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Ceulemans, Pauline W. *The Impact of Technology on Social Communication*

Abstract

This study discusses the impacts technology has had on social behavior. The change in communication mediums is addressed. Although face-to-face communication has decreased, technology has provided opportunities for aiding in communication. The video game and the Internet community are investigated for their positive and negative traits, but also for the information the new Internet culture can provide for us. Internet “trolls” can give us information on dealing with bullies, and social media websites make it clear that today’s youth may need to be educated on the appropriate use of communication technology.

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Chapter I: Introduction

Technology is constantly evolving and changing how we do things. There have recently become many more means of communication, and many more adolescents have access to them. School-aged children can communicate with both people they know and strangers through communication sources that are not face-to-face. This may have affected the way adolescents behave, particularly those who have had these new interaction methods the entirety of their lives. To them, face-to-face communication might not be the norm. The concern is that this may have had a detrimental effect on their interpersonal communication abilities.

Simply not having as much in-person communication might have allowed individuals to be less able to pick up on some social cues. Because people who communicate through non face-to-face mediums do not regularly see people talking, they may have difficulty recognizing facial indicators of moods and emotions. Body language is also absent from these forms of communication. This is important because it has always been a critical aspect of interacting with other people. The full meaning of what somebody is saying might not be in just the words. Just like incorrect grammar can make a sentence confusing, failing to comprehend body language and facial changes can cause the intended message to be lost to the listener. This could cause a lot of difficulty for adolescents when they reach the workforce; they would be communicating with people who did grow up using primarily face-to-face communication to interact with each other.

Technology may have had an effect on social behavior due to the online environment, and it might be unrelated to the lack of face-to-face communication (Diamanduros, Downs & Jenkins, 2008). People seem to be less politically correct when they are online and are not dealing directly with people (Diamanduros et al., 2008; Draa & Sydney, 2009; Sabella, 2007). This is likely due to the anonymity fostered by the Internet (Draa & Sydney, 2009). However,

even when the user is not anonymous, Internet users still seem to be more likely to express themselves in the public domain of the Internet. They may provide much more information about themselves than they would in a public real life setting. This could simply be because Internet users do not feel like people can see what they are doing - that it does not have the same real life consequences (Draa & Sydney) - but it could also be that they might not know what is appropriate to share, since others share openly as well. There are social side effects when making online comments, and adolescent Internet users may be unaware of the consequences of their actions. Educating students on this subject may become necessary as more people grow up with more technology.

Some people include video games as a detrimental use of technology, but video games can have positive, prosocial themes (Greitemeyer & Osswald, 2011; Jin, 2011). They can be educational (Griffiths, 2002). It seems that video games, like other forms of technology, are not detrimental unless they are misused or the user does not understand the implications of their actions. Playing a video game so much that it interferes with life is not good (Van Rooij, Meerkerk, Schoenmakers, Griffiths & Van De Mheen, 2010), but the problem lies with the player's misuse of technology, not in the game. In the case of people who choose to play video games excessively, depression may be the issue instead of addiction. Depressed individuals who wanted to avoid their life responsibilities might try to distract themselves with fantasy worlds. This is not to say that people who enjoy fantasy or video games are depressed, but that the excessive use of video games is correlated with depression (Pezzecca, 2009). The potential tendency for depressed people to find something to distract them from life would not be specific to video games. If a person chose to read books instead of going to work, it would have the same detrimental effect that is found when people play video games too often.

Some video games have an online community, and the culture of the Internet can provide hints for dealing with bullies. The online community can be friendly, but it also has a darker side, one that will take advantage of users who are not well acquainted with the online environment. Studying the behavior in this environment may shed some light on offline behavioral changes. Not only can the situations bullies put themselves into be viewed, but the response of others to the bullies can be observed. In some cases, the Internet community deals with bullies in a very productive way. However, anonymous Internet bullies cannot physically assault their victims, so the environment is inherently different.

Unlike anonymous Internet bullies, social media websites can contain bullies who are identifiable in real life. Adolescents seem to forget, be unaware, or indifferent that they are not anonymous when they use social media websites. Many comments are posted online that these students would not say if they were talking to people in person. Being able to communicate online to people certainly has its advantages, but some adolescents are not using the technology appropriately.

The social media format provides a link between the anonymity of the Internet and the real life relationships people have. This link between the two has very unclear boundaries, and adolescents sometimes make poor choices with their online statements that can get them into trouble in real life. Comments made online have caught the attention of school districts and local police departments have gotten involved (Kimberly, 2012). The situation could have been as simple as an adolescent making an extreme statement that they did not actually mean, and thinking that it did not matter because it was just on the Internet. Educating students on appropriate use of technology could alleviate this problem.

It is important to be aware of how technology has affected social interaction, and to study the results of it. If students are suffering socially because of it, then while these adolescents are still in school, efforts can be made to improve social skill deficits for those who may need them. Knowing what is going on online is important for understanding what students are experiencing, and if we do not know, then we cannot help them.

Statement of the Problem

Research indicates that adolescent use of technology has increased (Subrahmanyam & Greenfield, 2008), and this could have a negative effect on social capabilities and behavior. The repercussions of this change are unclear. This study will examine how social interactions and behaviors have changed in response to technology.

Purpose of Study

The purpose of this study is to review literature on how technological advances have altered social behavior in adolescents who live in the developed world. Data collection was done in 2012.

Research Questions

The following research questions will be addressed in this study.

1. How has technology impacted social behavior?
2. What should be done to accommodate changes in communication technology?

Assumptions and Limitations

It is assumed that the current school-aged population has had access to communication technologies like cellphone texting, messaging through the Internet, social media websites, and video games. It is also assumed that people in this age group spend less time than previous generations communicating face-to-face.

A limitation is that some students may be less impacted by technology than is assumed, and they may choose to communicate primarily in person. Another limitation is that a lot of the research on the impact of technology may be biased. There seems to be an assumption that technology decreases positive social interaction and that technology is positively related to destructive life choices (May, 2011). Another limitation is that some articles on the effects of technology do not seem to have a good understanding of some aspects of their subject matter.

Definition of Terms

This study contains some terms with which the reader may be unfamiliar. The meaning associated with them is included here.

Cyberbullying. Harassment through technological means. Often this takes place on the Internet, but it can also be done with other technologies, like cell phones.

Massively Multiplayer Online Game (MMO). A video game that is played online with thousands of people or more. Players share the same game world with other members, and the members can interact within the game.

Post. To put something online that others can see. Comments, pictures, videos, etc. can be “posted” onto websites.

Real Life. Existence off of the Internet. For example, people can be friends with people they know online, but when people play games with friends they know offline, they may refer to these friends as their real life friends.

Social Media Website. A website that an individual goes on to socially interact with other people. They often include a space for a user to tell about themselves, and the opportunity to post to others on the website. This is a public forum, but users can chose to limit who can see what they post.

Texting. A method of communication on a cell phone through written message. Unlike a phone call, the message recipient does not need to answer the phone when the message is received to be able to access it.

Chapter II: Literature Review

Introduction

This chapter will discuss the influence technology has had on interpersonal behavior in adolescents, the social effects of video games, Internet culture, social media websites.

Technology has changed the way people interact, and it is particularly noticeable in the school-aged population. This population has always had these technologies, and the impact on social behavior will be addressed.

Change in Communication Methods

Before the Internet and the use of texting on cellular phones, people communicated primarily face-to-face. Letters were mailed and friends were called through landlines, but one of the main means to communicate was by meeting in person at a physical location. Now, people can be in almost constant contact with each other through the Internet, cell phones, and other technological devices. However, this contact does not have the same physical element that face-to-face communication has.

The current student population has grown up with many technologies that enable them to talk to one another without being face-to-face. Research supports the increased use of cell phones (May, 2011). In 2009, the majority, 66%, of adolescents aged 12 to 13, had a cell phone (Lenhart, 2011). However, research suggests that the percent of adolescents aged 12 to 13 with cell phones has decreased since 2009. In 2011, survey results indicated that 57% of young teens aged 12 to 13 had a cell phone (Lenhart, 2012). Perhaps the decrease in cell phone ownership among adolescents aged 12 to 13 years is linked to an increase in social awareness of technology concerns.

Older teens were more likely to have a cell phone than younger teens (May, 2011); 87% had a cell phone in 2011 (Lenhart, 2012). In total, 77% of teens aged 12 to 17 owned a cell phone in 2011, up from 75% in 2009, and 45% in 2004 (Lenhart, 2012). Use of technology increases with age – both the age of the adolescent and as time advances. However, as communication technologies advance, people are also operating communication devices that foster non-face-to-face communication at a younger age (Subrahmanyam & Greenfield, 2008). Cell phone usage continues to increase as we grow older, (Lenhart, 2011), but because technology continually advances, not many individuals who are currently adults have used this technology since childhood (Subrahmanyam & Greenfield, 2008). This is particularly relevant today because we have not seen how this impacts individuals as they age from adolescence to adulthood. Because these individuals have always had these communication sources, some may lack the social skills learned through in-person contact simply from having limited exposure.

When engaging in a conversation with another, words are not the only thing being shared; body language, facial expressions, vocal tone, and other emotional indicators are displayed. In the past, recognizing these visual cues was a regular part of communicating. Now, adolescents are growing up with these in-person communication indicators being absent in a significant part of their socialization sources. Things like emotions displayed through facial expression may be harder for people to recognize if they are not used to seeing it. This may make the comprehension of physical indicators more difficult for individuals growing up with a significant amount of their communication stemming from technological sources, whether the physical cues be expression, body language, or otherwise.

Technology has created many more ways for people to communicate with each other, but they may make it easier to misread social cues when interacting in person. When cell phone texts

or online messages are exchanged, the mood or intent behind the communication is not always clear. For example, sarcasm can be difficult to detect. The main concern with changes in communication methods seems to be that there could be significant long term consequences. One researcher notes that it could lead to people have difficulty expressing emotion, social anxiety, and difficulty communicating effectively (May, 2011).

Although there does seem to be a significant amount of concern over the issue, there does not seem to be a lot of tangible support for any harm being done. Research shows that the use of technology has increased (Lenhart, 2012), but evidence that the increased use of technology to communicate has caused face-to-face communication to suffer is not readily available. Some researchers conclude that it must be negative (May, 2012), but the data gained from the research neither supports nor refutes the theory. As communication technologies continue to expand, more evidence that adolescents are negatively impacted may surface.

The thought that technology must have negative consequences is so widespread that some researchers have started to focus on why research has not been able to find the expected results. Although not factually known, there are a few thoughts on why research has not empirically shown that face-to-face communication abilities to have suffered significantly from the increase in technology. One study surmised that people adapt to communication technologies but that basic face-to-face communication skills may just come along with being human (Schnell, 2005). This study notes that communication methods used for thousands of years may have become ingrained through years of evolution (Schnell, 2005). Another study noted that adolescents might not have been as influenced by technology because they are still spending a significant amount of time communicating in person (Lenhart, 2012). One study found that 93% of teenagers participated in person engaging in social activities outside of school at least once a week

(Lenhart, 2012). Over a third reported participating in person daily (Lenhart, 2012). However, 4% of teenagers who responded reported never/not being able to participate in after school activities (Lenhart, 2012). This could be because of transportation issues. Whether or not the isolation is by choice, it does mean that some adolescents are getting few opportunities to gain interpersonal skills.

It is not clear if adolescents are generally more socially unaware than a generation ago, but we know from the previously described survey that some teenagers have no opportunities to gain experience communicating face-to-face (Lenhart, 2012). What this means for school counselors is that it could be helpful to work on social awareness - specifically on helping students to recognize social cues that are only used during face-to-face communication. Research indicates that not only is social skill instruction effective, but it also improves student academic achievement (Jennings & DiPrete, 2012). Even if it is possible that teaching social skills is not any more necessary than it was before, social skills have always been important.

Research on modern communication suggests that if negative aspects are addressed, there can be benefits, even in the education setting (Subrahmanyam, & Greenfield, 2008). Technology has aided communication in many different areas, and research does support the positive influences. Using technology to communicate online with students learning English was shown to be effective (Istifci, Lomidaxde & Demiray, 2011). Technology was used to help show information about communicating in English, and also provided virtual realities in which to practice communication (Istifci, Lomidaxde & Demiray, 2011). Technology has also provided communication methods to aid students with special needs. New methods of communication have been made to help individuals with Autism Spectrum disorders (Shane et al., 2012). These technologies can supply a visual component that makes communication easier for some

individuals (Shane et al., 2012). Incorporating visual components by use of communication technology has also been shown to be effective for students with deaf-blindness (Emerson & Bishop, 2012). There seem to be many studies that show that technology can enhance communication, provided that it is used for that purpose. While less face to face communication might be a negative thing, using technology to supplement communication was shown to be effective. Educationally, implementing supplemental communication technology could be very helpful for students with special needs.

Video games

Some people are under the impression that video games are inherently detrimental to social behavior. Some studies indicate that video games, particularly violent ones, desensitize people and could decrease their emotional awareness (Hassan, Bègue & Bushman, 2012; Kirsh, & Mounts, 2007; Möller & Krahé, 2009). However, other studies indicate that video games also have many positive effects (Clarke & Schoech, 1994; Griffiths, 2002; Greitemeyer & Osswald, 2011; Hollingworth & Woodward, 1993; Horn, Jones, & Hamlett, 1991; Jin, 2011; Kappes, Thompson, 1985; Masendorf, 1993; Okolo, 1992a; Okolo, 1992b; Wright, 2001). More in depth information about the negatives and positives will be addressed.

One study noted that some of the research implicating violent video games as a cause for aggression does not take into consideration that aggressive individuals may be drawn to violent video games (Porter & Starcevic, 2007). Aggressive behavior might not increase with exposure to violent video games; there might just be a correlation between people who are aggressive and desire to play violent video games (Porter & Starcevic, 2007).

A researcher pointed out that the press had a tendency to focus on the negatives of video games regardless of the content of the study (Griffiths, 2002). There seem to be a lot of

misconceptions about the nature of video games. Violence seems to be one of the biggest concerns about video games, but not all video games are violent. As for age appropriateness, video games have ratings. Games that are rated “M” are meant for age 17 and above; they are not suitable for young children to play (ESRB). Should young children be playing “M” rated games? Not even video game companies say they should. One video game company, Rockstar Games, has stated that they are adults making games for adults, and even suggest that parents should not buy their games for their children (Whitworth, 2010). Some people are under the false impression that regardless of what video game companies say, games are catered to children. However, the average age of a video game player is 37 (Johnson, 2011). Young children who cannot differentiate between fiction and reality should not be playing “M” rated video games without parental supervision. However, this does not mean that all video games are harmful, or that all video games are violent. A video game is simply an electronic game that a person interacts with. These are inherently neutral; the content determines the nature of the game.

Griffiths noted that video games have the potential to be helpful, especially in education (Griffiths, 2002). A more recent study investigated how video games can affect students in the personal social domain. This study found that video games with a prosocial theme increase a person’s prosocial thoughts (Greitemeyer & Osswald, 2011). It would appear that just like any other information or experience source, the effect that video games have is determined by the actual information provided; they do not have an inherently negative impact on people who play them. Violence in video games may make people less likely to have a strong emotional reaction to violence (Kirsh, & Mounts, 2007), and video games promoting positive behavior may also norm positive behavior (Greitemeyer & Osswald, 2011; Griffiths, 2002; Jin, 2011).

When people are repeatedly exposed to something, it may make that thing seem normal and less out of the ordinary (Guerra, Huesmann & Spindler, 2003). While this does not mean that people playing video games will be violent in real life situations – provided that the video game player can distinguish between fiction and reality – they might be more likely to find fake, over the top violence acceptable. This also means that positive behaviors, if related to real life situations, could be modeled by video games. For example, research done on this subject found that prosocial games fostered greater empathy (Jin, 2011). For the education system, this indicates that video games with the purpose of promoting prosocial behaviors could benefit students who have a need for social skill or behavior improvement.

Research has been done on the implementation of video game use for students with special needs (Griffiths, 2002). The purpose of using video games was to help students gain skills. Many different skills have been said to improve through use of educational games, and the skill area does not appear to be limited. Some of the skills reported to have been improved by educational video games are: language (Demarest, 2000), math (Demarest, 2000; Okolo, 1992a), reading (Demarest, 2000), social (Demarest, 2000), accessibility (Horn, Jones, & Hamlett, 1991), spatial ability (Masendorf, 1993), problem solving (Hollingsworth & Woodward, 1993), impulsiveness (Kappes & Thompson, 1985; Clarke & Schoech, 1994), attention (Kappes & Thompson, 1985; Wright, 2001), and motivation (Okolo, 1992b).

Some studies are concerned about the addictive quality of video games, rather than just the content of the games. A study by Van Rooij et al. (2010) suggested that people become so addicted to video games that they heavily neglect other activities in their lives, like social interaction and school. The article also implied that the fault was the video game developers, and that addiction services should be provided. This would be a serious concern pertaining to the

impact of technology on social behavior if it were accurate. However, it is not likely that video games cause people to neglect their lives. It is far more likely that people who are inclined to disregard their obligations seek out distracting activities. The linking factor may be depression. Research suggests that extensive video game use and depression are positively correlated (Pezzecca, 2009). While it is possible that focusing one's attention on only one type of activity could lead to depression, it seems more likely that people who were depressed would try to escape their responsibilities by living in a fantasy world. While Van Rooij et al. (2010) think the issue with extensive game play is just that people are playing too much, this does not consider reasons why some video game players may be doing so. That reason might just be that they are depressed. If individuals wanted to escape reality and desired to be distracted from their responsibilities, the abuse of video games could be enabling. If this is the case, then the problem is not video games, the problem is that some people prefer to avoid life. Assuming that video games are detrimental and not understanding the reason behind the behavior just slows the onset of a solution. Too much of anything can have negative influences on people; video games are not exclusive in this capacity.

Whether or not video games are considered a worthwhile use of time, they are increasingly becoming a significant part of the younger generation's life. They cannot be eradicated, but the technology can be used for educational gains (Griffiths, 2002). Video games themselves can be beneficial. While extreme overuse of video games can be detrimental to one's social behavior and may influence academics, casual video game play and the social culture of the Internet also have areas of social concerns.

Internet Culture

A unique factor of the Internet is that a user can be anonymous. While Internet users can choose to identify themselves, in many cases there is no evidence to support or refute their identity claim. What is said online is generally not attributed to the Internet user when that person interacts with people who only know them offline - people the user knows from “real life.” In the past this anonymity was more guaranteed than it is now, but the sense of anonymity still exists.

The implications of perceived anonymity are that people do not feel accountable for their social actions (Draa & Sydney, 2009; Sabella, 2007). When people are in an anonymous setting, they can say what they want without getting into trouble in real life. There are of course exceptions, but tracking down users can be very difficult (Placid & Wynekoop, 2011). Other than extreme cases when people try to identify Internet abusers for legal purposes, the worst that could happen to an Internet user is getting banned from a website or online game.

Because of the nature of the Internet and anonymity, individuals engage in social behaviors that might not be appropriate in a real life setting (Diamanduros et al., 2008). One place this behavior seems to be significant is within massively multiplayer online games. These games are played online with other people on your team and usually with other people playing against you. While you may know some of the people in real life, most are probably strangers. Modern video games may have a social element and sometimes feature teamwork (Murphy, 2009).

Perhaps it is the competitive nature of games, or because the game players know it is unlikely that they would come across the same people again within the game, but the behavior exhibited to others is less than kind. The use of derogatory terms is high, and empathy is rarely

exhibited. Because people have no way of verifying if something said is true in real life, any claims about one's life outside of the game are not taken seriously. That being said, this online community usually does not react positively to overly rude people.

Getting upset at people online is generally counterproductive, since the person most affected by anger is the person who is upset, and you cannot affect the real life of other anonymous users. Some people like to exploit this knowledge by intentionally trying to make people angry. These people are called trolls (Herring, Job-Sluder, Scheckler, & Barab, 2002). A troll is not mad, but gets other Internet users upset for their own amusement. A troll is self-aware. A troll can say something and not really mean it, but when somebody takes it seriously that person is considered to have been trolled. The idea is similar to laughing at another's expense. Originally, the term "troll" had a specific meaning, but over time the definition has become diluted, and it may be a bit overused.

These individuals are not uncommon online. They can be found in video games, in discussion boards, and in many other online settings (Herring, Job-Sluder, Scheckler, & Barab, 2002). In fact, they are so usual that people have learned how to deal with them; this could provide knowledge on how to deal with bullies in real life. A well-known saying from the Internet community, "do not feed the troll," is particularly notable when considering bullies (McNally, 2010). "Feed" refers to giving the person something that lets them grow. Responding in an angry way gives the troll what they want, and they will keep going. Letting them know their comments are upsetting is considered feeding them. If the comments are met with indifference, the troll cannot live. Getting mad simply eggs the troll on. Sometimes it is not clear if a person is trolling or if they are sincere; an Internet user might never know (Whittaker, 2007).

A person may be name calling online because they are legitimately upset and are not just having fun at the expense of others. Because getting mad online serves no purpose, this type of bullying it reacted to by making fun of it. When this happens, the bully may get trolled because other people may be amused by the bully's anger and comments, and they may make him madder for their amusement. Comments may be very direct and targeted at making fun of the bully being upset. For example, a phrase once commonly used, "u mad bro?," teases a person who seems upset online. Because being mad is something to be made fun of, the bully will likely deny being mad. Adjusting to this behavior online may have an impact on how an individual reacts in real life. Because of the harsh nature of online culture, it can provide some information on how to keep control of emotion, but it can also draw out anger in those prone to it. Studying what makes trolls successful can help us understand more about social interactions and motivation (Herring, Job-Sluder, Scheckler, & Barab, 2002).

However, part of the reason why getting mad at people online is amusing is that the upset person cannot do anything to harm the person's real life. Bullies in real life can physically harm people. In anonymous online settings, bullies can generally only make empty threats. While online bullies can cause psychological harm, trolls show us not to take it too seriously. One good thing about trolls is that they can show us to ignore harassment and not be as affected by it.

For people who are new to Internet culture, feelings can easily be hurt. For those who spend a lot of time online, the opposite may be true. Because people who spend a lot of time online are used to inappropriate language, trolling, and angry people, all of which could be perceived as bullying, they may not be as affected by it in real life. This may make them seem to be less emotional than their peers who spend less time online. This is one way that technology

may have changed social behavior. While there may be some downsides, lessons can be learned about handling bullies from the culture of the Internet.

Social Media Websites

A social media website is a website that people use to interact with their social network. Just like calling a friend or sending an email, these websites simply provide another means to communicate and stay in touch with people. An individual who uses this type of website will generally build a profile page about themselves. They can then post comments to other people, and the comments are public. Social media websites tend to provide an option to increase a user's privacy. This is done by changing the website user's settings so that only people identified as friends can see what is posted. The default privacy setting on social media websites is usually to very low, so information is publicly viewable.

Unlike social video games and other aspects of the Internet, social media websites are not anonymous. However, since most aspects of the Internet are anonymous, a social media user may still feel a sense of anonymity. At the very least, they may feel more secure while posting online in the comfort of their own space, away from others. Because of this feeling of security and the sense that what is said online does not affect them, individuals can be more inclined to act aggressively or emotionally. They do not feel like their words online have the same consequence as saying them in person. In other areas of the Internet, when a user is anonymous, there are generally no real life repercussions; when somebody posts on a social media site it feels like the same thing. However, the user is identifiable, as are people they talk to or about.

A benefit of social media websites is that they allow people to stay in contact with friends who otherwise may have been lost through lack of communication. Social media websites provide the opportunity for people to see what their friends and acquaintances have been up to,

and they can casually talk to them online. Realistically, most people do not have time to write a letter to all of their distant friends, and social media provides an easy way to stay in touch. Instead of writing an email to a friend who has not been in contact for a year, a friend can comment on something that their friend wrote. Social media websites provide a convenient way to stay in touch with people.

The downside of social media websites is that people may act without taking responsibility for their actions. Two significant problems that this causes are posting inappropriate images, information, or opinions, and cyberbullying. Adolescents may post pictures of themselves with alcohol or other drugs. They may also send sexually explicit pictures of themselves – though this is not exclusive to social media websites. There are many problems that can arise from this. Future employers may look at social media websites and not hire somebody based on what an individual has posted. In the case of adolescents distributing sexually explicit images, it is considered child pornography, and if charged, they would be classified as a sex offender (Maltby, 2010). Adolescents sometimes think that what they are doing online is not serious, but there can be legal penalties.

Cyberbullying is a serious problem on social media websites (Sengupta & Chaudhuri, 2011). Adolescents post cruel comments to others that they would probably not say in person. Because they feel like it is not as serious to say something mean online, some students do not think what they are doing is a big deal. People who are getting bullied on social media websites can be just as hurt by comments online as offline, and because they are not anonymous, it does affect them in real life as well as online.

Part of the problem with cyberbullying on social media websites is that it can be hard for behavioral rules to be enforced. Parents and teachers cannot moderate the communication of

adolescents online, and it can be hard for them to know that cyberbullying is going on (Subrahmanyam & Greenfield, 2008). As people become more aware of the issue, more attempts are being made to take Internet threats seriously. Some Internet users are under the impression that since they are harassing online that there are no legal repercussions. Some also think that exaggerations and going to extremes are more acceptable in the online environment. However, there are very real consequences, and legislation has been considered to help regulate Internet use on social media websites (Sengupta & Chaudhuri, 2011). Currently, government agents can scour personal social media websites and use information found against the user (Semitsu, 2011). In cyberbullying situations, if a person is making a serious threat against another person, that threat could hold the same weight as if it were said in person. There have also been multiple accounts of schools and law enforcement reacting to threats made online (Brief, 2011; Kimberly, 2012; Teenager, 2010).

There are positives and negatives that come along with social media websites, but ultimately they are just another communication method. Just like face-to-face communication, people can behave inappropriately, but people can also be supportive. What is important is making sure that adolescents understand the consequences of abusing social media communication, and letting them know how it can be appropriately and safely used.

Chapter III: Summary, Discussion, and Recommendations

Summary

This chapter clarifies what research has indicated about how technology affects social behavior. Following the summary there will be a discussion and recommendations for future research.

Research has indicated that adolescents are spending more time communicating with each other through technology (Subrahmanyam & Greenfield, 2008). This could mean that adolescents will be less likely to understand interactions that have subtleties beyond the words themselves. Research has supported the notion that adolescents are using technology to communicate more as technology progresses (Lenhart, 2012). A few people report having no face-to-face communication outside of school (Lenhart, 2012). However, while there is an assumption that technological communication harms interpersonal skills (May, 2011), research has not been able to find strong evidence for a decrease in interpersonal skills (Schnell, 2005). While negative effects have not been found to be significant, communication technologies have had some positive effects (Subrahmanyam & Greenfield, 2008; Istifci et al., 2011). Using visual communication technology to supplement communication for students with special needs has been found to be effective (Shane et al., 2012; Emerson & Bishop, 2012). For example, students with deaf-blindness were more able to engage in interpersonal communication by using videophone technology (Emerson & Bishop, 2012), and students with autism spectrum disorders had more success communicating when complex animations accompanied words (Shane et al., 2012).

Video games can have subjects that promote both antisocial and prosocial behavior depending on the content of the game (Hassan, Bègue & Bushman, 2012; Jin, 2011). Other than

the abuse of video games by extensively overplaying them, video games do not seem to have an inherently detrimental effect on social behavior. Although there is an assumption that video games must negatively impact adolescents (Möller & Krahe, 2009; May, 2011), research has shown that video games can be very beneficial (Clarke & Schoech, 1994; Griffiths, 2002; Greitemeyer & Osswald, 2011; Hollingworth & Woodward, 1993; Horn, Jones, & Hamlett, 1991; Jin, 2011; Kappes & Thompson, 1985; Masendorf, 1993; Okolo, 1992a; Okolo, 1992b; Wright, 2001).

Online communities can be a place with no empathy and plenty of indifference, but they can offer information on how to deal with bullies. Internet culture shows us information about dealing with negative emotions and how to ignore bullies, but it also teaches us to be more discerning when it comes to the intent of others.

Professionals in the school system can learn a lot from the changes technology has had on social behaviors. Ultimately there are positives and negatives to everything, but the changes brought by technology seem to be mostly beneficial. Resisting the change in communication mediums is futile. Instead we should strive to understand the changes and how to best deal with them.

Discussion

Technology will continue to advance, and given the recent changes in communication, face-to-face communication could continue to dwindle. If this is the case, it may become increasingly difficult for people to pick up on the meaning of body language and facial expression. On the other hand, if people are concerned about this happening, technologies promoting body language and facial comprehension skills could be created.

Technology seems to make things easier; abusing it is what causes a problem (Van Rooij et al., 2010). Adolescents might not know how much is too much, and they could unintentionally abuse their technology sources. Educating students on technology could solve this problem.

Recommendation for Further Research

More empirical research would benefit this social phenomenon. There does not seem to be a lot of research measuring a decrease in ability to differentiate body language and facial cues, nor is there much research on how this decrease would impact social interactions. In particular, using social media to communicate instead of human interaction may have had some effect on students. In the area of the online community, investigating the relationship between Internet trolls and bullies could provide useful information on how to decrease both real life bullying and cyberbullying. Learning more about how adolescent development is affected by technological learning enhancements could also prove useful in the school setting. Simply learning more about how changes in technology and communication directly affect schools could be beneficial. Potential changes in managing student interactions and student performance could be researched further. Lastly, researching the education level of adolescents on appropriate technological communication would help educators know what needed to be taught.

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