people.

As a technology that is developed to help human in accessing information and connecting each other, the internet also, in a way, deteriorating the ways human are connected. Some might feel connected as they can access it to kindle with relatives from faraway lands, yet forget to remain associated with those near them. OASIS has become the one and only way for those people to connect, however it prevents them to enjoy the company in their own home and their circle. They spend more time in the virtual world rather than the real world, forgetting the true purpose of it. Internet, or social media as that matter, has always had this effect and the best way to prevent it so to use it moderately. Understanding the use and benefits it offers, as well as the negative impacts it gives will help us to better implement it in our life.

Effects on Children

A study conducted by the California State University claims that aside from the food they eat and the activities they do, media, especially technology, plays a huge part in a child development. The researchers, in an anonymous online survey, conducted and used several aspects of technology in correlation with the use of screen time by children. Those aspects are associated with technology in forms of physical technology (i.e computer, phones, and video games).

As seen from how the reality and the use of technology in *Ready Player One*, many people use it all the time regardless their age, and with no limitations. Wade states that since the crisis and other problems going on in the real world, every day, more and more people had reason to seek solace inside Halliday and Morrow's virtual utopia (Cline 59 2011). This reality may result in various problems if it ever happens in our real world. From affecting their time, health, and mentality, these aspects are what shape the children in their developing age towards adolescence and adulthood.

Another reality found in the novel is that Wade Watts was raised in the OASIS environment, since his mother was a virtual babysitter. Meaning that he was introduced to the OASIS at an early age and created his own avatar as soon as he was old enough to wear the virtual reality visor and the haptic gloves (Cline 15 2011). Although it is not stated in the novel how old Wade was when he first made his avatar, from the stand point of our current world and the general morale that our society hold, children should be given access to technology only when they are old enough to understand it.

In spite of this, various researchers attempt to give advice and the proper treatment regarding the use of technological products for children. The American Academy of Pediatrics (AAP) makes the following recommendations of screen time for children (AAP, 2016):

Table 2. Screen Time Recommendation for Children

Younger than 18 months	Avoid screen time other than video chatting.
18 to 24 months	Parents and caregivers can offer high-quality programs and watch them with their children.
2 to 5 years	Limit to one hour per day of supervised high-quality programming.
6 years and above	Place consistent limits on time and types of media. Media shouldn't interfere with adequate sleep, exercise, or other behaviors that affect health.

Like grown-ups, children, especially those on a very young age, can also suffer from various deterioration from technology. Children who are invested so much of their energy and time towards technology, if go under supervised, might turn out to be badly influenced and in turn does not grow properly with various problems such as with their health. The screen time is also associated with many problems for children, such as obesity, lack of social skills, sleeping problems, even violence and behavioral problems. In this case, The AAP recommends that parents give their children assigned time in the use of technology such as television, computer, phone, and the likes in order to have their children's growth healthier and proper, as to not be affected by those negative effects of technology.

CONCLUSION

After having gone through all of the description and explanation above, we have a better perspective of the way in which many possibilities are presented from the innovation and advancement of technology. Those products of future technology are presented in the science fiction novel of *Ready Player One*. There is a strong connection between factual science and the ideas represented within the fictional story.

It is clear that many authors are inspired by actual real world scientific work and technological advancement. These authors take those aspects and elements to be projected in scenarios where future potentials of those fabrication of reality might impact our society. Likewise, many scientists take literary works as an imagery, creating a useful idea and developing more scientific breakthrough with the help of fiction, inspired by the ideas which came from the imaginations of many authors. The fact and fiction juxtaposed in a way that they create a circle in which they keep each other stimulated.

This study has shown that the advancement of popular culture in society, especially technology and its products, has powerful impacts on in many ways. Furthermore, the way that popular culture is sometimes taken as a commercial culture that influence the people's choices by the way it changes and consumed proves another point that popular culture is a significant aspect in the society.

Another important aspect is the technological aspect and from the advancement of technology bring fort more and more products in hope that they can help us in our life. Technology does not only affect society, it also somehow controls them in a way that we cannot predict. This is shown by how the technological advancement the society in *Ready Player One* has and how it makes them able to do so many things with the development of such technological products, however they are unable to get rid of their habit of using the products in daily basis.

As shown from the fact that the world within *Ready Player One* is at the most severe social and cultural turmoil, with the ongoing crisis of energy, poverty, and expensive way of life, the OASIS serves as an 'escape' and people are addicted to it, coming to it every day. This too is the impact of technological products towards society that could be seen in our world. The technology that is helping us to make life better and easier might also become our downfall if not utilized correctly.

REFERENCES

AAP.org. (January 26, 2020). American Academy of Pediatrics announces new recommendations

for children's media use. Retrieved from www.aap.org/en-us/about-the-aap/aap-press-room/Pages/American-Academy-of-Pediatrics-Announces-New-Recommendations-for-Childrens-Media-Use.aspx.

Abrams, M. H. (1953). *The mirror and the lamp: Romantic theory and critical tradition*. Oxford University Press.

AlAbdulwahab, S. S., Kachanathu, S. J., & AlMotairi, M. S. (2017). Smartphone use addiction can cause neck disability. *Musculoskeletal Care 15*(1), 10–12. https://doi.org/10.1002/msc.1170.

Arris Team. (April 6, 2018). A homage to the technology of *Ready Player One*. Retrieved from https://www.commscope.com/blog/2018/a-homage-to-the-technology-of-ready-player-one/.

Barbour, I. G. (2007). *Ethics in an age of technology*. International Society for Science and Religion,

Bennett, T. (1980). Popular culture: A teaching object. *Screen Education 34*, 18.

Cline, E. (2011). *Ready Player One*. Random House.

Fiske, J. (1989). *Understanding popular culture*. Unwin Hyman.

Hidayat, D. S. & Munjid, A. (2020). Elite domination and lower class resistance in Ernest Cline's *Ready Player One*. *Lexicon 7*(1), 106-116.

Mar'ati, A. Q. (2015). *Narcissistic personality disorder as seen in James Thurber's* The Secret Life of Walter Mitty, (Unpublished undergraduate thesis). Universitas Gadjah Mada.

Storey, J. (2006). *Cultural theory and popular culture*. Pearson Prentice Hall,.

Strinati, D. (2004). *An introduction to theories of popular culture*. Routledge,.

Tapscott, D. (1998). *Growing up digital: The rise of the net generation*. McGraw Hill.

Tyson, L. (2009). *Critical theory today*. Routledge.

Vargolici, S. (2011). *The influence of popular culture and science fiction on the public perception of emerging technologies – Focus: Nanotechnology*, (Unpublished master's thesis). Universite Catholique de Louvain la Neuve.