Media and Desensitization

Britney Hall

Psych 490

Pennsylvania State University

Every day people are sitting in front of televisions and consuming a massive amount of stimulation from whatever show or game they are engaging in at the time. Little does society question the effects this could have on our ability to feel and experience pure emotions from reality. Empathy, our greatest human connector, may be diminished when one is too often exposed to virtual stimulus. Instead of active engagement with others, one may find it easier to just connect with the overly expressive lives of their favorite characters. Mirror neurons make it possible for us to experience the same things as others do with just viewing the action, and that also goes for visuals of characters on screen as well. This connection to the virtual will lead to a sort of Supernormal Stimulus of true emotions that will exaggerate reality and replace it with our often more convent and pleasing viral counterparts. Simply put the more emotional excitement and connection television offers us, the less interest society may have in reality. This type of change can be backed up by evidence of aggression being increased by violent video games, as well as porn leading towards inability to perform in bed. Emotions are a vital part of how every human interacts with each other. In a world of constant media exposure, it is not just important, but necessary for individuals to study the effects of how media such as video games and movies effect our emotional sensations.

Empathy is our ability to understand and share the feelings of another. The importance of this emotion is that as humans we have a strong need to connect to each other in order to survive together. Our species is built on linking by creating communities in which we all emotionally connect to one another using empathy. Little do we think of how the loss of empathy can lead to destruction for us as a whole. If emotions could not be understood correctly or be felt at all, it would make it impossible for humans to band together to keep civilized society alive. Imagine if you will an office space. Let’s say your boss asks you to group up with a co-worker, let’s call

him Tim, to complete a big project. Tim is able to do his job just fine, but during the parts were collaboration is needed he shows no emotions. Unable to figure out what he's feeling it you end up misunderstanding how he is interpreting your work and grow frustrated to the point of being unable to produce respectable work. This is only increased when Tim is unable to understand your own emotions since he has little of his own. This can cause him to be confused and unable to continue doing his work properly as well. This could lead to both of you getting fired. Now put this on a larger scale and you have a society filled with frustrated and confused people absolutely unable to work together. Basically, we would be divided and probably be eaten by wildlife (Natures firing). Interestingly and thankfully empathy and pro social behavior actually increases as we age. "Older adults showed greater prosocial behavior due to the empathy induction than younger adults…. This suggests that in contexts relevant to socioemotional goals, older adults may be more motivated than younger adults to help others and state emotional empathy may be a potential mechanism for greater prosocial behavior in aging. (Beadle, 2015)" So there is hope for our empathetic communities for now, but research is starting to turn up everywhere to show that other things may be effecting our ability to feel these very important emotions. One of the biggest concerns is media, but first one must ask how do we feel empathy?

Mirror neurons have kind of been a hot topic in pop psychology for the last decade or so, but they play a big role in our ability to connect to others. Mirror neurons in the most basic understanding have a monkey see, monkey do, or in this case feel, effect. When a person views another showing a reaction by displaying strong physical symptoms, these neurons will allow the viewer to react or feel as though they too are experiencing the same emotions. A classic example of this how a baby will cry, and in turn any baby around them may quickly follow suit. With that in mind, one can also look into how this MNS (mirror neuron system) affects people on a virtual

level. One example of how this system can work even when we view things from a screen are sports. Even those who are not at the game will often jump for joy when their team scores as if they won the game themselves, or flinch when they witness a player takes a solid blow. On a daily basis audiences are being connected to the individuals on the screen by these mysterious Mirror neurons. These interesting neuron have been studied in relation to social cognition and learning, and although its role in empathy is contently being call into question, it is still being looked into widely today, and many still back up these theory of its connection. V.S. Ramachandran states in an interview article *"The other important thing I want to say is that mirror neurons are obviously the starting point for things like empathy, but that's all it is—I mean, you need much more. If mirror neurons are involved in things like empathy and language and all of that, then monkeys should be very good at these things. One of the things I argue, and others have argued, is that mirror neurons are important in transmitting skills from generation to generation. I need to put myself in your shoes to observe what you're doing, and to mime it accurately. Mirror neurons are important in that.(Jason Marsh, 2012).*" The importance of this concept of observational social learning by the MNS goes beyond just transmitting skills. It could indeed be possible to transmit emotions, and not just from face to face interactions, but through the media. The true influence of the MNS is that it allows us experience things we are only observing as if these things were real. It becomes hard for society to truly discriminate between real and artificial. In order to show why this could create a big influence on society though, one must look into the concept of supernormal stimuli.

Supernormal stimuli is a very interesting concept. This term is described by evolutionary biologists as "any stimulus that elicits a response stronger than the stimulus for which it evolved." To give an illustration of this that applies to society today, think about junk food. We

as humans started as a species that hunt and gathered all natural ingredients as a food source. As time went on we discovered artificial flavors. Now our culture is filled with fatty goodness and a large desire for sugary artificial sweets that generally over rides that of the all-natural products. This means the junk food has become a supernormal stimulus for our culture. Other small studies have been displayed this concept as well. Birds would feed a artificially created baby bird over its real babies if the baby bird had a louder cry. Peacocks would be attracted to a fake peacock with a large amount of feathers then a real peacock with an average amount (Ciotti, 2015). This is proof that even animals will have their reality domineered by a stronger stimulus, or supernormal stimulus, even if that stimulus was fake. Media in today's world is becoming a sort of supernormal depictions of our daily reality. Therefore, society experiences things through the medium of media that could never have been experience in real life (physical feats we're not capable of through video games, flying, breaking laws, sex with supermodels) or that we experience only rarely in real life (falling in love, seeing someone be killed). That being the case, the MNS, when intermingled with a supernormal stimulus such as media, might actually have a more powerful effect on us than our real-life experiences. So since super normal stimuli and MSN combined have this ability, my theory is that it can also do the same to our real emotions by having them domineered by the artificial emotions and empathy that mirror neurons allow us to feel for situations in media such as video games and television.

Video games are the most commonly examined case in which media has influenced human emotion and behavior. Many researches have done studies to test how video games can make children more desensitized to violence. One of the ones that is very well done is *"Comfortable Numb Desensitizing Effects of Media Violence on Helping Others"* by Bushman and Anderson. It demonstrated two studies that resulted in linking media violence to

desensitizing effects. In study one, they tested subjects by having them play a violent or nonviolent video game then staging a violent fight where someone hurt their ankle. Those that played the violent game took longer to react to the situation. Study two did a similar act but with violent or nonviolent movie goers, and instead of having the accident staged as a whole fight, it was an act of a person falling off of crutches. Again it took violent movie goers 26% longer to be willing to jump to the rescue (Bushman & Anderson, 2009). Clearly both of these results show high probability that violent media can cause a pretty significant gap in thinking empathy and prosocial and helpful habits. Another study showed acute desensitization linked to those after they played violent video games (Engelhardt, Bartholow, & Bushman, 2011). This shows to an even great extent how violent viewing can impact a person's emotional reaction to visuals. These examples show sound connections to the beginning signs of desensitization and violent media. With a larger amount of viewing it is unclear how far this loss could grow.

Pornography is a secondary example as to the effects of desensitization of reality due to artificial stimulation. This one may interest people more since it has been less widely studied. The basic premise of this is that when one views too much artificial or virtual sexual experiences, it can, for some, begin to get harder for them to perform in bed. Ciotti quotes in her article on supernormal stimuli *"As psychologist Susan Weinschenk explained in a 2009 article, the neurotransmitter dopamine does not cause people to experience pleasure, but rather causes a seeking behavior. "Dopamine causes us to want, desire, seek out, and search,."* Weinschenk worked with dopamine changes in addicts and Ciotto quoted her own article *"Dopamine Makes You Addicted To Seeking Information".* Another study named *Brain Networks during Free Viewing of Complex Erotic Movie: New Insights on Psychogenic Erectile Dysfunction*, looked into the minds of those who have ED and those who were perfectly healthy and studied there

reactions to porn as a stimulus. *"In summary our results showed that free viewing of erotic clip and ICA allowed the decomposition of the brain processes underlying normal and abnormal male sexual behaviour. The sexual behaviour is composed by autonomical, cognitive and emotional components that are thought to be related to a set of patients showed a decreased recognition of autonomical arousal changes as suggested by the decreased connectivity in the Insula and increased connectivity in the ACC.(Cera, 2014)."* I feel although this is not directly related to the research here, with more findings like these it could lead to furthering our understanding of how porn is influencing the effects ED. That being said there are physical things going on while one becomes addicted to things such as porn that can actually change ones perspective on reality and pleasure experiences.

To bring all these thoughts introduced to a conclusion, media has a powerful effect on society's emotional stimulation. With too much artificial simulation from things such as video games, television, and the internet, it is very possible to be desensitized to our tangible emotional stimuli. That being said this is a topic that from this point will require a wider range of study since it is fairly new and mysterious still. It is hard to truly say what can or should be done about these findings. Generally with these finding the best advice would be to say that everything is good, in proper moderation. Engaging with thrilling artificial stimuli such as what we see in games or television can be an amazing rush, but too much of it can clearly have effects, like desensitization, that we never even considered. Be aware of what people are viewing and how they view it, because you never know what is influencing you or how deeply, and knowing is as they say half the battle. Another thing to keep in mind is to vary your artificial experiences to a wider range of genres, because that will allow you to fulfil super stimulated emotional desires

without being too effected by one certain simulation such as violence or romance. You never know what emotions you lost, until you lose them.

Work Cited

• Anderson, C. A., Shibuya, A., Ihori, N., Swing, E. L., Bushman, B. J., Sakamoto, A., … Saleem, M. (2010). Violent video game effects on aggression, empathy, and prosocial behavior in Eastern and Western countries: A meta-analytic review. Psychological Bulletin, 136(2), 151–173. http://doi.org/http://dx.doi.org/10.1037/a0018251

This source uses Meta-analytic procedures in order to look at violent video games and how they can effect emotions such as aggression, arousal, prosocial behavior, and overall empathy. The researchers use many types of studies such as cross-cultural comparison and longitudinal. Results show weak cultural and sexually differences but the video games lead to a causal risk factor for aggressive thinking and behavior and decreased amounts of empathy and prosocial behavior. This is a very helpful source since it looks at many of the topics related to my paper as well as looking at many different types of research that leads to good solid conclusions.

• Beadle, J. N., Sheehan, A. H., Dahlben, B., & Gutchess, A. H. (2015). Aging, Empathy, and Prosociality. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 70(2), 213–222. http://doi.org/10.1093/geronb/gbt091

This study is a great look at empathy in general. It wants to discover how empathy is effected by age. It was a study on 24 younger and 24 older healthy male adults where they played a dictator game that simulated empathy choices. It found that older adults showed greater prosocial behavior than younger adults. By using this essay to better understand empathy it could be a great source to use as a gateway into talking about media.

• Bushman, B. J., & Anderson, C. A. (2009). Comfortably Numb Desensitizing Effects of Violent Media on Helping Others. Psychological Science, 20(3), 273–277. http://doi.org/10.1111/j.1467-9280.2009.02287.x

This way one of the experiments used in one of my other citations but it gives a more in-depth look at one example of violent media and empathy in the form of helping others. It had two studies about video games in it that lead to the conclusion that violent media makes people numb to pain and suffering. This finding relate well to my topic and will be great defense for my paper.

• Cera, N., Pierro, E. D., Ferretti, A., Tartaro, A., Romani, G. L., & Perrucci, M. G. (2014). Brain Networks during Free Viewing of Complex Erotic Movie: New Insights on Psychogenic

Erectile Dysfunction: e105336. PLoS One, 9(8). http://doi.org/http://dx.doi.org.ezaccess.libraries.psu.edu/10.1371/journal.pone.0105336

Wanting to get a different example of media effects this research looks at erectile dysfunction while viewing erotic movies. It is a bit complex with the language but in general that free viewing of erotic clips decomposes the brain processes underlying normal and abnormal male sexual behavior. Honestly because of its complexity it may not give me a large amount of information that I am able to use but its findings can give another good example of Media's effects on the brain.

- Corradini, A., & Antonietti, A. (2013). Mirror neurons and their function in cognitively understood empathy. Consciousness and Cognition, 22(3), 1152–1161. http://doi.org/10.1016/j.concog.2013.03.003

This journal give a good overall view of mirror neurons that I wish to explain about in the paper. These facts about the MNS will help example out connection to media and relationships as well as emotions such as empathy.

- Engelhardt, C. R., Bartholow, B. D., Kerr, G. T., & Bushman, B. J. (2011). This is your brain on violent video games: Neural desensitization to violence predicts increased aggression following violent video game exposure. Journal of Experimental Social Psychology, 47(5), 1033–1036. http://doi.org/10.1016/j.jesp.2011.03.027

This is another source used to show the connection between video games and violence. It compared violent and nonviolent Medias such as video game and pictures and measured brain activity. It showed a link to desensitization and aggression when exposed to violence. This will be a great example of media effects on the mind.

- Kilner, J. M., & Lemon, R. N. (2013). What We Know Currently about Mirror Neurons. Current Biology, 23(23), R1057–R1062. http://doi.org/10.1016/j.cub.2013.10.051

Another paper on the topic of mirror neurons that will allow me to get a better idea of what they are. In the other source about them they related them to empathy but this gives a more overall view of what we as a society have currently (up till 2013) know about these mysterious neurons.

This will really help me by giving me that well rounded current info on something that can change how we interpret media around us.

- Iacoboni, M. (2009). Imitation, Empathy, and Mirror Neurons. Annual Review of Psychology, 60(1), 653–670. http://doi.org/10.1146/annurev.psych.60.110707.163604

This source allows for a look into how Mirror Neurons are connected to imitation and empathy. It answers a lot of interesting and important questions about them which will help me easily relate them to my topic of media and how it can affect people even if it is just on a screen since it has power over the mind.

- Ciotti, Gregory. Supernormal Stimuli: This is Your Brain on Porn, Junk Food, and the Internet. (2015). Retrieved March 31, 2015, from http://www.sparringmind.com/supernormal-stimuli/

Although not a scholarly article this web page really gives an amazing overall view of the concept of supernormal stimuli. It cites all its facts, gives good quotes from professionals, and presents all of its information in a way everyday people can understand. The main reason I want to use this as a source is because it hits directly on the whole point of my paper and there is not much information on supernormal stimulus other than this. It is simple but very informative and creditable in my option.

- Gary Wilson. (2014, September 21). A cure for porn addicts who have lost that loving feeling; Young men are finding that addiction to hardcore videos is harming their physical ability to have real sex. Gary Wilson explains how science and online discussion groups are helping them to quit. The Sunday Times (London), p. 13.

This is also not a scholarly journal but a News article instead. I feel it is important to have a few different types of media source in order to get a more well-rounded view. This article will help me since it offers some information on the idea of porn addiction will give me a good example of how media is able to effect performance in bed. This will be a great example for my paper and they do mention a study which i will be able to look into more.

- Do Mirror Neurons Give Us Empathy? (2012). Retrieved April, 2015, from http://greatergood.berkeley.edu/article/item/do_mirror_neurons_give_empathy