



THE SCRIBLERIAN

Fall 2020 Edition

The Scriblerian is a publication sponsored by the SUU Writing Center. This online journal is the result of a competition organized by Writing Center tutors for ENGL 1010 and 2010, and General Education 1000 and 2000, students. The competition, which drew 35 entries, was planned and supervised by Chair Sydnee Atkinson and members Elliani Bailey, Sydney Beal, Taylor Huxley, and Shayli Morris.

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Argumentative- English 1010

1st Place Winner: Marianne Saunders, "Our People Are Suffering"

For Dr. Rosalyn Eves

For a long time, mental health has been pushed aside in the workplace (Renken). It's surprising that it hasn't been talked about more, given the fact that 71% of adults in the workplace have admitted to feeling at least one symptom of stress, which often leads to anxiety. (CDC) So many adults suffer, and most of them do so alone and away from society. This stems from many different reasons and are always unique to the individual. Mental health needs to become something people can talk about openly without judgement. Those who have an ongoing struggle with mental illness should be able to get the help they need, and not have work be a huge factor to their mental struggles. We will all struggle at some point in our lives. For some it's every day, for others it's only certain points in time, but when it all comes down to it, we all need the support from each other. Simply being alive is already stressful. There's a lot that goes into being stressed. Family, friends, and romantic relationships, to name a few, factor into the stressors of daily life. Let's try not to make work be a main factor one as well. Creating a safe space for all workers, no matter their status, will be beneficial to everyone.

Many mental health disorders, anxiety, depression, and ADHD being the most common, go unrecognized and untreated. Several people struggle, not knowing they can get help, or even why they're performing poorly. I'll give you the example of anxiety. Harvard Medical School says that "Anxiety disorders affect about 6% of the population at some point in life, but typically go undiagnosed for 5 to 10 years." It breaks my heart to think about all the people out there who struggle everyday and never know how to fix it or make it better. That's just anxiety too, there are several other mental illnesses that exist, and as I said before, go undiagnosed. Of those people are diagnosed, only one in three receives treatment for it (HMS). So even if they knew they had anxiety, only a few were able to really deal with it.

It manifests differently in everyone. Some find it hard to get a project done due to lack of motivation, another may find it hard to finish a project because they just can't seem to make it perfect. With everyone's symptoms being different, and with many of the symptoms overlapping, it's hard to pinpoint why someone may be feeling a certain way. There are people with chronic mental illnesses, and there are others with developed, seasonal, or situational illnesses. And they are just that: illnesses. They need to be treated as such. You don't tell someone who's having an asthma attack to "just breathe," so don't tell someone with depression to "just get out of bed."

This problem tends to be overlooked by many because people have become more skilled at hiding it around others. (HMS) It's not visual like a broken leg where you can look at them and see that they are in fact, injured. There has been a stigma around mental health that has been created by toxic masculinity (men don't have feelings), the need to always be okay, and the fear of being a burden on others. This stigma can be extremely detrimental to one that struggles with such a problem. The stigma can cause people to "mask" or hide their symptoms. This causes the situation to become worse and starts to negatively affect the person physically, affecting their body and how they function around the workplace.

Stressors from work, on top of existing mental illnesses tend lead to physical problems, which why companies would be smart to include mental health help in their benefit packages for their employees. According to Tara Parker-pope from the New York Times (para 3), "A number of studies have documented the health toll of workplace stress, showing that unhappy workers are at higher risk for heart problems and depression, among other things." There are people who already have health problems that they were present genetically, and having their mental health factor into their already existing health problems just make it worse.

The amount of lonely people is on the rise, and the workplace is everything but helpful to those who feel alone in this world. A report lead by health insurer Cigna found "a nearly 13% rise in loneliness since 2018, when the survey was first conducted." That is too many people. One person is too many people. Anxiety and depression have found to frequently be linked with loneliness. The stigma as stated before has caused many to isolate themselves from others who could potentially help (NAMI). Many jobholders go home to not much more than themselves. If they aren't feeling seen, they may have a decrease in motivation which in turn affects productivity. With a low productivity, you have a worker who's not doing a job well done or has only used half effort. (HLS) A domino effect is set off when a person starts to feel the effects of poor mental health. Instead of laying them off, employers should take care of their employees', and their own, mental health by giving them good mental health benefits in their package. Start at the source (Renken). There is a huge benefit to both the employees and the company to invest in a good environment around the office. The help of a good environment can go a long way when you're having a rough day, or a rough life.

Treatment is not a "one and done" thing. There has to be a constant to help the situation improve for the individual. Many people who receive treatment are put on medication that they have to take daily. Many others spend hours in therapy learning coping mechanisms and ways to handle the stress. According to the Harvard Medical School "The studies have found that when depression is adequately treated, companies reduce job-related accidents, sick days, and employee turnover, as well as improve the number of hours worked and employee productivity." It's a trade off that in the long run is beneficial to everyone. The CDC also reports many companies that benefit from taking care of their workers' mental health. The company benefits because they have workers who feel better and become more productive in their work. In return, the employees benefit from better mental health and they feel valued as an employee in the company.

So we know what our problem is, what can we really do if we aren't a boss that's in charge of benefit packages or such. Creating a good environment goes a long way. As an employee, you can make sure that there is trust built with those around the office and with the boss. Encourage those higher up to have mental health days accessible to those who may need them and take advantage of them. Suggest making working from home available to those who may not be able to get far enough to actually get to work, but always encourage a happy, healthy environment. Try to use brighter colors and inspiration quotes around the office, and asking how someone is doing will never hurt. Even if said person decides not to talk about what may be happening in their personal life, it will show that you care as a person in their life.

Harvard shares their own success story about making mental health help more affordable to randomized companies. Their results reported that many employees had a significant mood improvement and were more likely to stay in their job. They also found that there was an improvement in productivity that

caused a rise in pay due to extra hours worked. The researchers are conducting more research on how to improve the access to mental health and to make it more accessible. In the end, they had happier, healthier employees that were more productive. It's in the companies' best interest to take care of their employee's overall health, and that includes their mental health. Make mental health care accessible and available and you'll create faithful, productive employees.

In the end, everyone benefits. Our employees who could've been struggling for years will find it easier to work in a place that takes care of them in all aspects of life. They have higher, more quality effort put into their work. They feel better and more valued as an employee, and they've built up trust with the coworkers around them. On the companies' side they have happier employees that have fewer health problems because the company took the time to take care of their workers, in the end, it's a job well done.

Works Cited

"How to Support Mental Health at Work." Mental Health Foundation, 10 Aug. 2020,
www.mentalhealth.org.uk/publications/how-support-mental-health-work.

"Mental Health in the Workplace." Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 10 Apr. 2019,
www.cdc.gov/workplacehealthpromotion/tools-resources/workplace-health/mental-health/index.html.

Parker-pope, Tara. "Time to Review Workplace Reviews?" The New York Times, The New York Times, 17 May 2010,
well.blogs.nytimes.com/2010/05/17/time-to-review-workplace-reviews/?searchResultPosition=15.

Publishing, Harvard Health. "Mental Health Problems in the Workplace." Harvard Health,
www.health.harvard.edu/newsletter_article/mental-health-problems-in-the-workplace

Renken, Elena. "Most Americans Are Lonely, And Our Workplace Culture May Not Be Helping." NPR, NPR, 23 Jan. 2020,
www.npr.org/sections/health-shots/2020/01/23/798676465/most-americans-are-lonely-and-our-workplace-culture-may-not-be-helping.

"Why Employers Need To Talk About Mental Illness In The Workplace." NAMI Your Affiliate Blue Transparent,
namipierce.org/why-employers-need-to-talk-about-mental-illness-in-the-workplace/.

2nd Place Winner: Elsie Schut, "There's No Shame in Taking a Nap"

For Professor Natalie Johansen

It's Monday afternoon and you just finished your lunch break, now it's time to start the long haul to the end of your nine to five. You reflect back to the night before when you laid in your bed watching movies all night rather than sleeping; now you wish more than ever that you had just gone to bed. You wonder to yourself, is it even worth it to slip away and take a nap, or will that just make me feel more tired? As you wonder this, you half spiritedly finish your work and drag yourself home just to repeat the previous night's activities. The mid-day slump is a weekly, if not daily affliction we all suffer from, and the question remains, will a nap fix this daunting ordeal? Fortunately, statistics say yes! NASA conducted an experiment where they allowed their cockpit pilots to take a 40 minute nap during flight time. They found that by letting them do this, their performance increased by 34% and their alertness increased by 100%. These results are reason enough to understand that napping has many long term benefits, making it completely worth while. Many people think that taking a nap can cause nothing but harm. They see it as a weakness that needs to be overcome in order to work more efficiently. So many people have told us that it isn't good for us, or that it will make us look lazy and unaccomplished. This is most certainly not the case. Along with a few conditions, taking a short daytime snooze can in fact improve your productivity and increase neural activity. By allowing ourselves just a couple of minutes out of our day to sleep, our brain is able to improve a large variety of modalities, making it easier for us to perform tasks and allows us to focus more intently on the situation at hand.

In order to fully recognize exactly what it is that makes napping so productive, let's first understand what happens or what could be happening before you take that nap. Your brain has thousands of different impulses and ideas that are being processed by the millisecond, all in different areas of the psyche. When you don't get enough sleep, your brain has to devote more time and more attention to doing the little, mundane tasks that are second nature to the human body. It becomes even more difficult to get up and find motivation to accomplish tasks because just the idea of scratching some responsibilities off of our to-do list is far too exhausting for us to comprehend. Because of this, focusing when you are sleep deprived is very difficult and takes way more energy. When you are already tired it is just going to get worse making you feel even more worn out. In an article titled, "The Science Behind What Naps Do For Your Brain-- And Why You Should Have One Today" written by Belle Beth Cooper it says, "Once we start to lose focus and have received the right amount of sleep, our brain can compensate for that and increase attention. If we are sleep deprived, our brain can't refocus." When we can't refocus then the work we have to do becomes even more boring and it's even harder to find motivation to get done. Not getting enough sleep can affect so many parts of our lives and can directly influence loss of productivity.

Another variable that loss of sleep affects is something our bodies have called a circadian rhythm, which in short is our body's natural clock. It is what produces the feeling of being tired, hungry, and even influences body temperature. It's our brain signaling to the rest of our body what it needs at exactly the time that it's used to receiving that stimulus. In a textbook called Exploring Psychology written by David G. Myers, it says, "Have you ever pulled an all-nighter? Perhaps you recall feeling groggier in the middle of the night but with a sense of new alertness with the arrival of your normal wake-up time." As it says, because of that circadian rhythm if we do not receive the correct amount of sleep we will still be able to

feel awake and ready in the morning, however as the day drags on we will eventually feel the outcome of not getting an adequate amount of rest. So, it is highly suggested that we maintain a regular sleeping schedule. By doing this, our brains can independently function correctly and allow us to feel that continual motivation and focus that we so desperately need to carry us throughout the day.

Along with being able to focus, there are so many other health advantages to resting during the day that have been proven. One that not many people know about is it can actually help sustain heart health throughout your lifespan. One journal demonstrated this in a writing called, "Autonomic Activity During a Daytime Nap Facilitates Working Memory Improvement" written by Pin-Chun Chen. It talks about how the parasympathetic system improves immensely when you are properly rested. They conducted a test where they would measure the test subjects heart rates after a day of hard work. Some subjects were able to take some time to sleep for a short period of time while others didn't receive that same opportunity. After this, they discovered that those that were able to sleep had slower heart rates compared to those that didn't. Having a lower heart rate for a prolonged amount of time can help reduce the risk of cardiac arrest throughout our lifetime. Now, from this perspective, it's hard not to give in to mid-day drowsiness. Our heart is the literal lifeblood of our existence and if napping can improve that, then why not give it a go. However, on top of an improvement in heart health, there's still so much more that can be improved! "Apart from reducing sleepiness, mid-day naps offer benefits such as memory consolidation, better learning, better tasks performance, as well as improved emotional processing." Says Viatcheslav Wlassoff in their article, "Daytime Naps, Productivity, and Brain Functions." In this quote, the author provides an excellent summary of the many refinements that can take place when you decide to take a nap. By listening to Wlassoff, you could change your outlook on life immensely. So many areas of your brain and body are affected by sleep making it imperative that we allow ourselves enough time to reset, or we could suffer the consequences.

One major area that sleep impacts is our mind being able to process the day's memories better when it is well rested. When we give our brain time to reset and recharge during the sleeping process, we allow our brain to move the day's memories to long term memory storage. This makes it easier for us to remember and memorize items from our past as well as in our future. Our neural pathways are able to be exercised and embedded further into our cerebral cortex and other areas of the brain. This permits us to create more habits and enhance our ability to recall those memories from the past. By transferring our current memory store to long term, we make room for new memories and new thoughts to take place. This sharpens our minds because it leaves space for new knowledge which increases our intelligence immensely. By restoring our memory cache from day-to-day, we are able to recollect previous experiences and create new pathways that can make us even smarter than we were before.

Additionally to an increase in memory, emotions can become far easier to handle. This occurs because we are able to think more level headedly due to proper functioning of the brain. A main part that controls this is called the frontal lobe, which is in charge of decision making and judgement. When this region is not firing properly it makes it harder to rashly judge a situation. When you miscalculate your environment you could produce the wrong emotion which could make you end up in a situation you don't want to be in. In short, without sleep your emotions will be far out of balance, making you seem grumpy and possibly even unpleasant or ill-mannered to others. This can affect the social aspect of your life tremendously and could ruin a lot of chances for your professional and entertainment facets of life. Your brain has a lot of tasks, so make sure to rest it properly so it can manage your feelings and perceptions efficiently.

Now, memory, emotions, and richer educational experiences can only become available to you if you observe a few conditions that need to take place. The most important one is making sure your nap is no longer than 15-90 minutes long. Markham Heid from Time Magazine states in one of his articles, "Research shows a nap—defined as daytime sleeping that lasts between 15 and 90 minutes—can improve brain functions ranging from memory to focus and creativity... More research shows a quick nap can lower stress and recharge your willpower." If your nap happens to be longer than the aforementioned interval, then those benefits will not be quite as useful and could throw off your entire sleeping schedule. When you fall asleep your consciousness goes through what is called sleep cycles. The last level of this is called REM sleep which you reach about four times per night. When you go through this before you are fully ready for a good night's sleep, then you will negatively affect how you actually fall asleep the following night. In Belle Beth Cooper's article she says, "There is no benefit to napping longer than 90 minutes, because you will only begin another sleep cycle. Further, if you take a snooze too late in the day, it will contain too much slow-wave sleep." So, by taking a long nap you are only going to receive problems. Another point she hit right on the head was not taking a nap too late in the day. Sometimes it may seem tempting to just sleep for a little while after dinner or after you get back from work, but it is not going to help you. A really great rule of thumb is to sleep no later than 5:00 PM. Once it gets to about that point then just wait until you go to bed that evening, and even better go to bed early. By going to bed early you will be well rested the next day, so much so that you might not even need a nap the ensuing day.

For some, sleeping during the day is near impossible to accomplish. However, some days you are tired enough that you still want to sleep. When that occurs, you don't need to worry because Belle Beth Cooper has our backs with some great tips. The two most notable are first of all, figure out how long it takes for you to fall asleep. By doing this you can leave time for you to fall asleep before you start your timer or alarm for you to wake up so that you will be able to sleep your full allotted time. One thing that not many know is that genetics actually play a role in your napping abilities. So, if this is the case for you and it seems out of your DNA to achieve this, the last pointer she gave is to practice, as silly as that sounds. Your body can develop a habit over time just as long as you remain patient with yourself and recognize that breaking your routine will take time. Don't discount it until you give it a full hearted try, you never know what kinds of things could change in your life.

In conclusion, despite what many think, napping is actually great for our health. It can help with overall well-being, memory retention, emotional responses, and so many more aspects of our lives. Pierre Maquet encapsulates this in a study he wrote about in an article called, "Be Caught Napping; You're Doing More Than Resting Your Eyes" by running an experiment where he would teach something to the test's subjects multiple times daily. One group would have time to sleep both at night and during the day, while the other group would just sleep at night. At the end, they compared the two groups and discovered that those that were able to nap performed better in all applicable areas of testing. This proves that by just taking a minute to rest your brain and allowing it to reboot, you will be able to accomplish so much more and do much better in your waking life. Further, by making sure that your nap is a short interval of time and not too late in the day you will be able to be so much more productive and feel way more refreshed upon waking up. Our brains need rest and when you deprive it of that substance you will find achieving daily tasks is much harder than it should be. When this occurs, simply take a nap rather than completely diminishing its energy on a daily basis. Your brain will thank you so

much for allowing it to reenergize during the day when you need it most. So, don't be afraid to sleep during the day, you will find that it really is helpful and can truly improve your brain activity in ways that you could never imagine.

Works Cited:

- Chen, Pin-Chun, et al. "Autonomic Activity During A Daytime Nap Facilitates Working Memory Improvement." *Journal of Cognitive Neuroscience*, vol. 32, no. 1, Oct. 2020, Academic Search Ultimate, doi: 10.1162/jocn_a_01588.
- Cooper, Belle Beth. "The Science Behind What Naps Do For Your Brain-And Why You Should Have One Today." *Fast Company*, 16 Sep. 2013, www.fastcompany.com/3017356/the-revealing-science-behind-what-naps-do-to-your-brain-and-why-you-should-have-o. Accessed 23 Oct. 2020.
- Heid, Markham. "You Asked: Is It Good or Bad to Take a Nap?" *Time Magazine*, 1 Oct. 2014, time.com/3449959/is-napping-healthy/. Accessed 23 Oct. 2020
- Maquet, Pierre, et al. "Be Caught Napping: You're Doing More Than Resting Your Eyes." *Nature Neuroscience*, vol. 5, no. 7, Jul. 2002, p.2. Academic Search Ultimate, doi: 10.1038/nn0702-618.
- Myers, David G., and C. Nathan DeWall. *Exploring Psychology*. 11th ed., Worth Publishing, 2019.
- Rakicevic, Mira. "29 Astonishing Napping Statistics and Facts to Think About." *Disturbmenot!*. 13 Jan. 2020, www.disturbmenot.co/napping-statistics/. Accessed 21 Nov. 2020.
- Wlassoff, Viatcheslav. "Daytime Naps, Productivity, and Brain Functions." *BrainBlogger*. 13 Jan. 2018, www.brainblogger.com/2018/01/31/daytime-nap-productivity-and-brain-functions/. Accessed 23 Oct. 2020.

Expressive- English 1010

1st Place Winner: Abril Vale-Luzardo, "Journey with a New Language"

For Dr. Rosalyn Eves

Why do we even have to worry about the correct use of the word whom? Some people don't even use it. That was the question I had to ask myself everyday for more than two years when I was trying to learn English. That journey felt like an extreme roller coaster. I thought I just needed to know how to conjugate verbs in Spanish, I never had to worry about "ing" or "ed." It felt like I was being released in the desert without a map. It felt like swimming yet there was no water.

It was mid April and I had been walking every day through the same hallway that would lead me to "the room." I was thirteen years old. I remember summer was always present outside, but that room felt like nothing could make it warm. Eternal winter. Some days I would spend hours inside the bathroom just to get away from that room. I felt exhausted. Its walls had a brown color that did not match the yellow old chairs around the only table that could fit in that room. Having always my heart in my throat, I would not stop hearing the frustration in the back of my mind. It felt like thousands of bees would fly around my ears. It made me feel alone. The reason I felt that room so cold was because it was not home. It reminded me of an obstacle that at that time I thought it would be impossible to overcome: learning English. But there was something that had the power to produce some heat inside those walls. It was unique. It was the students. Those who could not speak English sat around me, and they came from all over the world: Russia, Cuba, Puerto Rico, Mexico, etc. We were there to learn. I felt safe. For the first time, the bright sun was able to walk through the doors of that room.

One day, we all walked inside a library, being able to smell the words that each book whispered to me. It sounded like something I never heard before, and it made sense, I still couldn't speak English completely, therefore, I couldn't understand those whispers. I remember seeing a dark old brown shelf. It had the Harry Potter series and for some reason I wanted to read those books in one sitting. They represented a challenge for me, they represented something I could control, which is why I had this fervent desire to *magically* read them. I looked at my teacher, Mrs. Hunt. She was wearing a long pastel blue skirt and a white shirt, her hair looked like a fresh morning during spring. Her smile removed all my problems. She was wearing a little pin saying "You Can Do This." From all of the sudden I hear her voice saying: "Please pick a book that you really like, you'll be reading it during your free time." Without hesitation I grabbed the biggest one of the Harry Potter series.

The next day I started reading the book. The only thing I understood was the title, and that's because I used Google translator. I was shocked, I was so excited to read, but I just couldn't put the words together. I think Mrs. Hunt felt my frustration since at one point she said: "I know it might not be easy, but no one said it was impossible." I understood her words while looking at her eyes. I decided to work hard. Everything I would watch on TV had subtitles in English. I spent hours watching the same Disney movies and taking note of those words I didn't know and wanted to use in a sentence. Later on I understood that "Bibbidi-Bobbidi-Boo" was not an actual word I could use. Some days I would feel trapped inside my room with white walls, but without being able to give color to those walls because I didn't have my own words to paint it with. Some other days I felt like the sky was not even the limit. In five months, I was

capable of creating solid sentences. In seven months I was able to change the language of my phone from Spanish to English. In nine months I was able to write paragraphs. And in one year I wrote my first poem dedicated to my country, Venezuela. I found the beauty of a new language thanks to those late night studying and trying to correctly pronounce words while having the Harry Potter series waiting for me to read them.

Having this class will allow me to express myself without any barriers, which is something I appreciate. My goal for this class is to learn from other people and read new perspectives. Having the capacity to read from others while learning from their perspectives will allow me to analyze certain texts closely and carefully. I want to become a flexible, and spontaneous writer while using my imagination to write descriptions, stories, and future narratives. From this class, I want to truly help myself understand that not all my writing has to be perfect at the beginning.

Argumentative- English 2010

1st Place Winner (Tie): Heather Durfee, "Fostering Human-Wildlife Interactions within the USA's National Parks"

For Professor Natalie Johansen

National Parks. Places of beauty. Places of mystery. Places dominated by the natural world. Every year millions of people visit national parks in the United States, so they can have one on one experiences with a world that has all but disappeared in our societies. Every park is unique, each exhibiting different natural elements that draw people into their protected lands, from the exploding geysers of Yellowstone, to the splendid natural formations of Arches, to the roaring waterfalls of Yosemite. But one thing that all national parks have in common is the life forces that they support, specifically the furry, feathery, or scaly creatures that roam free in their natural environment. According to David Newsome and Kate Rodgers, university professors that specialize in environmental studies, "there is frequently a deep need within humans to be in contact with animals... In addition, there is the ever-increasing interest in viewing animals in the wild" (255). That "deep need" we feel to connect with animals in their natural habitat is one reason people are drawn to national parks. Due to the ever-increasing number of park visitors, the wildlife within has become habituated to human presence, making it possible for people to view wildlife along roadsides and within park infrastructure. Wildlife habituation within national parks has an overwhelmingly positive effect on people and animal welfare when park policies are obeyed. These positives include opening food sources, providing protection, and allowing for energy conservation for animals, and for people it allows them to build connections with wildlife, support conservation and education efforts, and stimulates the economy in gateway communities around parks. Despite habituation's colored history in parks, due to its association with food conditioning and concerns some have for its negative effects, the USA's national parks should continue to allow for wildlife habituation within their borders.

Before discussing why wildlife habituation is positive within national parks, it is important to understand what habituation is. Kerry Gunther, et al. explains in a study done on managing human habituated bears that habituation is the behavioral expression of an animal's adaptability to human exposure. As animals are repeatedly and frequently exposed to people, they learn to stop responding to their presence ("Managing" 374). Simply put, habituation is the animal's response to visitors frequenting their habitat. Similarly, Wildlife specialists, Stephen Herrero, et al., in their study on the safety, risks, and benefits of bear habituation states, "Habituation ... will occur to the extent that the benefits of not reacting outweigh the perceived risks (costs). After repeated exposure to humans, [animal]-to-human habituation occurs" (363). In other words, when nothing happens to the animal after each exposure it loses its fear response to people and begins to ignore them. That is why park visitors can get out of their cars and view wildlife along the roadsides without spooking them. Habituation becomes the animal's technique for survival.

Although habituation seen in national parks today is caused by animals adapting to their continuous exposure to humans, that wasn't always the only reason habituation occurred. In the past, food-conditioning was the biggest cause of human-animal habituation. Food-conditioning occurs when

an animal is given access to human food, either intentionally or unintentionally. Newsome and Rodgers study further expounds, "intentional feeding is where tourists provide food informally for wildlife or under supervised conditions. Accidental feeding involves the wildlife acquiring food from disposal areas, discarded food wastes, or by stealing directly from the tourist's themselves" (256-57). Regardless, both intentional and unintentional feeding causes animals to lose their fear response to humans. They then begin to see people as a food source which leads animals to behave aggressively towards people. Both types of feeding were prevalent within many national parks in the past. Because both processes cause animals to lose their fear response to people, food-conditioning and habituation were often confused with each other, but they are not the same thing. Gunther, et al., affirms that these conditions were first thought to be identical because of earlier studies that showed habituation and food conditioning coinciding with each other. However, they further point out that the process of food-conditioning an animal is "an entirely opposite learning process" to habituation ("Managing" 374). Habituation is caused by neutral interactions. Food-conditioning is caused by reward. In summary, the food conditioning process that was constantly used by parks in the past, led to similar results as habituation, causing the animals to adapt to people but in an unfavorable way.

Furthermore, park managers used the food-conditioned habituation to enhance wildlife viewing and visitor satisfaction within national parks. Professors Alistair Bath and Jody Enck who specialize in wildlife management, mention in their article about wildlife human interactions that national parks used to be viewed more as "wildlife zoos" than as "wild ecosystems" (4). Parks were treated as large petting zoos where people would go, expecting to feed and interact with wild animals. Newsome and Rodgers endorse this idea when they claim, "historically the feeding of wildlife has been common practice in the Northern Hemisphere where many wildlife agencies and conservation groups actively promote wildlife feeding as an important role in conserving wildlife" (264). However, issues arose with this conservation method. It was discovered that food conditioning tended to cause aggression in bears and other animals towards humans. The safety of park visitors and the safety of wildlife were both at risk. A change was needed in park management policies to fix the issues.

Much of this needed change came from Yellowstone National Park, one of the biggest, oldest parks in America. Yellowstone's history is saturated with food-conditioned habituation, especially within their bear populations. Accordingly, they were one of the first parks to make a change in their management policies concerning the way visitors interacted with wildlife, leading them to become an essential part of study on this topic. Because of that, it is important to understand Yellowstone's management history. Gunther, et al.'s study illustrates the circumstances that led up to Yellowstone's most recent and effective management policies. In the 1920's, bear jams, or traffic jams that occurred from bears on the roadside, were a common occurrence along Yellowstone's roads. These bears were there seeking and receiving handouts from visitors. As bears became food conditioned, they began to cause property damage, attack visitors, and were often hit by cars. Feeding practices persisted until the 1970's when the park implemented a new management plan to keep bears and other wildlife from obtaining human food. This included, not only prohibiting visitors from feeding animals within park boundaries, but also closing garbage dumps in the park, using bear-resistant trash cans, and requiring visitors to use bear resistant ways of storing their food. Gunther, et al. continues explaining that by 1979, the issue of feeding wildlife was all but resolved with the animals that persisted in trying to obtain human food being removed from the park. Bear jams disappeared for a time before resurfacing in the early 1980's, but for a different reason. People would stop to view bears that were foraging for food along roadsides causing them to

habituate to people. At first, park rangers worried that food conditioning and bear human conflicts would arise again, so this behavior wasn't tolerated. Bears found on the roadside were subjected to negative conditioning processes in the form of hazing (shooting at them with rubber bullets, bean bag rounds, or cracker shells) to chase them off and discourage them from using these habitats, however this wasn't very effective. So, in 1990 another new management plan came about that focused on managing visitor's behavior rather than bears. When bears were found foraging by roads, a ranger would be dispatched to manage the visitors that stopped to view wildlife to ensure that they were following the park rules for wildlife viewing. Gunther, et al. conclude that as this continued, the negative effects that had occurred with food conditioned animals never resurfaced in these animals ("Managing" 376-78). This history illustrates that the habituation of wildlife to people alone was not the problem. The problem came when food conditioning was a part of the habituation process. Due to this realization, national parks across America changed their management plans to match what Yellowstone had done.

Today, all national parks in the United States have adopted similar management plans to that of Yellowstone's to help keep wildlife habituation positive. General policies or guidelines for all national parks, found on the National Park Service's (also referred to as NPS) website, include keeping a safe distance from wildlife visitors encounter, not disturbing wildlife by approaching them, harassing them, leaving designated trails, or attempting to attract them, ensuring that food and trash are stored in a way that wildlife cannot get into it, driving responsibly on park roads, and contacting rangers if a visitor see's someone breaking the rules or if they come across animals that are acting strangely, that approach them, or that are dead ("Safely Watch Wildlife"). In addition, each individual park has their own policies in place that coincide with the general park policies listed above. Take distance regulations for example also found on the NPS website; Glacier National Park requires that visitors to stay 75 feet away from any animals in the park and 300 feet away from bears and wolves (Wildlife Safety), and likewise Zion's National Park requires a distance of 50 feet from small mammals and 100 feet from all other wildlife (Wildlife Viewing Safety). Following these policies is essential to keeping habituation positive within national parks. Plus, some park policies are not just against park rules, they are against the law. Bath and Enck note that, although park management is given liberal amounts of freedom when it comes to choosing their management plans and efforts, there are a couple of laws that they must follow. In 1964, the Wilderness Act was passed which states that federal land managers including those of national parks are to minimize the effects that humans have on animals in wilderness areas. Then in 1973, the Endangered Species Act came into law allowing parks to be actively engaged in recovering and protecting animal species, within their borders, that are being threatened with extinction (2). All these guidelines, policies, and laws allow for habituation while protecting visitors and ensuring that wildlife within these parks do not just survive but thrive.

Under current management programs in national parks, habituation has had immense success with creating positive human-wildlife interactions despite a few negative effects it was thought to have on wildlife and human welfare. First off, rangers worried that when animals stopped fleeing, visitors would respond by acting irresponsibly and feeding wildlife. This was particularly worrisome when it came to predatory animals who often become aggressive when food conditioned. Their worry was warranted by the fact that, yes, this is sometimes the case. Although national parks have moved significantly away from feeding practices, occasionally, people still feed animals that approach them, reinventing food conditioning into parks. Food-conditioning then leads parks to have to relocate or destroy problem animals when hazing methods fail to decondition them. Most if not all parks use relocation as a solution

before using euthanization. According to Gunther, et al. in another study conducted on habituated grizzly bears, habituation tends to be site specific (“Habituated “ 34) so the hope is that relocating a problem animal will cause it to resort back to its natural behavior. However, this is not always effective, because it is nearly impossible to decondition animals from using human food sources. When that is the case, the only options left is to send the animal to a zoo or reserve to live in captivity the rest of its life or to destroy them. An example of this occurred in May 2020 at Yellowstone National Park with a wolf. As reported by National Parks Traveler, it was discovered by rangers, after getting multiple reports of the wolf acting unnaturally, that the animal had become food conditioned. The evidence of this included the wolf chasing bikers and approaching people and cars. After hazing methods did not work to deter the wolf, rangers had no choice but to destroy it (Repanshek). It never determined in the article how the wolf became food conditioned, but it is safe to assume that, with park management as it is today, a visitor chose to ignore the rules. In the end, it becomes apparent that, for habituation to be positive with national parks, visitors must respect park policies.

In continuing to address the issue of altering an animal's fear response to people, another negative behavior it may promote is visitors approaching wild animals they believe to be tame. In an article by traveling journalist Ali Wunderman, whose work focuses on wildlife, she asserts that the psychological need we have to connect with wildlife, as mentioned before, leads us to want more than to just see them. It drives people to approach and pet the wildlife they view; despite warnings they are given about the dangers. That natural pull clouds judgement, leading people to believe they are the exception to the rule. Wunderman confirms this when she says, “Many of us are pretty good at reading rules and regulations as applying to everyone but ourselves” (Wunderman). When people visit national parks and discover that the animals will tolerate them, it can lead to animal harassment by visitors. Harassment includes any activities that disturbs, stresses, or excites animals, which means that simply approaching an animal too closely is considered harassment. Animal and communication research group, Abrams, et al., point out in a study on communication in national parks that when park visitors view habituated animals, they tend to forget that they are wild. (255) They infringe on the animal's personal space and when they get too close the animal reacts. That reaction can cause injury to both the animal trying to get away or to the person who may be attacked for being too close. This illustrates, again that for habituation to be positive, park policy must be adhered to.

To remedy the behavior of visitors approaching wildlife, national parks implement and enforce their rules for wildlife viewing by dispatching rangers to monitor animal jams that occur and through signage posted throughout the park. In Abrams, et al.'s study they viewed the results of a communication campaign that took place in 4 different national parks in the U.S. testing different signage and ways to communicate to visitors effectively. They found that signage was the most effective and preferable way of communicating with the thousands of visitors that utilize these protected lands. (298) Using signage throughout a park to educate park visitors on wildlife management, allows people to take responsibility for their own education while interacting with wildlife. Plus, people often respond better when they read the rules for themselves rather than having to be told face to face what to do. It gives them a chance to take pride in their part of helping wildlife, choose to follow guidelines, and support habituation.

Moreover, signage and park rangers are not only used for correcting visitor's immediate interactions with wildlife. It is also used when addressing animal-vehicle collision risks due to wildlife's expansion into roadside habitats. As animals adapt to human presence it allows them to utilize roadside habitats, putting them at higher risk of being struck by vehicles. However, the heart of this issue seems to lie, not

on the animals use of these habitats, but on visitor's actions. Many choose not to adhere to speed limits posted throughout the park or drive too fast through areas of high traffic congestion where animal viewing is taking place, leading to devastating consequences. In a news article from USA Today, written by environmental reporter Trevor Hughes, it is reported that rangers in national parks attribute speed to be the biggest reason for animal-vehicle collisions. Due to the risk and abundance of speeding, rangers are diligent in trying to remedy this problem by posting speed limits and enforcing that limit throughout the park. They also post warning signs to remind visitors to watch for wildlife on the road but are frequently met with the issue of these signs being stolen by visitors as souvenirs. Hughes also introduces us to some of what Yosemite National Park is doing to try to promote awareness. Yosemite has used souvenir items like t-shirts and mugs that say "Speeding Kills Bears" to help educate visitors to the risks, but despite these efforts people still drive irresponsibly. Strategies on how to solve the issue of vehicle-animal collisions have been discussed, such as building over and underpasses next to roadside pull outs used for wildlife viewing or using shuttle bus transportation for visitors rather than allowing use of private vehicles (Hughes). However, none of these ideas have yet to be implemented so there is no way of knowing their effectiveness. In short, when considering the information Hughes discloses, it becomes clear that the best solution is responsible driving within parks. The fault does not appear to lie in wildlife mistakes or in poor park policy, but in the gap between policy enforcement and visitor compliance to park rules. Changes in that area would lead to a decrease in the mortality rate of animals caused by vehicles and support habituation practices.

In addition to the animals' adaption to human presence moving them closer to roadsides, they also expand into other areas of high human activity such as park infrastructure or public and private property outside of the park. When this happens, it is possible for property damage to occur in those areas. After all, the animals are not confined to park boundaries and may choose to leave and feed on flower beds, gardens, and lawns in residential areas nearby. This, however, seems to be a small price to pay when considering the economic effects park visitation has on gateway communities around national parks. These communities are stimulated by the income they receive from providing goods and services for park visitors. Kerry Gunther, et al. found that wildlife viewing in Yellowstone National Park and Grand Teton National Park "contributes millions of dollars to the local economies of gateway communities" ("Habituated" 35). In the end, it seems that property damage is a small price for community members to pay when their lively hood is determined by the presence of habituated animals in the nearby national park.

Although, all these negative aspects of habituation are present in national parks, it has been found that they aren't as impactful as they were first thought to be. In Kerry Gunther, et al.'s study regarding Yellowstone it was discovered that most of these issues have remained low or even decreased since they have reverted to new management policies. They explain that since 1990, the park has seen over 14,000 bear jams along roadsides, yet bear-caused property damage, bear attacks throughout the park, bear removal, and bear deaths due to bear-vehicle collisions have not increased. In fact, in some cases they have decreased in comparison to the decades before when the park didn't tolerate wildlife habituation. Keep in mind too that all of this has occurred simultaneously with increased visitation and growing bear populations. Gunther, et al. concludes by saying, "thus, the concern that tolerating habituated bears along roadways would lead to increases in human-bear conflicts was unfounded. ("Managing" 379) Although these results are looking specifically at a single species, bears, it is likely that the same thing could be seen in other species of wildlife that live in Yellowstone and in other national parks. Overall,

with these results, it is hard not to see habituation as an overall positive behavior for national park wildlife.

In concurrence with habituation being a favorable behavior in park wildlife, is the positive effects that it has on both animal and human welfare, beginning with expanding animal habitats. As mentioned previously, animals who lose their fear response to people can access areas of high human traffic. This opens untapped food sources and habitat for wildlife along roadsides and within park infrastructure. Herrero, et al. acknowledges that opening these resources increases the carrying capacity of the land, resulting in a rise in animal populations because they have use of more resources (367). For example, there are elk herds in Yellowstone National Park that congregate in the infrastructural areas near Mammoth Hot Springs. There, they can graze freely within dense human populations, boosting the population of elk in the park. Essentially, more resources mean more animals which leads to increased visitor satisfaction. Visitor satisfaction then plays into parks seeing more visitation and more funds that they can put towards conservation, education, park maintenance, etc. Overall, allowing animals to habituate allows them to expand into habitats with high human activity and enhances wildlife viewing.

Another positive aspect of habituation for wildlife is protection from threats. According to Gunther, et al., park policies state that bears and other predators are not permitted inside park infrastructure and are hazed out by rangers ("Managing" 380). This allows deer, elk, and other prey animals to enjoy a predator-free zone within the park. Furthermore, protection is not limited to prey animals, it can also be extended to predatory animals like bears as mentioned by Herrero, et al. when they explain the following. Some bears use human presence to protect them against other bears that may be harmful to them. This is especially common for mama bears who will sometimes stash their cubs near roadways, to protect them from falling prey to adult male bears that typically avoid roadside habitats. It is believed that weaker bears tend to become habituated to people and use roadside habitats more so than stronger, dominant bears do. This is because dominant bears gain access to prime territory by chasing off other bears and are more likely to choose habitats away from human activity (Herrero, 368). As a result, dominant bears choose not to adapt because their survival does not depend on it. Bears left without a home must then learn to adapt to human presence. Then the last source of protection parks offer animals is from hunters. Hunting is strictly prohibited within national parks. But wait. What if habituated animals leave park boundaries? Outside of the park they are exposed to hunting and if they have lost their fear of people, they become easy targets for hunters leading to unfair hunting. Although this is a legitimate concern, it was also found in Herrero, et al.'s study that allowing people to safely view animals in parks leads to them becoming more sympathetic towards wildlife and cause more areas to become hunting free zones (368). More hunting free zones means more protection for animals in and out of national parks. So, although it does present concerns, the animals are overall better protected by habituation in national parks than they are negatively affected by it.

In addition to habituation allowing protection to animals in parks, it also allows for energy conservation. Gunther, et al., claims that "under certain circumstances habituation can actually improve the fitness of bears by reducing energy expended in response to stimuli that have no consequences" ("Habituated, 34). This can extend passed bears to include other animals as well. When animals do not have to waste energy fleeing from people that do not have a negative impact on their welfare, they can then focus that energy towards watching for actual threats, foraging, or simply preserving energy.

Finally, habituation of park wildlife promotes both education and conservation efforts. When people visit national parks, they learn about appropriate human-wildlife interactions that allows them to enjoy wildlife while also protecting it. This new knowledge then goes home with visitors and they can use what they learned to protect the wildlife in their communities and promote conservation efforts.

Furthermore, these positive experiences can extend to people who have never visited these parks. Gunther, et al. explains that when visitors come to national parks, they take pictures and videos of the animals and then post them on their social media platforms (“Managing” 381). All of their friends and followers see the experiences they had with these animals and desire to have the same experience. This causes people to become, as Herrero, et al. states, “ambassadors of good will” for wildlife (366). They want these animals to always be there so that they can continue to have amazing experiences every time they visit the park or so that their posterity can experience it. In the end, support for wildlife conservation in and out of parks stems from viewing experiences visitors have with habituated animals in national parks.

In conclusion, because of the desire people have to connect with the natural world found in national parks throughout the USA, these parks see thousands and thousands of visitors each year. One of the common attractions found in every park is the wildlife living in their borders. These animal populations have become habituated to human presence due to the large number of people that frequent their homes. History once suggested that this was an undesirable behavioral adaptation, especially for predatory animals, due to habituation from food conditioning. However, as park policy has changed over time to support habituation without food conditioning, it has been found that habituation can be a positive behavior for both people and animals in many ways. Yes, there are problems that arise from it, but as park visitors follow guidelines, there should be no reason why habituation shouldn’t always be positive. So, next time you go exploring in a national park, remember, you can make a difference. You can be the one to support the park in their mission of providing enjoyment for people and a haven for wildlife.

Works Cited

“7 Ways to Safely Watch Wildlife,” *National Park Services*. US Department of the Interior, 15 July 2019, <https://www.nps.gov/subjects/watchingwildlife/7ways.htm>. Accessed 23 October 2020.

Abrams, Katie M., et al. “Encouraging Safe Wildlife Viewing in National Parks: Effects of a Communication Campaign on Visitors’ Behavior.” *Environmental Communication*, vol. 14, no. 2, 23 Aug. 2019, pp. 255-70. Taylor & Francis group, doi. <https://doi.org/10.1080/17524032.2019.1649291>

Bath, Alistair J., and Jody W. Enck. “Wildlife-Human Interactions in National Parks in Canada and the USA.” *Social Science Research Review*, vol. 4, no. 1, Summer 2003. *Digital commons*, doi <https://digitalcommons.usu.edu/govdocs/424>. Accessed 25 Oct. 2020.

Gunther, Kerry A., et al. “Habituated Grizzly Bears: A Natural Response to Increasing Visitation in Yellowstone & Grand Teton National Parks.” *Yellowstone Science*, vol. 23, 2015, pp. 33-39. *Researchgate*, url

www.researchgate.net/publication/312576915_Habituated_Grizzly_Bears_A_Natural_Response_to_Increasing_Visitation_in_Yellowstone_Grand_Teton_National_Parks

- Gunther, Kerry A., et al. "Managing Human-Habituated Bears to Enhance Survival, Habitat Effectiveness, and public viewing." *Human Wildlife Interactions*, vol. 12, 2018, iss. 3, doi: <https://doi.org/10.26077/83cn-mh23>.
- Herrero, Stephen, et al. "From the Field: Brown Bear Habituation to People--Safety, Risks, and Benefits." *Wildlife Society Bulletin*, vol. 33, no. 1, Spring 2005, pp. 362–373. *BioOne Complete*, doi:10.2193/0091-7648(2005)33[362:FTFBBH]2.0.CO;2. Accessed on 25 Oct. 2020.
- Hughes, Trevor. "National park visitors leave roadkill in their wake," *USA Today*, 27 July 2013, <https://www.usatoday.com/story/news/nation/2013/07/27/national-park-road-kill/2587753/>. Accessed on 1 Nov. 2020.
- Newsome, David, and Kate Rodger. "To feed or not to feed: a contentious issue in wildlife tourism." *Too Close For Comfort*, edited by Daniel Lunney, et al, Royal Zoological Society of New South Wales, 2008, pp. 255-70. *Semantic Scholar*, doi: 10.7882/fs.2008.029. Accessed on 23 October 2020.
- Repanshek, Kurt. "Yellowstone National Park Rangers Kill Habituated Wolf." *National Parks Traveler*, 19 May 2020, www.nationalparkstraveler.org/2009/05/yellowstone-national-park-rangers-kill-habituated-wolf. Accessed 25 Oct. 2020.
- "Wildlife Safety," *National Park Services*. US Department of the Interior, 15 July 2019, <https://www.nps.gov/glac/planyourvisit/wildlifesafety.htm>. Accessed 23 October 2020.
- "Wildlife Viewing Safety," *National Park Services*. US Department of the Interior, 15 July 2019, 11, <https://www.nps.gov/zion/learn/nature/wildlife-viewing-safety.htm>. Accessed 23 October 2020.
- Wunderman, Ali. "Why People Keep Trying to Pet Animals at National Parks." *Condé Nast Traveler*, 7 Aug 2019, www.cntraveler.com/story/why-do-people-keep-touching-animals-in-the-wild. Accessed 25 Oct. 2020.

1st Place Winner (Tie): Kylee Thomas, “Social Benefits of Animal Assisted Therapy on Children with Autism”

For Natalie Johansen

Children on the autism spectrum disorder, or ASD, experience challenges in developing essential social skills and exhibiting emotional expressiveness. Autistic children struggle to manage behavioral impulses and develop social skills necessary for social functioning. Social functioning defines the social interactions that individuals encounter on immediate levels as well as in society. It also illustrates their ability to form competent relationships and function adequately in social environments. Merops Palvides discussed the challenges that her child, Kyle, personally faced with ASD. Kyle exhibited explosive tantrums and displayed little interest in other children. Regardless, Kyle's love for animals, especially his three household dogs, was a central aspect to his personality. Recognizing this love, Palvides introduced Kyle to animal-assisted therapy through therapeutic riding sessions. Kyle's social functioning increased through valuable interventions utilizing animals. Therapy animals are a significant method to help children with ASD unlock social routes. However, it has become common today to dismiss the benefits of animal-assisted therapy for children with autism because the methods in the therapy's clinical testing can be considered flawed with the considered population. Animal-assisted therapy increases the social functioning in children with Autism Spectrum Disorder through improving social skills, building relationships, and initiating emotional expressiveness. Educators should require animal-assisted therapy in the classroom for children with autism.

Animal-assisted therapy is one of various types of treatments and interventions that are available today. This specific type of therapy concerns forms of animal interventions to facilitate treatments for physical, emotional, mental, or social improvements. Animal-assisted therapy relies on the natural human and animal bond in a goal-oriented manner. Some of the significant advantages and distinguished results from animal-assisted therapy overall includes reducing stress, anxiety, depression, loneliness, and agoraphobia that children with autism may encounter on a regular basis. In her article, “Effects of Dog Assisted Therapy for Adults with Autism Spectrum Disorder: An Exploratory Randomized Controlled Trial,” Carolien Wijker noted the important benefits from animal-assisted therapy after completing a study. As Wijker puts it, “The remarkable adherence to the therapy program by study participants and the program's clinically relevant effects indicate that AAT (animal-assisted therapy) with dogs can be used to reduce perceived stress and symptoms of agoraphobia, and to improve social awareness and communication in adults with ASD with normal to high intelligence.” These important conclusions have meritable applications in children on the autism spectrum disorder as well.

Animal-assisted therapy has proven to be immensely beneficial and successful within children with autism spectrum disorder. However, it has become common today to dismiss the benefits of animal-assisted therapy for children with autism. Those that dismiss the benefits of animal-assisted therapy argue that the methods in the therapy's clinical testing can be considered flawed with the considered population. The discredit of animal-assisted therapy is stimulated on the idea that there were early studies that, although they produced positive results, were based off of inadequate research methods, such as inefficient sample quantities or biased research conductions. Regardless, recent studies have greatly improved their research methods. From Purdue University, Noémie Guérin and the

OHAIRE Lab, Organization for Human-Animal Interaction Research, focus on studying the interactions between individuals with autism and animals while emphasizing the importance of animal-assisted therapy. In her article, Guérin supports that, “However, recent years have seen an increase in high-quality research on animal-assisted intervention for autism. As rigorous studies are being conducted and their findings shared, animal-assisted intervention for autism is better understood in its benefits and limitations.” In making this comment, Guérin validates the importance of animal-assisted therapy in recent years as technology and study designs advances. Recent studies on animal-assisted therapy are penetrating and breaking down biased assumptions that discredit the merit of the intervention.

Although recent studies in animal-assisted therapy for individuals with autism has progressed, others may argue that this specific intervention does not work for every child with autism spectrum disorder and therefore has no overall merit. Whereas this argument provides a few justifiable points, in that animal-assisted therapy more than likely won’t work for every child, it neglects a crucial detail. Mohamd Ghazali Masuri identifies this detail in his article, “The Effects of Animal Assisted Therapy in Improving Attention Among Autistic Children.” Masuri states that, “The need for future research on a more individualized approach to interventions for autism is based on the reality that, as previously mentioned, “there is not and will never be a single ‘most effective’ method which works with each person on the spectrum.” Masuri emphasizes that although animal-assisted therapy is a recent intervention method for those with autism, the results of other commonly used interventions will range in its effectiveness for each distinct individual with autism spectrum disorder. Autism spectrum disorder encompasses a wide variety of symptoms that range in different levels of severity for each unique individual. Tailoring the right intervention for each child is a crucial step for reducing challenging symptoms and encouraging development. Animal-assisted therapy is a valid and practical therapeutic intervention when modified to fit each child’s needs based on where they place on the autism spectrum disorder.

One method to tailor animal-assisted therapy to each individual with autism is to incorporate specific inventions or service animals that are enticing and personal. Although therapy dogs are the most well-known service animal, animal assisted therapy encompasses a broad range of other service animals, such as guinea pigs or cats. Other forms of animal-assisted therapy include therapeutic horseback riding and dolphin therapy centers. Later in her book, Pavlides supports this idea by stating that, “Like dolphin therapy (see Chapter 6), horse-back riding has a mobility component in addition to interaction with the animals: one can ride horses as well as engage with them. And therapeutic riding has the potential to develop into a lifelong recreational activity, enjoyed by people with and without disabilities.” Pavlides’ purpose in making this comment was to illustrate the effectiveness of a variety of animal-assisted therapy methods in relation to individuals with autism. In each form of animal-assisted therapy, the goals of the interventions are similar in means to improve the progression of individuals with autism. However, each unique form of animal-assisted interventions must tailor the service animal to each child’s need. Not every style of treatment will work the same for every child. Therefore, tailoring the type of animal-assisted therapy to each individual’s personality and attitude is a crucial step to accomplish any desired progress.

Emotional engagement is a desired accomplishment of animal-assisted therapy. Children with autism spectrum disorder tend to struggle to engage emotionally with the environment around them. The

presence of therapy dogs and animal-assisted therapy can help these children to open up more emotionally. Therapy dogs and service animals allow children with ASD to become more involved with their surroundings by creating a secure and interactive environment. Merope Pavlides, in her book "Animal-Assisted Interventions for Individuals with Autism," addresses the importance of animal-assisted therapy in triggering involvement. She advocates that, "The potential exists to utilize animal-assisted interventions in addressing many of the challenges of autism. There is no magic here. But there is power. The strength of these interventions lies in the remarkable ability of animals to provoke "engagement." Engagement—pulling out of that internal world of autism—is, I believe, the key to progress with individuals with autism." In short, Pavlides agrees that although animal-assisted therapy cannot magically produce results, it has the capability to as it endorses its fundamental role in provoking engagement for children with autism. Carolien Wijker and her research team conducted multiple studies involving the beneficial outcomes of dog assisted therapy programs for adults with autism. According to Wijker, "Both the participants and therapists evaluated the animal-assisted therapy program as satisfying, feasible, and relevant for adults with ASD. They reported the following arguments for their positive appraisal of the therapy: the therapy helped improve self- insight, joy, relaxation, and physical contact." Although this study was based on adults with autism spectrum disorder, therapy dogs and service animals can encourage similar engagement and result in children with the same condition. Animal-assisted therapy helps individuals on the autism spectrum disorder break down inhibiting social barriers through creating a safe environment to motivate emotional expressiveness.

The advantages of animal-assisted therapy encompass more than simply provoking engagement from children with autism spectrum disorder. Animal-assisted therapy has proven to enhance the development of social emotional skills for individuals with autism. Socio-emotional skills include the knowledge and skills acquired throughout an individual's youth to help them manage and express their behavior and attitude appropriately and develop personal relationships. Alice Grigore and her colleagues from the Transilvania University of Brasov evaluated the effects that animal-assisted therapy had on children with autism to determine whether or not the therapy resulted in socio-emotional skill improvements. After conducting multiple studies and case analysis, Grigore concluded that, "Thus, the therapist who adopted AAT said that his children have become more enthusiastic, more cooperative, have begun to obey rules, express more emotions, have a diminished emotional rigidity, children smile more often, express how they feel, and regarding the appropriate recognition of emotions, the therapist who adopted the AAT states that participants in therapy sometimes recognize how others feel after facial expressiveness and are more aware of emotions." Grigore concluded her research by stating that the therapists who did not participate in the animal-assisted therapy, and engaged in other intervention methods, showed no changes in the socio-emotional skills of their participants. By illustrating the notable results and conclusion of the study, Grigore and her research team's work extends and validates the effectiveness of animal-assisted therapy in children with autism spectrum disorder.

Children with autism spectrum disorder experience difficulties in developing communication skills. The ability to communicate efficiently is a critical aspect in social functioning, which defines the social interactions that individuals encounter on immediate levels as well as in society. Individuals with autism encounter many challenges in developing and maintaining relationships, as well as interacting with their surrounding environments, because of their struggle to grow necessary communication skills. Animal-assisted therapy improves and builds essential communication capabilities within children with autism. In July 2020, prominent researchers, Adriana Avila-Alvarez and her colleagues, conducted a

series of studies. Avila-Alvarez explored the feasibility of utilizing animal-assisted therapy in early years of diagnosis in children with autism through examining the therapy's impact on communication skills. The research team determined that, "The total ACIS (Assessment of Communication and Interaction Skills) score increased significantly between the initial and final assessments of the study, with communication and social interaction skills improving with a large effect size." The significant results of this study showed the effectiveness of animal-assisted therapy in improving communication skills.

The challenges that children with autism face, such as the struggle to develop communication and social skills, can negatively impact their relationship. Through increasing the communication skills in children with autism, animal-assisted therapy increases the interactions between the children and adults. Animal-assisted therapy encourages interactions between the participating child and service animal. The interactions that occur between the animal and child facilitates other potential types of interactions for the child, such as between the intervention instructor, therapist, teacher, or parent. Through the combination of overall increased social interactions and social functioning, including the increased emotional expressiveness and engagement and the development of socio-emotional skills and communication skills, animal-assisted therapy improves the relationships that children with autism develop.

The benefits of animal-assisted therapy can transfer to educational purposes and be institutionalized at schools. Animal-assisted therapy increases the social functioning in children with Autism Spectrum Disorder through improving social skills, building relationships, managing behavioral impulses and initiating emotional expressiveness. Each of these results can be exceptionally useful in the classroom perspective. To prove the compatibility and determine the efficiency of animal-assisted therapy for schools, Lou Jenson, in collaboration with the American Occupational Therapy Association, performed an exploratory case study to analyze the results of having a therapy dog visit a class for one hour a day over a certain period of time. Jenson discovered that, "Students and staff perceived benefits of AAA (animal-assisted activities) in the classroom. This study is important to school-based occupational therapy practitioners because it shows that AAA are feasible interventions in the school setting to impact behavior, provide emotional support, and increase positive feelings in the classroom, which can improve students' occupational performance." The results from the case study demonstrated the benefits that children with ASD would receive if animal-assisted therapy would be practiced in schools.

Animal-assisted therapy creates benefits for children with autism in the classroom because the service animals stimulate safe and interactive environments. Children with autism struggle to connect with their peers around them because of social challenges that they encounter on a daily basis. However, service animals allow the child to engage with their surroundings and improve social skills by providing a non-judgmental companionship. In her article, "Animals and Autism: A Promising Treatment Approach," Trina McMillin illustrated that, "Children with autism are at higher risk for becoming the victims of a bully. Furthermore, these children are more likely to experience stress, in general. Both of these issues are of the greatest concern during his or her years in school. However, the nonjudgmental companionship offered through animal-assisted intervention can provide these children with stress relief and eliminate the feeling of loneliness that many of these children experience." As McMillin stated, service animals reduce the stress and loneliness that children with autism may experience in school situations. To improve the educational experience for children with autism, classrooms should incorporate a form of animal-assisted therapy.

Animal-assisted therapy breaks down many inhibiting barriers that children with autism encounter daily in the classroom. One significant issue that children with autism face is the lack of desire to go to school and participate. This is an important factor that can either negatively or positively influence a children's educational experience. Marguerite O'Haire, along with other prominent researchers from the University of Queensland, conducted a study to evaluate the classroom influence that animal-assisted therapy has on the social functioning development in children with autism spectrum disorder. Marguerite demonstrated her results by stating that, "Over half of parents also reported that participants demonstrated an increased interest in attending school during the program." The results of Marguerite's study validates the argument that animal-assisted therapy should be implemented into the educational curriculum because it increases the interest to participate and attend at school. The initial interest to attend school sparks the desire to participate and learn. Creating a proactive environment where children with autism want to be there is important in an academic perspective. Integrating animal-assisted therapy in the classroom increases the interest of children with autism to attend school and ultimately spark the desire to learn.

Incorporating animal-assisted therapy into classrooms not only improves educational conditions for children with autism, but for teachers, staff and other children experiencing emotional challenges. Some of the significant advantages and distinguished results from animal-assisted therapy, including reducing stress, anxiety, depression and loneliness, helps other children that are not on the autism spectrum disorder. Animal-assisted therapy also benefits teachers by providing opportunities for students with autism to experience social interactions in the classroom to help develop and learn necessary social skills. Jennifer Friedrich, in her article "The Role of Animal-Assisted Interventions in Communication Skill of Children With Autism," maintains that, "This study may contribute to the field of special education practice by promoting the implementation of more AAI programs in educational settings, not just for students with ASD, but also potentially for the whole school community." Friedrich endorses the idea that animal-assisted therapy benefits the majority of those involved in the intervention. She later states that, "Key findings of the study revealed that a therapy dog could act as a stimulus for social interactions as well as facilitate students' social interaction participation." In making this comment, Friedrich ties together notable effects of animal-assisted therapy within the classroom.

In conclusion, animal-assisted therapy is extremely beneficial for children with autism and should be implemented in the classroom. Children with autism face many social challenges in their lives, in and out of the classroom, as they learn to develop necessary skills for social functioning. Animal-assisted therapy increases the social functioning in children with ASD through improving social skills, building relationships, and initiating emotional expressiveness. Animal-assisted therapy also helps children with autism engage with the surroundings around them by providing safe and interactive environments with the presence of a service animal. Service animals play important roles in animal-assisted therapy by acting as a trigger to provoke engagement and serving as non-judgmental peers for children with autism. Despite the benefits of animal-assisted therapy, some discredit this intervention on the idea that early studies were based off of inadequate research methods, such as inefficient sample quantities or biased research conductions. Jennifer Friedrich, after conducting recent research, validates animal-assisted therapy by stating that, "Results demonstrate the feasibility and potential efficacy of a new classroom-based Animal-Assisted Activities model, which may provide a relatively simple and cost-effective means of helping educators and families to improve the social functioning of children with

ASD." Animal-assisted therapy is an important intervention method for children with autism that should be integrated into the classroom.

Works Cited

- O'Haire, Marguerite, et al. "Effects of a Classroom Animal-Assisted Activities on Social Functioning in Children with Autism Spectrum Disorder." *Journal of Alternative and Complementary Medicine*, vol. 20, no. 3, 01 March 2014, pp. 162-168. doi:<https://doi.org/10.1089/acm.2013.0165>.
- Jensen, Lou, et al. "Effect of Animal-Assisted Activities on Children in a Behavioral Classroom: A Pilot Study...2018 AOTA Annual Conference & Expo, April 19-22, 2018, Salt Lake City, Utah." *American Journal of Occupational Therapy*, vol. 72, July 2018, pp. 1. EBSCOhost, doi:10.5014/ajot.2018.72S1-PO7026.
- Wijker, Carolien, et al. "Effects of Dog Assisted Therapy for Adults with Autism Spectrum Disorder: An Exploratory Randomized Controlled Trial." *Journal of Autism & Developmental Disorders*, vol. 50, no. 6, June 2020, pp. 2153–2163. EBSCOhost, <https://proxy.li.suu.edu:2443/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=asn&AN=143506768&site=ehost-live>.
- Ávila, Álvarez, Adriana, et al. "Improving Social Participation of Children with Autism Spectrum Disorder: Pilot Testing of an Early Animal-assisted Intervention in Spain." *Health & Social Care in the Community*, vol. 28, no. 04, July 2020, pp. 1220–1229. EBSCOhost, doi:10.1111/hsc.12955.
- Wijker, Carolien, et al. "Process Evaluation of Animal-Assisted Therapy: Feasibility and Relevance of a Dog-Assisted Therapy Program in Adults with Autism Spectrum Disorder." *Animals* (2076-2615), vol. 9, no. 12, Dec. 2019, p. 1103. EBSCOhost, <https://proxy.li.suu.edu:2443/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=asn&AN=141440426&site=ehost-live>.
- Grigore, Alice and M. Bazgan. "Effects of Assisted Animal Therapy on the Development of Socio-Emotional Abilities of Children with Autism." *Bulletin of the Transilvania University of Brasov. Series VII: Social Sciences. Law*, vol. 10, July 2017, pp. 231-238. EBSCOhost, <https://proxy.li.suu.edu:2443/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=asn&AN=129478411&site=ehost-live>.
- Pavlidis, Merope. *Animal-Assisted Interventions for Individuals with Autism*. Jessica Kingsley Publishers, 2008. EBSCOhost, <https://proxy.li.suu.edu:2443/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=236315&site=eds-live>.
- Mohamad Ghazali Masuri, et al. "The Effects of Animal Assisted Therapy in Improving Attention among Autistic Children." 2011 IEEE Colloquium on Humanities, Science and Engineering, Humanities, Science and Engineering (CHUSER), 2011 IEEE Colloquium On, Dec. 2011, pp. 813–818. EBSCOhost, doi:10.1109/CHUSER.2011.6163849.

McMillin, Trina. "Animals and Autism." Relias, 04 January 2017.

<https://www.relias.com/blog/animal-assisted-therapy-for-autism>.

Friedrich, Jennifer Ann. "The Role of Animal-Assisted Interventions in Communication Skills of Children With Autism" (2019). Walden Dissertations and Doctoral Studies. 6203.

<https://scholarworks.waldenu.edu/dissertations/6203>.

Guérin, Noémie and the OHAIRE Group. "Animal-Assisted Intervention for Autism." Purdue University.

<https://vet.purdue.edu/chab/ohaire/autism.php>.

2nd Place Winner (Tie): Dakin Sundeen, "From Bulldozers to the Bundys: A short history of the Sagebrush Rebellion"

For Dr. James Aton

On July 4, 1980, three hundred residents of Grand County Utah assembled to protest their lack of access to a piece of state land believed to have mineral potential (Cawley 5). A Bureau of Land Management Wilderness study area stood in the way, and a bulldozer would be their tool to create a road. After speeches by county officials, the bulldozer began to clear a path into the BLM's land, stopping in what they believed to be wilderness. Unfortunately, the assembled activists misread the map and stopped a quarter mile from the actual wilderness study area boundary. In response, the BLM asked for restoration of the area, and being faced with litigation, the county officials complied. While this incident is ultimately minor, it was a necessary action to a movement that had been bubbling up in the west since the closing of the frontier. Plastered on the blade of the bulldozer were several bumper stickers stating "Sagebrush Rebel."

The Sagebrush Rebellion's motives were to return control of the federal estate in the west to the states to reduce regulation. The name referred to the arid environment and its prominent vegetation, and its rebellion was against overreach by the Federal Government. Its membership consisted of the typical commodity users of public lands: ranchers, miners, and a few members of the Off-Highway vehicle community. They relied on arguments centered on the equal footing clause of the Northwest Ordinance, the disclaimer clauses in state enabling acts, and the property clause of the US constitution. While history has shown their efforts to be ultimately unsuccessful, their influence on the public land debate continues. In 2016 the Republican party platform endorsed divesting from public lands (Blumm and Jamin 781). Showing that the ideas and motives of the sagebrush rebels have spread over the west. However, their roots go back farther than the 1970s and 80s.

Not long after the United States had won its freedom from Great Britain, the new Congress created the first law to regulate lands. Around half of the original 13 states had claims to areas in the Ohio valley, while also holding significant debt from fighting the war. Alexander Hamilton proposed that the states relinquish their claims in exchange for the federal government assuming their obligations. With all of the states complying, the confederation congress passed the Northwest Ordinance of 1787. The new law created a framework for the federal government to sell land for settlement, while also banning slavery in the new territories, and fair compensation for any private property seized by the government (Blumm and Jamin 797). More notably, the ordinance called for the admission of new states on "equal footing" with existing states. This section of the law would become crucial to the arguments of the later sagebrush rebels. However, the same ordinance's article 4 stated that states could not interfere with federal land sales, demonstrating federal supremacy over state rules concerning public land.

By the 1860s, with most of the best and more arable land sold off, Congress gave the rest away (Bartrum 74). The Homestead Act of 1862 allowed anyone to settle on up to 160 acres of land by just paying a \$10 fee and promising to use the land for "actual settlement and cultivation" (Bartrum 74). While leading to an expansion of settlement into the west, the act also allowed for much of the land to be devastated by development. The loss of the vast forests of the east and Upper Midwest led to the creation of the first federal land management agencies. Yellowstone was created as the first national park in 1872, followed by the General Revision Act of 1891 that allowed the president to develop national forest reserves from

anywhere in the public domain (Ragsdale Jr 602). By 1909 over 150 million acres had been added, and the government needed someone to manage all of this land. The Forest Management Act of 1897 provided the framework to create national forests, while lobbying by Gifford Pinchot led to the Transfer Act of 1905 (Dennis 45). This last piece of legislation led to the creation of the USDA Forest Service to manage the nation's forest reserves. Not long after, the National Park Service was created in 1916 to manage the growing number of national parks that had been set aside for preservation.

Up until this point, western settlers had enjoyed relatively free reign in the public estate. The only real regulation had been the Unlawful Inclosures of Public Lands Act of 1885, which prohibited fencing public lands. At the same time, many of the new western states had disclaimer clauses in their enabling legislation to become states. The disclaimer language stated that the states would "forever disclaim all right and title to unappropriated public lands lying within [their] territory, [which] shall be and remain at the sole and entire disposition of the United States" (Bartrum 86). Similar provisions were found in state constitutions. A rancher in Colorado named Fred Light, and a sheepherder in California called Pierre Grimaud, felt that the imposition of fees to graze on public land was unconstitutional (Blumm and Jamin 22). While both district and circuit courts agreed with the aggrieved grazers, the supreme court in a unanimous decision found that federal ownership of the public lands was indisputable (Miller 3). This decision affirmed that Congress, through a series of legislative acts, had granted the Executive Branch, through its agencies, the authority to regulate and manage these lands.

In the 1920s and 30s, widespread overgrazing led to extreme degradation of the rangelands and the dust bowls of the Midwest. While having the effect of increasing migration to the west, the situation also led the Forest Service to announce an increase in grazing fees (Cawley 72). In response, Senator R.M. Stanfield (R-OR) held hearings throughout the west to hear the grievances of those that felt harmed by the land management agencies. While the fees did increase, the Forest Service replaced its original plan with one designed in consultation with representatives from the national livestock associations. As a result, grazing interests held an outsized influence in their regulations for the next 40 years. President Hoover established a Committee on the Conservation and Administration of the Public Domain in 1929, which recommended giving the states the remaining public lands except for the mineral rights (Cawley 72).

The exception created opposition to the plan by the western states, and the public domain remained in the hands of the Federal Government. In 1934, western stock growers assisted in the creation of the Taylor Grazing Act, which regulated the range on the federal domain with the intent to "stop injury to the public grazing lands by preventing overgrazing and soil deterioration [and] to provide for their orderly use, improvement, and development." (Blumm and Jamin 808) While the act was biased towards the cattlemen, many of them were unhappy with being charged a uniform fee. They sued in 1936 and lost, leading to Senator Pat McCarran (D-NV) to hold a series of hearings and assembling six thousand pages of complaints directed at the Grazing Service. Through appropriations, legislation that disallowed raising fees, and a house committee that refused to increase the budget for that reason, Sen. McCarran effectively neutered the Grazing Service. This event led to reductions in the agency's field staff from 250 to 78 (Sharp 232). Not long after this controversy, the Grazing Service was merged with the General Land Office to create the new Bureau of Land Management.

For the next 20 years, stock growers, miners, and loggers enjoyed relative dominance over the management of the public estate. As stated by R McGregor Cawley, "Throughout the first half of the

twentieth century, then, federal land policy operated under the assumption that planned, orderly resource development was the primary management mission" (18). The founder of the Forest Service, Gifford Pinchot, felt that "The first principle of conservation is development...In the second place conservation stands for the prevention of waste." (Cawley 17). The primary beliefs of early conservation were to sustainably develop natural resources for the benefit of the nation, and not to preserve land for aesthetic beauty.

Beginning in the 1960s, this definition of conservation fell out of favor, codified in the Multiple Use Sustainable Yield Act (MUSY). The act specified that management of the National Forests for "Outdoor recreation, range, timber, watershed, and wildlife and fish purposes... in the combination that will best serve the needs of the American people" (Cawley 19). In 1964, the Wilderness Act was passed that set aside primitive areas for preservation. The new legislation gave outdoor recreationists, environmentalists, and wildlife advocates a place at the table in public land debates. Resources users chafed at this new arrangement, with William Tucker calling wilderness a, "all-purpose tool for stopping economic activity" (Cawley 44). However, it would be the Federal Land Policy and Management Act (FLPMA) of the 1970s that would provide the catalyst for the birth of the Sagebrush Rebellion.

Similar to how MUSY changed the Forest Service, FLPMA updated the management mission of the BLM. It directed that "public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resources, and archaeological values" (Cawley 39). At the same time, the act also stated: "the public lands be managed in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber." Most importantly, the act stated that lands would remain in Federal ownership unless disposal of a particular parcel would serve the national interest. Effectively bringing an end to any possibility of disposal to states or private entities (Bartrum 69). While the language of the act pressed for compromise, FLPMA left many commodity users of public land feeling they had lost their influence to the environmental movement. Senator Orrin Hatch (R-UT) called the legislation's role to the sagebrush rebellion as similar to the role played by the Bastille during the French Revolution (Cawley 39).

In 1979, the Sagebrush Rebellion truly began with the passage of Assembly Bill 413 in the Nevada legislature. The bill asserted control over all lands managed by the BLM within the state, amounting to 48 million acres or 79% land (Cawley 1). Several other western states followed, including Arizona, New Mexico, Utah, and Wyoming. California, Alaska, Colorado, and others provided funds for a multistate study of public land issues. Hawaii and North Dakota passed resolutions in support of the Sagebrush Rebellion. The various states cited the aforementioned equal footing doctrine of the Northwest Ordinance of 1787 and the disclaimer clauses in their enabling acts. Many rebels believed that the large federal estates in the west left them unequal to eastern states with little federal land. At the federal level, Sen. Hatch introduced the Western Lands Act, which would create federal land boards for each state to allow for the transfer (Cawley 101). The political environment of the late 1970s and early 80s was ripe for this movement, with growing frustration at the federal government and Carter Administration. National media took notice, with Newsweek running a cover story featuring a photograph of a cowboy on horseback with the headline "The Angry West: 'Get Off Our Backs, Uncle Sam.'"

Within a year, the Sagebrush Rebellion felt greatly emboldened by then-presidential candidate Ronald Reagan calling himself a "Sagebrush Rebel" (Blumm and Jamin 785). In November of 1980, the

movement gathered together in Salt Lake City for a conference of the League for the Advancement of States' Equal Rights (LASER). Around 500 activists, along with sympathetic senators from western states, met to discuss the strategy of their movement (Cawley 92). At the same time, the environmental community began their opposition with a feeling of *déjà vu*. As stated by Izaak Walton League Conservation Director Maitland Sharpe,

We are convinced that the greater and more immediate threat from the Sagebrush Rebellion is that it will be used to undermine effective multiple use management, in the same ways that Senator McCarren and Congressman Barrett did in the 40's and 50's: by breaking down the barriers that insulate professional land management decisions from political intervention; by controlling BLM's appropriations; by placing BLM on the defensive and diverting energy away from management; by sapping the agency's morale; and by winning concessions directly from Congress.

While many in the Sagebrush rebellion felt that a lawsuit against the federal government based on the Equal Footing Doctrine would be the most effective strategy, they tabled this method thanks to the recent election of Reagan and an accompanying Republican Senate (Cawley 111).

President Reagan wasted little time in appointing fellow self-described Sagebrush Rebel James Watt as interior secretary. This development greatly alarmed the environmental community, feeling that the gains made under administrations of both parties would be lost. The Sierra Club amassed over a million signatures in a "Dump Watt" campaign (Cawley 117). While affirming his sympathies with the rebellion, Watt also stated that conveyance to the states was a waste of money. He said that the conflict arose from how the Department of the Interior had "become hostile to many interests of the West." Once confirmed, Watt enacted the "Good Neighbor Policy," which sought to compromise with commodity users of the public lands. Other members of the Reagan administration had other plans. Steve Hanke, a member of the Council of Economic Advisors, proposed an initiative to privatize public lands, which was called the Federal Real Property Initiative (Cawley 123). This proposal faced substantial objection by commodity users, the environmental movement, and Secretary Watt, creating many odd allies. Many of the Sagebrush Rebels opposed the privatization initiative as it conflicted with their plans of conveyance to the states. While defeated, the privatization initiative and Secretary Watt's policies effectively stopped the Sagebrush Rebellion for almost 30 years.

In the 1990s, the debate over who owns the federal estate had gone hyper-local. As most state-level legislation aimed at the conveyance of federal lands had failed, counties believed they could take up the fight. On July 4, 1995, Nye County Nevada passed an ordinance asserting state control of public lands (Coppelman 30). Other western counties passed similar laws, while individuals took action against federal land managers. In Clark County, Nevada, a rancher threatened to shoot any government employee that came on this property. At the same time, a group of 100 activists built a fence around a water box that a judge ordered removed. In response, the Justice Department issued civil suits against the counties, asserting the preeminence of Federal Law. In other counties, the local federal agencies signed a memorandum of understanding to apprise local officials of their plans. Criminal prosecution was taken against individuals that had threatened or harmed Federal Employees, including the pipe bombing of BLM and Forest Service offices. While mostly just a footnote in the history of public land disputes, the county supremacy movement helped to elevate theories that would be used by Cliven Bundy in his conflict with the BLM starting in 1993.

Cliven Bundy claims that his family has ranched in the area near Bunkerville Nevada since 1847 (Bartrum 71). Using this hard to prove historical fact, Bundy believes that he has preemptive property rights to the lands that his family has grazed on for generations, despite never filing any title under the homestead act or subsequent legislation. Starting in the 1990s, the local BLM office began to close down tracts near the Bundy ranch to protect the desert tortoise. As a result, Bundy refused to pay his grazing fees, stating that under the property clause of the US constitution, the Federal Government must dispose of all of their landholdings when a territory becomes a state (Bartrum 72). Meaning that the only officials with standing to regulate his grazing practices are state officials, or the local sheriff. In July of 1993, the BLM sent Bundy a trespass notice to remove his cattle from their land (Nash 159). Bundy refused to meet with BLM officials and was subsequently sued in Federal Court, racking up \$1.2 million in past-due grazing fees (Blumm and Jamin 788). Several judges ordered the rancher to remove his cattle with no compliance, while federal officials wanted to avoid confrontations like Ruby Ridge and Waco. By 2013, the court ordered Bundy to remove his livestock again, and if he did not, then they would be seized. In April 2014, the roundup of the cattle began, with Bundy responding, "These people are thieves I'm going to fight for the Constitution and state sovereignty" (Nash 160).

When the Bundy family went to confront the BLM employees, they kicked a police dog, resulting in one of the sons being tased. The incident was caught on video and shared on the internet, causing Cliven Bundy to send out a call for militias and right-wing activists to join him in protecting his cattle (Blumm and Jamin 788). Much like how the political environment of the late 1970s created a ripe environment for the original Sagebrush Rebellion to flourish, the recent election of President Barack Obama and the response from the Right and subsequent Tea Party Movement gave Bundy an advantage. Close to 400 armed activists arrived at the Bundy ranch to take back the animals, encouraged by Fox News host Sean Hannity who stated to Bundy, "You're using the public land. . . . I would think the government might be thankful, because you're cutting the lawn for free" (Nash 160). With his armed supporters at his back, Bundy presented his demands: open up all restricted public lands, remove BLM equipment, return the cows, and disarm federal agents. Within an hour, they were marching towards the pens that held the cattle and to block Interstate 15. Local and Federal Law enforcement officials being outmanned and outgunned withdrew "because of our serious concern about the safety of employees and members of the public" (Nash 162). The cattle returned to their pens, and for the first time, the Sagebrush Rebellion had a leader.

Unfortunately for the new generation of sagebrush rebels, their leader would soon have to step down from his position of prominence. News media released a video of Cliven Bundy expressing his views on African Americans:

They abort their young children, they put their young men in jail, because they never learned how to pick cotton. And I've often wondered, are they better off as slaves, picking cotton and having a family life and doing things, or are they better off under government subsidy? They didn't get no more freedom. They got less freedom. (Kahn 68)

This event proved to be a public relations disaster, causing many of the prominent right-wing media personalities to drop their support. Luckily for the rebels, Cliven Bundy has 14 children, and two of his sons were more than happy to fill the leadership vacuum.

In January of 2016, a group of armed militia led by Ammon and Ryan Bundy arrived in Harney County Oregon to advocate for two local ranchers convicted of setting fires to BLM land abutting their property. Not long after a rally for the affected ranchers, the Bundy brothers led a heavily armed group to occupy the nearby wildlife refuge office closed for the holidays (Gallaher 296). They called the press and listed their demands: release the convicted ranchers, and for the government to renounce its claim to the wildlife refuge. This statement conflicted with the views of Harney County locals, who only felt that the sentencing for the local ranchers was excessive, and saw the Malheur Refuge as an economic resource (Gallaher 297). After six weeks of occupation and media coverage, the Bundy brothers left the refuge to attend a speaking engagement in a nearby county. Federal Law Enforcement took the opportunity to arrest them, and unfortunately, killed one of the occupiers when he was reaching into his coat (Nash 158). Cliven Bundy was arrested at the Portland airport, leading to the effective end of the occupation.

Most Americans saw the Malheur occupation as the next step in the saga of the Sagebrush Rebellion, but the movement had been active in the intervening two years. In Grants Pass Oregon, two gold miners had gotten into a dispute with the BLM over mining rights in April 2015 (Blumm and Jamin 792). After issuing a call for a local militia to provide armed assistance, the situation deteriorated to the point that one of the miners pleaded with the militia to, "Please stop calling the BLM and threatening their personnel" (Nash 163). The Interior Board of Land Appeals agreed to hear the miner's case, and according to law and political science professors Olivier Jamin and Michael C. Blumm, the miners may have a credible legal argument (792).

Recapture Canyon in Utah had been closed to motorized recreation after two men had created an illegal trail that vandalized Ancestral Puebloan archaeological sites. In response, county commissioner Phil Lyman, joined by Ryan and Ammon Bundy, led dozens of ATV riders into the archaeological area (Nash 163). While the federal government prosecuted Lyman, he remained defiant, "If things don't change, it's not long before shots will be fired" (Nash).

Lyman's mindset is not surprising, considering the role Utah has played in the Sagebrush Rebellion. Besides the action in Grand County with the bulldozer, and Sen. Hatch's many bills, the state legislature enacted the Transfer of Public Lands Act in 2012 (Hoffman 34). The legislation required the Federal Government to transfer title to all lands within the state, much like the original Sagebrush legislation of the 1970s. Other western states would soon follow with similar legislation, but none were as direct as Utah's. To see if the management of the federal estate was feasible, the legislature commissioned a study of the economic costs. If Utah were to take on the management of public lands, they would incur a cost of \$245 million per year, leaving the state with an annual deficit of \$32.5 million (Hoffman 36). To offset these costs, the state would have to increase energy and mineral extraction, which would be subject to the prices of the energy market. While the energy revenues may offset some of the costs, revenues generated from outdoor recreation would drop as mineral development would close those areas from recreation. Despite a Senate budgetary amendment to study the feasibility of transfer, the Federal Government never publicly acknowledged the act, as its deadline passed in December of 2014 with little fanfare.

In October of 2016, the jury in the Malheur Occupation trial acquitted the Bundys of all charges. Jurors believed that the government failed to make a convincing case that the occupiers prevented federal employees from their right to work and weapons charges (Blumm and Jamin 824). Two years later, in January of 2018, charges were dismissed against Cliven Bundy arising from the armed standoff in 2014.

Standing on the steps of the federal courthouse in Las Vegas, Bundy stated, “We’re not done with this” (Bartrum 89). While the judge noted the reason being overreach by the government in prosecuting its case, none of the legal arguments of the sagebrush rebels were heard in court. UNLV Law Professor Ian Bartrum feels their claims have little merit, as evidenced by over 200 years of case law (89). The Bundys and other Sagebrush Rebels have their best recourse through political rather than legal means. Only Congress can relinquish or sell public lands and has. Since 1990 the federal domain has decreased by 18 million acres mostly through transfers in the Alaska Native Claims Settlement Act (Hoffman 34). Similar to the 1980s, the rebels have another sympathetic voice in the Whitehouse, causing many of them to fall quiet. While this current situation is temporary, the influence of the first sagebrush rebels and the Bundy family will continue to be felt in public land debates to come.

Works Cited

- Bartrum, Ian. "Searching for Cliven Bundy: The Constitution and Public Lands." *Nevada Law Journal Forum* (2018): 67-90.
- Blumm, Michael C and Olivier Jamin. "The Property Clause and Its Discontents: Lessons from the Malheur Occupation." *Ecology Law Quarterly* (2016): 781-826.
- Cawley, R McGregor. *Federal Land Western Anger: The Sagebrush Rebellion & Environmental Politics*. Lawrence: University of Kansas Press, 1993.
- Coppelman, Peter D. "The Federal Government's Response to the County Supremacy Movement." *Natural Resources & Environment* (1997): 30-33, 79-80.
- Dennis, Steve. *Natural Resources and the Informed Citizen*. Urbana: Sagamore Publishing, 2012.
- Gallaher, Carolyn. "Placing the Militia Occupation of the Malheur National Wildlife Refuge in Harney County, Oregon." *ACME: An International E-Journal for Critical Geographies*. (2016): 293-308.
- Hoffman, Hillary M. "The Flawed Law and Economics of Federal Land Seizure Statutes." *Natural Resources & Environment* (2015): 34-37.
- Kahn, Jonathan. "ACCEPTING CONSERVATIVE FRAMES: Time, Color Blindness, Diversity, and Intent." *Race on the Brain: What Implicit Bias Gets Wrong About the Struggle for Racial Justice*. New York City: Columbia University Press, 2018. 63-96.
- Miller, Char. "Malheur Occupation in Oregon: Whose Land is it Really?" *The Conversation* (2016): 1-4.
- Nash, Steven. "Sacred Cowboys." *Grand Canyon For Sale*. Berkeley: University of California Press., 2017. 142-166.
- Ragsdale Jr, John W. "The American Legacy of Public Land Rebellion." *The Urban Lawyer* (2016): 599-614.
- Sharp, Maitland. "The Sagebrush Rebellion: A Conservationist's Perspective." *Rangelands* (1980): 232-234.

2nd Place Winner (Tie): Caitlin Henderson, “How Musical Training Affects Brain Plasticity”

For Dr. Julia Combs

Abstract

The brain is an ever-changing organ. Its ability to adapt is brain plasticity. Learning to play musical instruments can help change the brain for the better. Some aspects that can describe brain plasticity are brain function, memory, and the brain’s structure. People who had musical instrument education had better control over specific brain functions such as auditory and motor skills, enhancing those brain functions. Those with musical training also showed improved working or short-term memory as well as long-term memory. However, only certain parts of both memories were improved. There is also a difference in brain structure between musicians and non-musicians. The research also showed that teaching children to play musical instruments also changes the rate at which certain parts of the mind develops. Musical training positively affects brain plasticity because certain brain functions, aspects of memory, and specific parts of a brain’s structure were improved.

Keywords: brain plasticity, brain function, memory, brain structure, musical training, music education

Music and the Brain: How Musical Training Affects Brain Plasticity

The limitations of the brain are not yet known. It is one of the most complex and important parts of the body. It controls some of the most basic life functions, such as digestion of food to absorb nutrients or breathing. Beyond the essential functions, human brains can also produce higher thought than in most living organisms. That higher thought process allows humans to do many things like drive cars and make connections based on experiences and information. People often use music to help focus the brain when doing these complex tasks, but it can help in other ways. While most of the brain is still a mystery, humans still look for ways to improve how this organ works and develops. Brain plasticity is the brain's ability to modify itself based on experiences. Improvements to the brain are looked into to ward off mental illnesses or develop useful learning techniques. There are many ways that one can improve the brain, with one of the best ways being one of the least used. Learning or training in a musical instrument takes time and determination. Musical training is an experience that many people participate in, and it shows in other aspects of their lives. Many of the experiences are similar, no matter the instrument. Musical training can affect brain plasticity by improving its function, memory, and structure of the brain.

Brain Function

Brain function is a broad aspect of the brain. Functions can include anything from motor skills to executive functions or cognitive abilities. Most studies look into specific functions and compare how musically trained people perform compared to people who are not. Shimizu et al. (2018) found that specific functions were improved when musical training was incorporated with exercise activities in older adults with mild cognitive impairments. The skills the authors were testing were cognitive and executive functions. Cognitive and executive functions allow the brain to choose what information is vital to situations, create connections between the information, and form new ideas from the connections. The participants were older adults that were likely to develop Alzheimer's disease later in life. These adults were all asked to participate in exercise activities. One group had music lessons with percussion

instruments included with their activities, and the other group did just the exercises. The group with the musical instruction improved in certain brain functions. There was better control of motor functions, improvements in other cognitive functions, and improved inhibitory control. Inhibitory control is ignoring or resisting information from the environment that is not pertinent to the task at hand. The functions tested in this study explicitly focused on functions that commonly decrease in effectiveness with age and with the development of Alzheimer's disease. The authors found a change in the brain's functions, even in previously negatively affected brains.

Similarly, when older adults without cognitive impairments engage in music lessons, executive functions were improved (MacAulay et al., 2019). However, the authors did not include exercise activities with music training in this study, so no motor control results were found. The authors alternatively look into using teaching materials that were designed specifically for older adults. Other functions like verbal fluency and visual memory were improved and cognitive function with this different approach. These results show a positive change in several brain functions, which is also a positive effect on brain plasticity. However, improvement is not limited to people with older brains and possibly deteriorating skills.

Auditory functions in the brain can also be enhanced through music training. Dittinger et al. (2018) found that specific auditory skills are developed with musical education. These researchers looked into foreign language perception and learning. The study compared professional musicians to people without formal music education. The administered tests asked participants to identify sounds, not in their native language and indicate which sound from their native language the new sound was most similar to. The musician participants did outperform the non-musicians, but only in one aspect of the testing. An interesting correlation was found between the neurological responses (brain activity) and the number of years the musicians had played. This correlation shows that the brain sections used when performing auditory discrimination tasks are influenced by music training, how much or how long they have been training. Because the researchers looked into a specific function and a few skills associated with it, they could find an immediate improvement of the brain when performing these specific tasks, which is an improvement in brain plasticity.

These improvements to cognitive, executive, and auditory functions can also be found in children. Habibi et al. (2018) studied children who had been given music training for two years. The musically educated children were found to have more brain activity during cognitive inhibition tasks than the other groups' results. Cognitive inhibition is the ability to pull pertinent information from a big pool of available information, such as a person picking out a conversation they are a part of while on a crowded street with background noise. The skills used during inhibition tasks were also improved during the study by Shimizu et al. (2018) with older adults with cognitive impairments. Research done by Huotilainen and Tervaniemi (2018) showed that auditory systems are also positively developed in children with music education. They put the brain functions that improve into two categories, high- and low-level functions. The low-level functions include skills attributed to better listening, such as pushing sounds to be processed more quickly. This function aids in picking certain sounds out of background noise and blocking those other sounds. High-level functions include automatizing simple motor tasks. Finger movements are simple motor tasks that often become automatized because when using a musical instrument, fingers control the sounds and intensities that come from the instrument. This means control of these movements is practiced continually to the point that they are not intentional movements but second nature that they do not have to think about to perform. These functions are

difficult to interpret as improvements to the brain. When the neural activity is tracked, these motor tasks require less activity due to the movement's automatic nature (muscle memory). Musical training has an amplified improvement to the brain functions of adults and children alike.

These authors showed that specific brain functions improve with musical training. However, the limits of this improvement are based on age and time training. The differences were evident based on whether the participants were trained before or during the studies. The difference between years and months of training shows more significant or longer-lasting improvements, which should be a main focus of improving the brain. There was no evidence of a general brain improvement but rather specific functions. Auditory functions and inhibition functions were found to be the most improved. There were also results showing that some motor skills were improved. Brain functions are a part of brain plasticity. The improvement of brain functions is a positive effect on brain plasticity because the functions of the brain work as a unit, so when parts of the functions increase in effectiveness, the functions as a whole work better.

Memory

The brain has two types of memory, working memory, and long-term memory. Working memory is where information is processed when it is immediately given. For example, lectures are usually given visually and/or orally. When students read or hear the information, it goes to the working memory, where the information is either stored for further processing or disregarded. The long-term memory is where the information kept from the working memory is stored. This part of the brain is where connections are made and where memories are recalled. Information kept in the long-term memory is often kept there because of repetition or intense emotions connected with the information. Both parts of memory are essential in brain plasticity.

Certain parts of the working memory are improved with musical training. Suárez et al. (2016) looked into the four domains of the working memory. The authors used tests to look at these domains and the effectiveness of their functions. The working memory domains are central executive function, phonological loop, visuospatial sketchpad, and the episodic buffer. First, the central executive function controls attention and includes perceptual speed skills. Perceptual speed skills are how quickly one can identify something or someone using defining qualities such as taste or sounds. Second, the phonological loop stores and uses auditory information. Third, the visuospatial sketchpad makes connections using visual and spatial cues from the environment, such as knowing what something would look like in a different place or orientation. Finally, the episodic buffer connects auditory, visual, and spatial information with long-term memory information, like knowing the couch is in a different spot today than it was yesterday. These domains of the working memory are all exercised when practicing instruments. This study was experimenting to see if the continued use of these domains from musical training would improve their function compared to those with no musical training.

The data from this study showed that some functions are improved. The overall working memory was improved in musicians compared to non-musicians, but looking at individual tests shows that some tasks showed no difference between the groups. The functions that were improved in musicians were central executive function and visuospatial function. The authors did additional research that found similar results that musical training is positively related to executive functions. The research also found studies similarly testing older adults. The results were similar to those in this study, meaning that the working

memory improvements last long-term with continued musical practice. The working memory is improved with musical training, and that affects brain plasticity. Without the working memory, the brain would not make new memories or experiences to learn from and change.

Long-term memory is also improved with musical training. Roden et al. (2012) found that school-based musical instrument instruction improved verbal long-term memory. Similar to how there are two parts to memory, there are two parts to long-term memory. The verbal and visual long-term memory are separated because different sections of the brain control them. The researchers tested both of these portions of long-term memory to determine if musical training only affected one or if both were improved. The participants were students from elementary schools, with the mean age being eight years old. These students were sorted into three groups; 45 minutes of weekly instrument practice and at-home practice, enhanced school curriculum, and no additional training or education. The students were tested three times in 18 months. They were tested with verbal and visual long-term memory tests and IQ tests, and demographic questionnaires to keep bias from the study. The verbal test included the students listening to 15 different words and recalling them immediately after they were given and 25 minutes after they were given. They were also asked to identify the 15 words from a list of 30 words. Participants were asked to memorize an object's path for the visual memory tests, which increased or decreased in difficulty with correct or incorrect answers respectfully. They were also given an image with a pattern on a chessboard of 16 squares, and this test also increased or decreased in difficulty. Participants younger than eight years old were given shorter starting sequences for both types of testing. The authors found that students receiving instrument training scored higher in verbal memory tests after 18 months of practice. However, there was no significant improvement with visual memory when compared to the other groups of children. This result concurred with previous research the authors referred to in the study. Without long-term memory, connections would not be made between ideas, and thus, no improvements would be made to the brain and how it works. Long-term memory is crucial to brain plasticity, so brain plasticity is positively affected when long-term memory is improved.

The evidence shows that there is an improvement to specific memory functions with musical education. The parts of the memory that are improved are directly related to music and musical instruments' practice. The central executive functions are used when playing music on instruments when reading from sheet music because there is a need to quickly understand the notes and produce them on the instrument. The visuospatial sketchpad is used when understanding patterns and learning how to apply the patterns to different music pieces. Verbal memory is continuously used because it includes knowing what the music sounds like and when the wrong note is played, which is stored and connected in the verbal memory. The parts of the memory that were tested showed similar results to those found with brain functions. There is no complete memory or brain function improvements, but specific improvements specific to parts of the brain and memory used when also playing an instrument. The whole brain is affected by improved memory and function, and thus brain plasticity. These aspects of brain plasticity can also be improved when the structure of the brain is improved.

Structure

When the brain learns a new task or new information going into the long-term memory, it turns the information into electrical signals that run through the brain via neurons. Neurons are the cells that make up the nervous system (including the brain). When these neurons attach to other neurons, there is a connection of information. Eventually, enough neurons are joined to create a network of connections.

These networks are developed throughout life, but the connections can be developed faster or more frequently based on experiences or learning, such as musical training. There is a layer around neurons called the myelin sheath. It allows the neurons to send the signals quickly and efficiently. These are structural parts of the brain that affect every part of the body, from movement to metabolism. So, when these structures have improved, the brain itself is improved to perform functions further better.

Part of the research Huotilainen and Tervaniemi (2018) did include looking at children's structural development. There are observable differences in the brain that relate to and control motor skills, somatosensory (senses of pain, position, and movement) information, and auditory functions. These differences have to do with the brain's folds. The folds increase the surface area of the brain. The surface area is directly related to the control of parts of the body like fingers and legs, so more surface area means better control of movements. There is also a difference in neurons' density and connections, neuronal metabolism, and more myelin coverings on neurons. The authors look into studies that looked for these changes by testing and imaging before and after musical training starts. The studies have found that these changes happen over time. However, they start when music education begins, and these changes do increase brain plasticity.

In addition to studying brain functions of children participating in music, Habibi et al. (2018) looked into the developmental differences of the structure of the brains of the students. This longitudinal study trained students who were six to seven years old in musical instruments, sports, or had no extra training. The article was written two years after the study started, so the structures of six-to-seven-year-old children were compared to eight-to-nine-year-old children. Normal brain development for the age group of the participants includes cortical thinning over the whole brain. This thinning happens because the cortex is no longer needed. It is only essential when a person is an infant and learning perception, language, memory, and consciousness. The study found that there was increased thinning on the side of the brain associated with auditory functions. They also looked at functional images (MRI images taken while the student was performing a test) and found that the music training group participants exhibited more neural activity than those in the control group. The activity shows that there are more connections between neurons used in those tasks and other neurons. Increased development leads to enhanced brain plasticity because the brain can change when neural connections are better and more numerous.

Musical training changes the development of the structures within the brain. With increased neural connections and better pathways to send and receive information, brain plasticity is positively affected. Musical training increases the number of connections. The connections are used in other applications such as inhibition functions or even memory. These connections' efficiency increases, leading to better performance of bodily functions and brain functions like memorizing and recall.

Conclusion

Musical training is correlated with improving brain functions, memory, and brain structure. In two of the studies, the authors used students as their participants. They provided training in musical instruments, sports, challenging school curriculum, or nothing. The researchers found that the students who learned how to play musical instruments had improved brain functions, memory, and brain structure development. Huotilainen and Tervaniemi (2018) suggest that these findings should result in better music education in schooling or music engaged learning. They wrote about how children, especially children with learning disabilities or children with developmental delays and deficits, would benefit from

any music involvement in the learning environment (music engaged learning). This is backed up by statements made by Shimizu et al. (2018) and MacAulay et al. (2019) that while musical training positively affects most people no matter the age or mental state, they suggested that training children in musical instruments would provide the best results for positive effects on brain plasticity.

Musical training affects some brain functions, some parts of memory, and the development of the brain's structure. These aspects of brain plasticity are connected. The improved brain functions are executive functions, cognitive functions, motor functions, and auditory functions. The enhanced memory parts were the central executive and visuospatial sketchpad of the working memory and verbal long-term memory. The brain's auditory processing and connecting structures were more developed in those with musical education. All of these specific parts of the brain are used when learning musical instruments. When the brain structures that manage auditory portions of information are more developed because of music, the auditory functions are improved, and so is the verbal memory. When neural connections are strengthened and more numerous, movements and connecting ideas in the outside world become more effortless. Musical training positively affects brain plasticity because it improves these integral parts of the brain. Adding musical training into lives can improve them in ways that are beyond what has been studied now. However, with the information that is present, there are positive and universal enhancements to the brain.

Works Cited

- Dittinger, E., D'Imperio, M., & Besson, M. (2018). Enhanced neural and behavioural processing of a nonnative phonemic contrast in professional musicians. *European Journal of Neuroscience*, 47(12), 1504–1516. <https://doi-org.proxy.li.suu.edu:2443/10.1111/ejn.13939>
- Habibi, A., Damasio, A., Ilari, B., Elliott Sachs, M., & Damasio, H. (2018). Music training and child development: a review of recent findings from a longitudinal study. *Annals of the New York Academy of Sciences*, 1423(1), 73–81. <https://doi-org.proxy.li.suu.edu:2443/10.1111/nyas.13606>
- Huotilainen, M., & Tervaniemi, M. (2018). Planning music-based amelioration and training in infancy and childhood based on neural evidence. *Annals of the New York Academy of Sciences*, 1423(1), 146–154. <https://doi-org.proxy.li.suu.edu:2443/10.1111/nyas.13655>
- MacAulay, R. K., Edelman, P., Boeve, A., Sprangers, N., & Halpin, A. (2019). Group music training as a multimodal cognitive intervention for older adults. *Psychomusicology: Music, Mind & Brain*, 29(4), 180–187. <https://doi-org.proxy.li.suu.edu:2443/10.1037/pmu0000239>
- Roden, I., Kreutz, G., & Bongard, S. (2012). Effects of a school-based instrumental music program on verbal and visual memory in primary school children: a longitudinal study. *Frontiers in Neuroscience*, 6, 572.
- Shimizu, N., Umemura, T., Matsunaga, M., & Hirai, T. (2018). Effects of movement music therapy with a percussion instrument on physical and frontal lobe function in older adults with mild cognitive impairment: a randomized controlled trial. *Aging & Mental Health*, 22(12), 1614–1626. <https://doi-org.proxy.li.suu.edu:2443/10.1080/13607863.2017.1379048>

Suárez, L., Elangovan, S., & Au, A. (2016). Cross-sectional study on the relationship between music training and working memory in adults. *Australian Journal of Psychology*, *68*(1), 38–46. <https://doi-org.proxy.li.suu.edu:2443/10.1111/ajpy.12087>

Expressive- English 2010

1st Place Winner: Amelia Naumann, "What Makes a Monster and What Makes a Man"

For Professor Rhett Cooper

I was raised with three protective brothers, a loving and loyal father, and an absentee mother. A masculinity rich environment has always been a part of my life. While other girls braided hair and played house at recess, I smashed Power Ranger action figures attached to toy trucks into sand castles made to be destroyed. This was not because I disliked other girls and the activities they did, I just preferred and understood what boys did. Plus, boys in my elementary school were more than happy to have me. We would arm wrestle for fruit snacks, re-enact Star Wars for hours, and pull out each other's loose teeth. I got along with boys marvelously while never really being a tomboy myself. However, those relationships were short lived, stamped out by a force I did not fully understand at the time. Sixth grade is when things started to change. I got boobs and my friends got balls and somehow that changed not only our bodies, but our relationships. I will never forget the feeling when a boy I had met in 2nd grade that shared my interest in matchbox cars and baby otters called me a "piece of ass." We were in 7th grade.

I understand why this change happened a little more now; he had to put on a show for the world, and in a way I don't blame him. He could no longer simply be friends with me. I was now just a girl to be admired, a crush to conquer maybe, but not a friend. Not only because I was a girl, but because I knew things about him I am positive he wanted no one else to know. I knew he loved matching shoes with coordinating socks, that he was a sympathetic crier, and that his mother was his best friend. That is dangerous information to have held against you in Jr. High. After that friendship ended, we educated ourselves in our gender roles and learned to fit into the boxes presented before us. He went onto being a football player and a regular player. He dated half the school, shoved around kids who were smaller than him, and turned the girls he kissed into tally marks instead of recognizing them as people. I went onto gossiping about things with other girls, and letting them braid my hair. Hannah Gadsby, comedian and LGBTQ+ activist, summarized the feelings I had at that time in a single sentence. She says, "I don't hate men, but I wonder how a man would feel if they would have lived my life" (Gadsby). I don't hold anything against my former friend. His actions were a product of something bigger than our elementary school relationship, but the memory still stings. Because the act of making me feel less human made him feel like more of a man. A part of me wishes he understood that, but I don't think he ever will. Despite all this, I've always known my friend who used to play matchbox racers with me and coo over baby otters is still there. You don't call your friend a piece of ass in 7th grade without conditioning.

Maybe it was his family dynamic, popular movies, mean coaches, puberty, or insecurity brought on by the pressure of friends, but something made this boy I loved like a brother into a person I did not recognize. Mark Greene, senior editor of articles produced by the "Good Men Project" wrote, "America's pervasive homophobic anti-feminine policing has forced generations of young men to abandon each other's support at the crucial moment they enter manhood" (Greene). I did not know it at the time, but my friend had fallen into an age old trap set by men, for men. He was no longer allowed to have meaningful, loving relationships; not only with me, but everyone around him. If he did, he would fall subject to ridicule or somehow be deemed less than his fellow men. While a man's lack of "girly"

friendships and tendencies makes him more admirable in the eyes of others, it also makes them catastrophically isolated. You can't cage a pack animal alone and expect them not to lash out in violent ways. This is only one case where I have watched masculine pressures turn someone from a boy into a man, and a man into a monster.

However, in my experience, masculinity itself has never been a bad thing. Given a "choice" or outside the pressure of society, I believe that most men would still act like a "man". Cliques are cliques for a reason. We know that traditionally, masculinity norms aren't great for men. Studies have linked these norms to physical and mental health problems, among other harmful tendencies. But that doesn't mean there's no healthy way for men to express masculinity. I know it's possible to be masculine yet a gentleman, because I know more of that kind of man than the kind I write about now. But fostering a safe environment for boys to grow into men is no easy task. Natascha Yogachandra, a contributor at Narratively and the chair of the Hope is Life Foundation, reported on teaching positive masculinity. Facing History High School in New York City started a program has been adopted to teach young boys not only what makes them men, but what makes them human. Yogachandra reports, "The purpose of these programs is to give boys the chance to rethink maleness, and to change the way men treat women and each other. The group isn't for the weak-minded. This is for people who have strong minds; who are willing to step up to the plate and really become a young man" (Yogachandra). So what is this group's idea of masculinity? In their course, they focus on the treatment of women, healthy ways to deal with emotions, self care, and--most importantly--what makes them happy. For some boys happiness comes through dance and makeup, while others find joy in basketball and car models. These open discussions display how they are different, but also how they are the same. In other words, what makes them men. In this viewpoint, masculinity is simply something a man chooses to do.

While masculine traits can certainly be positive, on a broader scale these norms tend to turn toxic. Masculinity has become an expectation, not a choice. We soak young boys in poisonous pools that promote competitive and assertive natures and are surprised when they come out stained with feelings of inferiority or dictatorship. The shame we put on men can turn into violent outbursts, from barfights to abuse, rape to murder. It can also lead to years of untreated mental health issues, solitude, and suicide. Joe Ehrmann, seasoned player and coach for the NFL said, "We have constructed an idea of masculinity in the United States that doesn't give young boys a way to feel secure in their masculinity, so we make them go prove it all the time" (Ehrmann). Coach Ehrmann has spent his career around football players, alpha males who constantly try and assert their dominance. These men can be viewed as the gold standard for a "true man". This coach and former player knows better than anyone the lengths insecure men will go to to keep their masculine mask on. This kind of masculinity we tend to lean towards in the United States is exactly what is damaging your everyday man. Every action a man makes--how they speak to other men, how they interact with women, how they express love, or even touch others--factors into the algorithm of if they are man enough. They are constantly in danger of outing themselves as anything less than that. With this concept lies the true dangers behind masculinity. Boys, teenagers, and grown men will go to desperate measures to prove not only to others, but to themselves, that they are men.

We not only encourage but romanticize this crushing pressure we put onto little boys to act as dominant males. This is done by filling them with ideals of how they should act everyday. Then, after applying years of peer pressure and after they have proven themselves as men, we allow them to act as they wish. After this conditioning is done, we begin the excuses. "He's mean because he likes you", "that's a

man's place", and the crowd favorite, "boys will be boys". This point is illustrated perfectly in "Hegemonic Masculinity" written by R. W. Connell from the University of Sydney, Australia, and James W. Messerschmidt from University of Southern Maine. They write, "Men's behavior is reified in a concept of masculinity that then, in a circular argument, becomes the explanation (and the excuse) for the behavior. This can be seen in many discussions of men's health and problems of boys' education—indeed, any of the contemporary troubles assembled under the banner of a "crisis in masculinity"" (Connell, R. W.; Messerschmidt, James W). We force men to face this crisis everyday, making them question if they are even worthy of a key part of their identity. When you look at masculinity through this scope, the word turns into an emotionally charged idea of the pressures on modern young men.

This crisis of masculinity is all around us, from high school sports teams to our own living rooms. By constantly trying to define what it is to be a man, we are murdering personalities of individuals and filling the corpse with carbon copies of ideals. Men are tough, strong and independent. Men are rigid, dominant and selfish. Men are aggressive, assertive and sexually active. Men are all the same. It is these ideas that have turned the word masculinity from a simple association with men to a domineering expectation of them.

While on a panel discussing what it takes to be a man in modern society, Mike Reynolds stated "If boys like robots and math and science, great, but they have to be equally accepting of boys who like princesses. It's a constant discussion with my kids about what being a boy or what being a girl means, and also what it doesn't mean" (Reynolds). From this statement, I take that femininity can be toxic in the exact same way as masculinity. It's simply putting a person into a constrained box of ideals because of their genitalia. Women have been tirelessly tearing down walls the patriarchy has put them into for years. From the right to vote, to own property, to receive an education, or simply wearing pants and liking superheroes. Valiant efforts from women all over the world and over several centuries have been made to normalize women with "male interests". Women pursuing careers in male dominated fields are becoming more normalized, while men in female dominated fields of study are not quite as steady. If I were to wear a T-shirt featuring comic book characters nobody would bat an eye, while a teenage boy wearing a T-shirt featuring Disney princesses would be shameful and bizarre. While women have a long way to go before the patriarchy attitudes recognize them as equals, the male population has a much longer fight ahead of them to accept their fellow brothers.

Telling anyone how they should feel, how they should act, or what they should wear is disgusting, but especially so when you are doing it to young mold-able minds. Little boys developing into adults are vulnerable. Their brains are still making connections, their personalities still unformed, and their hormones make life that much harder. When you take a developing mind and hammer into it that "men are always the strong ones, they have the power, don't cry, men dress in this way and take up interests in specific things," it becomes a part of them they can't shake, no matter how badly they might want to. Masculinity is simply a word we lace onto specific traits, behaviors, and activities we associate with the male sex. But Masculinity has a tendency to run out of an association with an activity, to a dictator of an activity. Masculinity is how we desire men to act, and when they do not meet our expectations, we force them to change. It is in this way, masculinity has a tendency to not breed men, but monsters.

Works Cited

- Connell, R. W.; Messerschmidt, James W. "Hegemonic masculinity; rethinking the concept" *Gender & Society* December 2005 (<https://journals.sagepub.com/doi/abs/10.1177/0891243205278639>)
- Ehrmann, Joe "The Mask you live in" a documentary. *The Representation Project* (<http://therepresentationproject.org/film/the-mask-you-live-in-film/>)
- Gadsby, Hannah "Nanette" a comedy special. *Netflix* 2018 (<https://scrapsfromtheloft.com/2018/07/21/hannah-gadsby-nanette-transcript/>)
- Greene, Mark "Why Do We Murder the Beautiful Friendships of Boys?" *Man, Interrupted* July 2017 (<https://medium.com/s/man-interrupted/why-do-we-murder-the-beautiful-friendships-of-boys>)
- Reynolds, Mike "What does it really mean to be a man?" *The Washington Post BrandStudio* (<https://www.washingtonpost.com/brand-studio/harrys/what-does-it-really-mean-to-be-a-man>)
- Yogachandra, Natascha "Teaching Positive Masculinity" *The Atlantic* May 2014 (<https://www.theatlantic.com/health/archive/2014//becoming-men-teaching-positive-masculinity>)

2nd Place Winner: Dakin Sundeen, "A Changing Landscape"

For Dr. James Aton

We called the place The Ranch, despite it not being one for quite some time. I don't know the exact history of the land, but it was dealing with changes then. The Ranch was over a mile from the pavement, following a dusty road opening up to an elysian preserve of earthy beauty. If one looked towards the east at the hills, they could believe that a wild expanse surrounded them, until the dull roar of an engine above spoils the moment. If one looked west, the entire San Francisco Bay Area would dominate the view. The land existed in a state of flux then; we knew most of it would become a park, and the rest a golf course surrounded by McMansions. But we didn't see where the divide would be. Progress is the mantra of the region, whether social or technological. Our ethos was not in opposition to change, but concerning what the cost may be and to whom. Because of the potential of permanent modification to the land, I became very intimate with the Oak trees, golden hillsides, and wildlife that made living there unique.

The hills rise up to embrace the fog, holding it tight to prevent it from sneaking inland. Fog envelops the morning landscape in grey eeriness, burning off under the gaze of warm sunshine. On the hilltops, there is an expanse of grass rolling and titillating the skies. The contours resemble my girlfriend's hips when she lays on her side, repeating on in imperfect copies. Gullies dive down into dense mazes of chaparral. Afternoon winds lightly quake the grass while taking the wind-borne seeds onto their next destination. The grasses provide food and cover for wildlife but are also routinely trimmed by mowing future hamburgers. There are only two seasons in the East Bay, and the hills indicate which one we are in. During the wet season, the hills become a shocking green that harkens to the land of Eire. But after only a few months, they return to the golden shimmer of the dry season.

For a short period in the seasonal transition, wildflowers explode with color onto the hillsides. Poppies provide the yellow fire, while the Douglas iris offers a refreshing blue contrast. Blue-eyed grass inserts purples, and sky lupin introduces pale blue. All of these colors and more combine with green grass in a kaleidoscope of colors on a hillside. One must be lucky with their timing to find these wonders. They only arrive for a few months, and even then, one must find a sunny day in the rain. But the rewards are worth the wait and extracting hard clay from hiking boots.

Stands of coastal live oak huddle together, dotting the landscape resembling heads of broccoli. Thick grey trunks rise out of the ground, breaking the pocketknives of those who dare to carve them. Their dark and wizened branches twist and curl in an arthritic manner, rising upward to a thick canopy of small leaves. Even in the hot Indian summer of September, the leaves remain dark green, holding onto their color until their service is up. Under each oak, the dry brown veteran leaves carpet the ground, cracking underfoot to speed up their process of decomposition. Among the fallen are hard cylindrical acorns ending in a sharp point. When attached to the mighty oaks, the acorns wear a small hat as worn by Russians. Some continue to sport this cap after falling, but most lose it at some point. They mix among the oak duff, providing sustenance to ambitious beings willing to scrounge for them. Birds, rodents, and the indigenous Ohlone people rely heavily on acorns for food. Acorn mush was the first solid food I ever ate. But more importantly, the few acorns that miss the grasp of the gatherer will continue the long life of the oak.

Vast forests of oak stood watch over this land for hundreds of years. Many of the very trees I walked under observed the massive city across the bay crumble and burn in 1906. Some can remember when they provided food to the Ohlone people, but those are the survivors. Many were lost to build the cities that dominate the area. At the same time, thirsty and invasive Eucalyptus encroached on what was left. The oaks stand in silent solidarity against the drastic changes around them, the wind shaking them disapprovingly at the disappearance of their once vast forests. Now their worry is a fungus, possibly brought from elsewhere, that causes oozing red sores upon their bark. This new threat may remove a near-permanent foundation of the grassland ecosystem. I can't imagine the hills without the broccoli florets of oak trees. Still, I couldn't imagine ever leaving that land until I did.

Three graceful figures raise their heads and hurriedly glance towards the noise. Black Tail Deer rely on the grasslands for grazing and the oak stands and chaparral for protection. They quickly dash off on skinny legs supporting slender bodies while their ears twitch sporadically in each direction. The doe and two fawns abruptly stop and look back like a bored shop-girl, annoyed you needed her assistance. Black marbles with glints of sunshine shoot back in fearful annoyance while furry round ears circle for other visitors. Their vulnerability betrays their nobility. Persistently avoiding what predators are left, besides the occasional rifle or Lexus bumper, they continue in a state of evolutionary fear. Grizzly bears once hunted deer here, but now the silent hunter of mountain lions is all that remains. The deer continue to dash away from danger, no matter how harmless. Even the mighty bucks possess some fear, as they are rarely seen but much desired. The deer continue to adapt to the changes in their flighty manner, always running and stopping to look with their ears spinning.

Below the grasslands and oak woodlands is the thick impregnable barrier of chaparral. This border wall provides the means of preventing anyone from just hiking straight up the hills. A dense mix of poison oak, chamise, scrub oak, and manzanita make up a sharp labyrinth of vegetation. Passages continue upwards, then back down to end abruptly, while branches reach out to scratch unarmored limbs. The only ones with any sense of navigation in this mess are the wildlife that rely on it for cover. Deer, foxes, and even mountain lions dive through the many tunnels deep into the scrub, avoiding the humans who are stopped by endless pointy thorns and branches. Prey can find some protection, while predators enjoy a concealed position before their attack. This condensed sanctuary is full of life yet fills me with dread. I can feel old scratches on my arms and legs, reminding me of a tight maze of chaparral I once tried to traverse. My remembrance of chaparral is hot steep terrain, with bushes taller than my six-foot frame. I hope to leave it to the wildlife for as long as I can.

One of the denizens deep in the chaparral is the wily grey fox. They resemble a small to medium dog, but with a catlike face. The coloration is mostly grey, with burnt orange underneath. Like many natives of the Bay Area, the grey fox is losing its neighborhood to transplants from the east. The only tree-climbing canid in the Americas is losing its habitat to deforestation. Without the oak and bay laurel to climb up, grey foxes are at higher risk to predators and can't find food sources in the trees. As a result, the red fox moves in, as it's better able to adapt to urbanization. Because the grey fox is nocturnal, many people do not realize they are there and think red foxes must be native as they fit the conventional image of a fox. Grey foxes increasingly find themselves outnumbered, with very few places to go. They must continue to rely on their cagey nature to survive, but for how much longer? The species as a whole are thriving across the country, but in the Bay Area, they are losing their home, and no one seems to care. I feel a sense of kinship with the grey fox because we both have generations of history in the area, and

increasingly feel that it's no longer our home. I have the luxury to leave, but like many natives of the region, the grey fox is stuck.

A burst of grey footfalls explodes out of the chaparral screaming, "Chicago!" These are the California quail, the state bird, and another lost native of the area. Their distinctive forward drooping plume looks like a pompadour, while their short stature causes chuckles when they run across the road. When I was younger, I would watch a brood run across the streets, but now, thanks to domestic cats and habitat loss, this ground-dwelling social bird is typically seen alone. However, like most Californians, they found a way into the rest of the West and the world.

Other birds serve their purpose to the land. High above the red tail hawk watches sentry over the grasslands, searching for a small rodent morsel. The morning tranquility is broken by the squawk of a Steller's jay. Acorn woodpeckers gather food to fill their storehouses for the cold and wet season. They all sing and dive among the oak trees, riding updrafts to rise above the cacophony below them. Within the wild hills, they are relatively safe, but they must cope with change as well. Invasive plants and insects replace native ones, harming the native bird's food supply. And the pesticides used to combat the invaders weaken successive generations of native fowl. Like long-term residents of a once prosperous urban core, native birds persist with what they have left.

The land had not always been as wild as it was then. The remnants of its former ranching occupation laid scattered about like the remnants of a long-lost civilization that worshipped rusty cars. Stone foundations and walls emerged from the ground in select spots, grasping for someone to remember them. Nature's reclamation project advanced upon an earlier generation of human modification with success, giving hope to the disheartened natives. Eventually, progress must meet the simple economics of nature and lose. Nature's victory is symbolized in a Poison Oak bush consuming a decrepit Ford Model A. Despite the continued incursions of people into this place, it would remain very wild.

Argumentative- General Education 1000

1st Place Winner: Alayna Haas, "An Explanation of a Coach's Impact"

For Dr. Kristen Graham

It's the bottom of the seventh inning, two outs, runner on third. The score is tied four to four. What kid would you want walking up to bat? The kid that's mentally tough. There are a lot of different ways to define mental toughness, but it is said that it exists with or in reply to adversity (Middleton, 2004). Mental toughness is an area that every athlete works to improve, and it has been found that coaches have an immense impact on the growth of their athlete's mental toughness. Coaches affect the mental toughness of their athletes by providing a positive practice environment, being a role model, and teaching positive psychological tools.

Research shows that when coaches create competitive, game-like practice situations that are physically challenging, athletes are more prepared and perform better on gameday. This common theme shown throughout multiple studies revealed that athletes prefer intense and pressurized practices because they feel that it strengthens their mental toughness and helps them perform better under pressure and during competition. It was also found that tough physical conditioning was highly important. It allows the athletes to feel confident and gives them a mental edge that helps them push harder and through adversity. In Joanne Butt's study, she interviewed athletes and one stated that it's imperative to be stretched at practice and asked to give everything you have if you want to be mentally tough during the actual competition (Butt, 2010). When coaches set up challenging practices meant to push the athletes, the athletes' performance improves, especially during stressful times. It is also mentioned that physical toughness and endurance are directly related to mental toughness. By building physical strength, athletes are able to display their mental toughness. Physical conditioning allows the athletes to have a strong mental edge and helps them to exercise using mental toughness and cope with difficult situations. It is believed that being in a good physical condition is essential before displaying mental toughness and leads to increased levels of confidence in themselves. Mental toughness seems to feed off of good physical conditioning and it is easier to display mental toughness when you are accustomed to it (Butt, 2010). Coaches that design competitive and intense practice environments build athletes with increased levels of mental toughness that allows them to perform better in competition. Within having a tough practice environment, athletes have intensified mental toughness when their coaches create friendly rivalries between teammates during practice. These rivalries and competitions between teammates allow them to push each other, hold each other accountable, and build a strong work ethic. This builds mental toughness because teammates are able to challenge each other to work harder and improve their skills, even when they are fatigued. This also creates more game-like situations and heightens the level of competition and intensity during practice, which is very important for the success of the athletes (Butt, 2010). Holding intense practices is extremely effective in building mental toughness, and coaches can also enhance this skill by being a strong role model.

Athletes feel that when their coaches are good role models by demonstrating leadership skills, being confident and supportive, and handling pressure well, their mental toughness is positively influenced. There are so many different ways for coaches to be role models for their athletes. A common theme

found is coaches that display leadership skills increase the development of mental toughness of their athletes. Declan Connaughton from the Cardiff School of Sport explains that leadership skills in coaches are able to nurture mental toughness in athletes and pass those desirable skills onto them (Connaughton, 2008). By having coaches that demonstrate strong leadership skills, athletes are able to look up to a positive role model and learn important attributes to build mental toughness. Along with strong leadership capabilities, coaches that radiate confidence are also effective in building mentally strong athletes. Studies found that when coaches project a confident image, the athletes feel that they can depend on them to handle pressure well and trust that they have control of the situation (Butt, 2010). This in turn leads the players to feel that they can do the same. This confidence in their coaches translates to confidence in themselves, which is crucial when working to build mental toughness. As well as presenting leadership capabilities and confidence, coaches that are supportive and motivating are essential to building mentally tough athletes. Robert Weinburg shares how coaches found that being nurturing and focusing on what the athletes are doing right, instead of what they need to improve on, is crucial (Weinburg, 2016). Coaches that provide positive feedback and support both at practice and outside of it can create meaningful relationships with their athletes. Daniel F. Gucciard from the School of Sport Science, Exercise, and Health explained that developing that relationship between coaches and athletes has been found to be one of the most important aspects in developing important life skills (Gucciard, 2009). By building these strong relationships, the athletes know that they can trust their coaches and learn from their knowledge and expertise. This trust allows the coaches to give feedback and criticism, as well as have high expectations and demand excellence. Athletes find that they can see greater improvement when they can trust their coaches' criticism and know that they will be held accountable for their efforts. These relationships make it possible for the improvement of athletic skill and the construction of mental toughness, and make it easier for coaches to teach their athletes psychological tools.

When coaches take the time to teach their athletes positive self-talk, emotional control, and other psychological tools, mental toughness increases. There are many positive correlations found between the use of psychological tools and mental toughness. According to Butt, when mental skills are fervently being taught, mental toughness is embodied (Butt, 2010). When coaches focus on teaching their players psychological tools, they are able to learn and use the skills for themselves to actively cope despite adversity. Mick G. Mack explains that there are compelling relationships between mental toughness and using various psychological skills which confirms preceding research and supports the instruction that coaches should teach mental skills (Mack, 2019). One of the most important psychological tools for coaches to teach their athletes is positive self-talk. Mack also states that self-talk and being able to control their thoughts is the most crucial part of being a mentally tough athlete (Mack, 2019). By using self-talk, they are able to manage their concentration, handle stress, and be a stronger performer. This powerful psychological tool is extremely beneficial, especially when coaches teach their athletes how to use it. Doing so can build their confidence and help them have the mentality to push through challenges and persevere. They have better control over their emotions and can handle themselves in stressful situations, which in turn allows them to perform better. Being able to control their emotions allows them to be more confident and not let defeat or frustration affect their performance as drastically as it could. Andrew P. Driska found that athletes who are mentally tough already use psychological tools in general, and athletes who use psychological tools become more mentally tough (Driska, 2012). Overall, psychological tools are proven to be one of the most fundamental ways to develop and increase mental toughness. They allow athletes to stay composed under pressure, both in competition and in life.

Athletes that used these tools were able to remain level headed during job interviews, exams, and other stressful situations outside of the gym. Coaches who teach psychological tools to their players are setting them up for success and enhancing their mental toughness.

Coaches are one of the most important influences of building mental toughness. Their actions impact the lives of their athletes and how successful they can become. They bolster the mental toughness of their athletes by being a role model, creating positive practice environments, and teaching helpful psychological tools. It has been proven that coaches are the most significant authority in developing mental toughness (Gucciardi, 2009). Their influence can incredibly strengthen the mental toughness of their athletes, which allows them to perform at a higher level and makes them more likely to succeed both in competition and in life.

Works Cited

- Butt, J., Weinberg, R., & Culp, B. (2010). Exploring Mental Toughness in NCAA Athletes. *Journal of Intercollegiate Sport*, 3(2), 316-332. <https://doi.org/10.1123/jis.3.2.316>
- Connaughton, D., Wadey, R., Hanton, S., & Jones, G. (2008). The development and maintenance of mental toughness: Perceptions of elite performers. *Journal of Sports Sciences*, 26(1), 83-95. doi:10.1080/02640410701310958
- Driska, A. P., Kamphoff, C., & Armentrout, S. M. (2012). Elite Swimming Coaches' Perceptions of Mental Toughness. *Sport Psychologist*, 26(2), 186–206. <https://doi.org/10.1123/tsp.26.2.186>
- Gucciardi, D., Gordon, S., Dimmock, J., & Mallett, C. (2009). Understanding the coach's role in the development of mental toughness: Perspectives of elite Australian football coaches. *Journal of Sports Sciences*, 27(13), 1483–1496. <https://doi.org/10.1080/02640410903150475>
- Mack, M. G. (2019). An Examination of the Relationship Between Mental Toughness, Psychological Skills, Coaches' Ratings, and Athletic Performance. *Journal of Sport Behavior*, 42(2), 142–157.
- Middleton, S. C., Marsh, H. W., Martin, A. J., Richards, G. E., & Perry, C. (2004). Discovering mental toughness: A qualitative study of mental toughness in elite athletes [R]. Weinberg, R., Freysinger, V., Mellano, K., & Brookhouse, E. (2016). Building Mental Toughness: Perceptions of Sport Psychologists. *Sport Psychologist*, 30(3), 231–241. <https://doi.org/10.1123/tsp.2015-0090>

2nd Place Winner: Isabelle Packham, "Hamlet's Repressed Love"

For Professor Joy Sterrantino

There's little denying that Shakespeare had intimate relations with men from the evidence found in his sonnets. In them, Shakespeare describes an adoration of a man with "a woman's face" whom he calls "the master mistress of my passion" (Hermes). This raises questions as to whether or not Shakespeare wrote queer coded characters as an extension or expression of himself. One of these characters may very well be the Prince of Denmark: Hamlet. Shakespeare's *Hamlet* depicts a young prince who's riddled with grief over his father's death and his mother's quick remarriage to Claudius, his uncle. He then encounters the ghost of his father who tells him that he was murdered by Claudius and implores Hamlet to avenge his death. This inciting incident prompts Hamlet to vow a life of revenge and disguise himself as mad to protect his motives from those he can't trust. This causes tension between him and Lady Ophelia as it's alluded that Hamlet loves her, but when it comes down to it, he cannot trust her. Among the few he can trust, is a scholar named Horatio whom Hamlet is very close. Throughout the play, their relationship grows to a point where Horatio is his most trusted confidant and companion. Although Ophelia is portrayed as the supreme love interest in Shakespeare's *Hamlet*, her relationship with Hamlet is much less relaxed and natural than when he's with Horatio. This gives the impression that he is a repressed Homosexual and is mimicking what he perceives as love with Ophelia.

Hamlet has many intimate conversations with Horatio that seem more endearing and heartfelt than his conversations with Ophelia. One example of these touching scenes is in act three when Hamlet expresses how Horatio is the most principled and just man he's ever talked to. Followed by his statement that since he could distinguish between men, Horatio was the one that he'd chosen to be "sealed" to (Ham 3.2.69). Not only is this an immense compliment of Horatio's character, but it alludes to Hamlet confessing that Horatio is his chosen soul mate. He then recounts how much he admires those whose judgments and emotions are well-coordinated, saying "Give me that man That is not passion's slave, and I will wear him In my heart's core, ay, in my heart of heart, As I do thee.—Something too much of this.—"(Ham 3.2.76-79). Therefore Hamlet is not only confessing that he sees Horatio as a soulmate, but that he loves him as well. Also, when he says "hearts core" he is referring to the placement in which he holds Horatio. This alludes to a much deeper love than that of a friend. However, one can detect Hamlet's dismissal of his declarations when he says "something too much of this" seems as if he is saying that he was exaggerating. On the other hand, it could be a declaration of how his feelings are so profound and that they are too much to bear. In this manner, one can sense Hamlet's repression of his true feelings and how he deeply struggles with expressing himself.

Another element of the play that alludes to Hamlet's repression is his general demeanor and his talent for deceiving others. It makes logical sense that he'd have success disguising himself as a mad man if he'd had something to hide all his life. After all, if Hamlet had to bury his admiration for the same sex, it can be inferred that he'd have much practice and acting talent. When actors begin to act they aren't perfect; just like any other skill, it must be cultivated. The audience can therefore infer that Hamlet has had something to hide for his whole life. In addition, there are strong ties to sexual repression and disgust for people who do express themselves sexually. In an article written by Crystal Raypole, a writer for the *Healthline* and editor of *Goodtherapy*, she states that a negative emotional association with sex

from an early age could result in “negative views toward people who freely express their sexuality” (Raypole). There are many instances in the play of Hamlet putting down his mother for remarrying too quickly. For instance, he persecutes Gertrude by saying that she is “honeying and making love/Over the nasty sty” (Ham 3.4.105-106). In a different tirade with Gertrude, Hamlet expresses his disgust over her sexual grievances by imploring her to “Confess yourself to heaven; Repent what's past; avoid what is to come; And do not spread the compost on the weeds To make them ranker” (Ham 3.4.165-167). That being said, it is evident that Hamlet is experiencing repression through the abhorrence of his mother’s sexual relations and his talent for disguising himself.

Another aspect of Hamlet’s repression is his relationship with Ophelia. Although she is primarily seen as his love, there’s cruelty and apathy in the way Hamlet expresses his so-called “love” which leads the audience to believe that Hamlet may only be involved with Ophelia to put on airs. In Hamlet’s first interaction with Ophelia, he degrades her to the status of a whore because she lied about her father’s whereabouts to preserve herself in her father’s eyes. Surely Hamlet must realize how callous he’s being since he is smart enough to recognize that there is someone who is spying on them to begin with, so how could a white lie rile up or justify those cruel words? In short, they don’t. There’s a sense that Hamlet didn’t care for her that much to begin with. Even if those actions were motivated with the intent to be perceived as unhinged and mad, Shakespeare didn’t write in any remorse for his actions in Hamlet’s character; thus inciting the idea that Hamlet had been using her as a pawn from the very start.

This thought is justified by the poorly written love letter that was given to Ophelia. To summarize an already short letter, Hamlet writes that she can doubt science and man’s words but that she must never doubt that he loves her, and then he reiterates by writing “ I love thee best, oh, most best, believe it” (Ham 2.2.131). His repetition and desperate plea for Ophelia to know that he loves her gives the impression that he’s attempting to manipulate her into loving and believing him. In addition to this, the incongruence between his speech and writing is profound. The difference is almost to the point where it is very difficult to believe. Although he says he is a poor writer, that does not explain how he (as a character) can speak into existence one of Shakespeare’s most famous monologues, “To be or not to be” (Ham 3.1.64).

Hamlet’s character is one that is composed of deep mistrust and unruly emotions. However, he found security in his relationship with Horatio that wasn’t present in any other relationship he had. Horatio was the only character Hamlet fully confided in and their relationship was so intimate that Horatio wanted to take his own life once Hamlet was dying. These comfortable and loving interactions coupled with the indications of sexual repression makes for a complex queer coded character. From Hamlet’s acclamation of love to his apathetic relationship with Ophelia, it is not difficult to conclude that Hamlet was a repressed homosexual character.

Work Cited

Bergmann, M. S. (2017, September 14). The inability to love and inability to mourn in Shakespeare's Hamlet. *The Psychoanalytic Quarterly*, Retrieved November 11, 2020, from <https://doi.org/10.1002/j.2167-4086.2009.tb00398.x>

- Hanson, Elizabeth. "Fellow Students: Hamlet, Horatio, and the Early Modern University." *Shakespeare Quarterly*, vol. 62 no. 2, 2011, p. 205-301. *Project MUSE*, doi:10.1353/shq.2011.0022.
- Hermes, M. (n.d.). Was Hamlet gay? The textual evidence... Retrieved November 11, 2020, from <http://www.myrlinhermes.com/2010/01/was-hamlet-gay-textual-evidence.html>
- Patel, J; Patel, P. (2018, December 22). Consequences of Repression of Emotion: Physical Health, Mental Health and General Well Being. Retrieved November 11, 2020, from <https://openaccesspub.org/ijpr/article/999>
- Raypole, Crystal. "What Does It Mean to Be Sexually Repressed?" Healthline, 20 Apr. 2020, www.healthline.com/health/healthy-sex/sexually-repressed.
- Shakespeare, W. (2001). *Hamlet*. New York: Vintage International.
- Stanivukovic, Goran. "Shakespeare and homosexuality." *Forum for Modern Language Studies*. Vol. 46. No. 2. Oxford University Press, 2010.
- Van Watson, William. "Shakespeare, Zeffirelli, and the Homosexual Gaze." *Literature Film Quarterly*, vol. 20, no. 4, Oct. 1992, p. 308. *EBSCOhost*, search.ebscohost.com/login.aspx?direct=true&db=aph&AN=9608080158&site=ehost-live.

Argumentative- General Education 2000

1st Place Winner: Le Zhang, “Different Symbolic Meanings between Chinese Dragon ‘Loong’ and Western Dragon”

For Professor Charala Strosser

The dragons have a long history in the world. The earliest dragon pattern found in Chinese archaeology dates back to about 6,600 years ago. Dragon myths in the west first appeared in the ancient kingdom of Babylon about 4,000 years ago (Li 3). Although the Chinese dragon ‘Loong’ is translated into dragon in English, they are actually two different mythical creatures. China and Chinese often use the dragon as a symbol of national image, so China is easily misunderstood when dealing with western countries that do not know much about Chinese culture. On the one hand, the Chinese dragon ‘Loong’ has always represented a positive symbol in the primitive period of China, it represents the worship of natural totem and divinities. In Chinese feudal society, it represents the authority and status of the emperor and the symbol of luck. With the development of time, ‘Loong’ still has auspicious symbols in modern China and has become one of the most important cultural symbols of the Chinese nation. On the other hand, western dragon is a kind of monster and represents the symbol of evil and ferocity in western society. According to Babylonian mythology, long before the earth was formed, a fierce female dragon named Taman killed all the challengers. After a world war, Taman was executed by the sun god Maduk, who dismembered the dragon and separated the sky from the earth (Shi and Jia 112). Therefore, in the ancient western generally formed the concept of dragon slaying and spread a number of dragon slaying stories. These dragon slaying stories not only spread for a long time and a wide range of regions, and even formed a type of folk stories with a world.

The Chinese dragon ‘Loong’ family is not huge, but it has a unique system unlike any other creature. Those with scales are called ‘Jiaolong’, those with wings are called ‘Yinglong,’ those with horns are called ‘Qiuolong,’ and those without horns are called ‘Chilong’. The dragon in Chinese mainstream culture and general concept is the ‘Zhenglong’, which represents the emperor in the feudal period of ancient China, which is also the one object of this paper. The other object of this paper is the western dragon also known as the European dragon. The diversity of dragons in European culture is the result of many influences. Before, there were Greek, Babylonian, Christian and Nordic myths, Celtic culture and Anglo-Saxon legends, which created a colorful image of the dragon in European culture. For example, in many Greek legends, the dragon is the keeper of treasures and a symbol of evil. At the same time, under the influence of Christian legends, the dragon became a symbol of evil. Therefore, there are numerous differences between Chinese dragon ‘Loong’ and the Western dragon, especially the symbolic meanings. The reasons why the Chinese dragon ‘Loong’ and the western dragon have different symbolic meanings are diverse, which include the history of the development of the dragon’s image, civilization, physical functions or abilities, and culture.

Although the ‘Loong’ and western dragon have a number of differences, at the beginning, they shared one origin. The images of both Western and Chinese dragons are complex, so there are different views on the origin of dragons in academic circles. One of them is that scholars believe both are created by transforming the image of the snake. The ‘Loong’ is formed by the combination of various parts of

various animals and the main body of the snake. Jun Zheng states that the mainstream Chinese thought believe the main part and basic form of the 'Loong' is the snake. There was a primitive tribe that used the snake as their totem, which merged and absorbed many other totem groups. Then, they put the feet of the beast, the head of the horse, the tail of a lion, the horns of a deer, the claws of a dog, the scales of a fish on the big snake, so it became the Chinese dragon 'Loong' we know now (302). This is also confirmed by archaeology. In ancient history, Fuxi and Nuwa were the ancestors of human beings, and they were the images of the combination of human and dragon. The book *Lu Shi · Hou Ji* records: "Fuxi, dragon body and ox head" (伏羲, 龙身牛首). The book *Bei Tang Shui Chao* notes: "[Fuxi], snake body." (太昊蛇身人首). So far, the portraits, frescoes, silk paintings and bronze mirrors unearthed from archaeological excavations are also consistent with the contents recorded in the literature; that is, the images of Fuxi and Nuwa are all human head and snake (dragon) bodies (Chen and Zhang 107).

The dragon shape of Western countries is not very standard, it is different in different countries and different periods. Even the same country in the same period of the dragon also has different views, but they are generally based on the snake as the prototype. As Chengming Ji points out, the legendary dragon in western countries looks like a monster like a snake. Some western countries have also transformed the dragon from a snake to a beast head snake (69). In addition, westerners regard the dragon as a basilisk with powerful power, which means that in the eyes of westerners, dragon is essentially a kind of snake, but this kind of snake is more evil, uglier, and more powerful than ordinary snakes (Zheng 302). Both Chinese and Western dragons originated from snakes, but due to the different attitudes of Chinese and western people towards snakes, Chinese and western dragons formed different symbolic meanings in the development process. This is because primitive Chinese regarded snakes as a totem of worship, while westerners generally hated snakes.

Although the Chinese and western dragons have the same original, and the Chinese dragon 'Loong' is translated as 'dragon' in English, they are actually two different mythical creatures, in particular, they have completely different symbolic meanings. First, the specific appearance of Chinese and western dragons is different. According to the description of Qian Fu Lun by the scholar WangFu of the Han dynasty, the Zhenglong just has one head, and it's horns like a deer, head like a camel, eyes like a ghost, neck like a snake, belly like a clam, scales like a fish, palms like a tiger, and ears like an ox. In western culture, the dragon image combines the characteristics of reptiles and mammals. It is shaped like a giant lizard, has a body like a snake, and a back with huge fleshy wings like bat wings. It has eagle claws, crocodile mouth, sharp teeth, and can spit fire and venom. There is a description of Hydra in Greek mythology. Hydra is also called Lernaean Hydra. It is a large water snake of the genus, there are different versions about the number of its heads. Yan and Fan notes, "Pausanias thought there was only one, Simonides said there were five, and Edward Topsell increased to seven, reaching as many as a hundred by Diodorus Siculus" (133). It can be seen that the appearance of Chinese and western dragons is significantly different.

Secondly, the Chinese and western dragons have different connotations. The definition of the 'Loong' in *The Modern Chinese Dictionary* (bilingual version) is "(1) the supernatural animal in the legends of ancient times in China, with a long body, a dragon, horns, feet, walking and flying, swimming, and the ability to make clouds and rain. (2) In feudal times, the 'Loong' was the symbol of the emperor, and the word dragon was also used in the things used by the emperor." *The New Oxford Dictionary of English* defines the dragon as: "dragon: a mythical monster like a giant reptile. In European tradition the dragon is typically fire-breathing and tends to symbolize chaos or evil, whereas in the Far East it is usually a

beneficent symbol of fertility, associates with water and heavens.” As Shi and Jia said, “In Chinese dictionaries, ‘Loong’ first refers to a kind of mythical animal (neutral), while in Western dictionaries, ‘dragon’ first refers to a monster (obviously derogatory)” (111). Therefore, as far as the dragon itself is concerned, the positioning of the Chinese dragon ‘Loong’ is completely different from that of western dragon. The ‘Loong’ is a neutral mystical animal, while western dragon is a derogatory monster.

The last and most important, Chinese and western dragons have different symbolic meanings. The ancient Chinese dragon originated from the primitive tribe period. According to the historical records, the first ancestor of the Chinese people, the Di Huang, traveled around the country and unified the military orders of various tribes after defeating the tribal leaders Di yan and You Chi. Then, with the advent of the feudal dynasty, the ancient Chinese emperors mythologized themselves as the son of the dragon god. With the help of people's reverence for the dragon, they established the authority of the emperor and gained the trust and support of the people. Thus, the dragon Loong's image became the emblem and symbol of power of the son of heaven. Moreover, the Chinese dragon has been a symbol of good fortune and auspicious sign since ancient times. Zhu and Tang said: “Loong is full of ancient Chinese people's wish for production and life and longing for a better life” (2019). In western culture, the dragon often represents demons and evil forces. It is also regarded by westerners as the embodiment of terror, ferocity, greed, and disaster. In the original Greek mythology, the dragon often appeared as a guardian of rare treasures. Although at that time they were in opposition to the Greek heroes, they were still ruled by the gods and had nothing to do with evil or demons. However, in the middle ages, in order to expand its influence, Christianity began to vilify the dragon to foil their own noble and holy. The dragon is described in the bible as a terrifying incarnation of satan, a red dragon with seven heads and ten horns that greedily devoured newborn babies (Zhu and Tang 162). Since then, the dragon has become a symbol of cruelty and evil. Because of the symbolic significance of dragons, westerners had formed a strong concept of killing dragons.

Since China and the west originated from different civilizations, they have different attitudes towards snakes, which leads to different symbolic meanings in China and the west. China is one of the world's four ancient civilizations. It originated in the plains of the middle and lower reaches of the Yellow River. There is a vast plain area, rich in all kinds of resources, because the Yellow River flows through so convenient irrigation, the land is very fertile. The favorable natural environment provides the superior living conditions for the original inhabitants of China (Zheng 303). They live in harmony with nature. This kind of life made the ancient Chinese people form a stable and peaceful state of mind. At the same time, it has formed the spirit of the unity of man and nature in the Chinese civilization, that is, the universe is naturally a big heaven and earth, while humans are a small world. Human and nature are essentially interlinked, so all human beings should conform to the laws of nature to achieve harmony between man and nature. This psychological and cultural trait influenced the attitude of ancient Chinese towards snakes, that is, since they have created a harmonious way of living together, there is no need to eliminate all poisonous snakes.

As is known to all, western civilization originated from the Greek civilization, which was mainly born in the northern shore of the Mediterranean Sea with the Balkans as the center. The area was small, hilly, poor in soil, and volatile in climate, which was not conducive to the growth of crops. Therefore, the inhabitants had to claim resources from the vast ocean around them, it was a painstaking process. In this process, the Westerners have cultivated the characteristics of being individually centered, constantly outward exploring, constantly self-pursuing, self-expanding, and self-innovating, that is, they advocate

the martial spirit, believe in their own strength, have the courage and courage to conquer and transform nature completely, and completely destroy everything that hinders their survival and development. Therefore, snakes, especially vipers, that would interfere with their production activities must be hated and rejected by early Westerners (Zheng 303). Different civilizations have different attitudes towards snakes, which have influenced the image development, physical function, and symbolic meaning of the Chinese dragon and the western dragon.

Because of the different physical functions of dragons, they also have different symbolic meanings. The Chinese dragon in ancient China possessed the ability to control the weather and was often described as a god who controlled thunderstorms. Research by Chen and Zhang suggests that Chinese dragon is regarded as a celestial myth creature and auspicious animal, which is a tool to connect with heaven or a symbol of good fortune (107). The first collection of romantic poetry in the history of Chinese literature, *Chu Ci* recorded: "The god of Xiang Shui went north in a dragon boat, water in the stone beach rapids flowing, the 'Loong' boat across the water light and swift. (驾飞龙兮北征, 石濑兮浅浅, 飞龙兮翩翩)". Therefore, the dragon is regarded as a divine beast that drives the gods. Moreover, the dragon is a biological explanation of the cause of lightning and rain by primitive ancestors. Shan Xu, a professor from Suzhou university explained the character 'Loong' in ancient animal bone inscriptions. It retains the curve of lightning and uses a part of the character thunder to represent the dragon's mouth, while the word dragon opens down to indicate rain pouring out of the dragon's mouth (73). The ancient Chinese people were highly dependent on the land, and agriculture was greatly affected by the natural conditions, especially the weather. The physical function of the dragon in China was to control thunderstorms and rains. Therefore, the ancient associated the dragon with the imperial power and called themselves as the real son of the 'Loong', so that gained the trust of the people and strengthened their rule over people.

Western dragons are often described as cruel, greedy, evil, fire-breathing guardians of treasure, and disaster monsters. There is a myth about golden apples in ancient Greece. According to the myth, when Hera married Zeus, Gaia, the goddess of the earth, gave them a golden apple tree. This tree was planted in the sacred garden of atlas. It was cared for by his four daughters, the sisters of Hesperides (Zhu and Tang 162). In addition, in *Beowulf*, the dragon who guards the treasure takes mad revenge from the Goths when the treasure is stolen. It poured fire on houses and on heaven and earth, scorched the earth, leveled castles, and killed many goths. In the latest *Godzilla* movie in 2019, monster zero, a three-headed dragon that has been frozen for thousands of years, awakens and commands titans from all over the world to destroy the earth and bring disaster to the earth. Thus, the physical function of western dragons is usually to breathe fire and poison, and their ability to guard treasure. At the same time, they can also bring disaster.

Ancient China and the early west had different cultures, and it results in the different symbolic meanings of dragons. Ancient Chinese society was strictly atheistic or pantheistic. Ancient China was in the feudal period for a long time. Such social nature determined the control of emperors over people from physical life and thoughts. Since there was no fixed religion that could influence the whole country, controlling the minds of the people became a problem that the emperor had to solve. Based on the legendary physical appearance of the 'Loong', the physical function of controlling rain and thunder, and the Chinese belief that the 'Loong' was a water god that can bring good luck, the 'Loong' gradually became a tool for emperors to strengthen their power and consolidate their rule.

Some emperors used the way to consolidate their power by asking historians to make up stories between them and the 'Loong'. For example, the first emperor of the Han dynasty, Bang Liu was not born into the nobility, but in order to get the recognition of identity and blue-blooded attestation, thus strengthening the centralization of the new dynasty and consolidating the rule, Bang Liu coerced historian to fabricate that he is the son of the 'Loong'. He said his mother Liu Ao had mated with the 'Loong' and gave birth to him. Sunzhan Xu, an eminent archaeologist notes that in the Han dynasty, Liuxiu dreamed that he rode a 'Loong' to heaven. Then, he became an emperor. Sun Liang and Sun Xiu, the sons of Sun Quan, both of them succeeded to the throne of Wu because they made up stories about the 'Loong' (Xu 9). In addition, other emperors would limit others except themselves use of dragon pattern to highlight the royal majesty. A classic example of trying to build and enhance the majesty of the ruling class through exclusive use of the 'Loong' was the Yuan dynasty. Yueqiao Chen and Huiping Zhang argue that the rulers of the Yuan dynasty had strict regulations and controls on the details of the use of Loong-patterned clothing, even making it detailed to use the number of claws. For example, no one except the royal family was allowed to use five-claw Loong-patterned clothing (108). After the establishment of the Ming dynasty, it was recorded in volume 67 of the history of the Ming dynasty that Yuanzhang Zhu made specific regulations on different levels of civil and military officials to express their official positions with different animal decorations. Their clothes and curtains were not allowed to be in dark colors, yellow and purple, and embroidered 'Loong' and phoenix patterns were not allowed. Thus, it can be seen because of the nature of the dragon itself and the atheism of ancient China, the dragon became the tool of the emperor and thus became a god that had the symbolic significance of symbolizing imperial power.

However, unlike the Chinese dragon, the western dragon does not bear the cultural cohesion and accumulation of a nation and has a special cultural symbol meaning. Most people in the west have religious beliefs, they have no need to worship people or creatures other than God. To take western Christianity as an example, Christianity is a religion that recognizes only one god as the creator and ruler of everything in the world, including human beings. People must obey God absolutely. God knows everything and can do anything. Jun Zheng reports that the ten commandments observed in Christianity, three are the fear and worship of god. The first is to fear God and not to misuse his name. The other was to keep the Sabbath. The Sabbath is a day of rest for god. God uses six days to create everything and the seventh day to rest. It is a day of worship for God, usually called Sunday. It is also stated that idols are not to be worshiped, that is, no one or god but God is to be worshiped (303). This difference between atheism (pantheism) and theism led to the Chinese people to worship the 'Loong' as a totem, while the westerners could not worship the dragon because of the fact that Christianity could only worship God as the only deity.

The 'Loong' symbolizes auspicious and sacred power, while the western dragon symbolizes evil and disaster, so this different symbolic meaning leads to different cultural influences, namely different utilization of dragons. The 'Loong' has penetrated all aspects of Chinese society and become a kind of cohesion and accumulation of Chinese culture. It is a symbol of Chinese culture and has a high cultural value. First, the 'Loong' has humanistic and social values. Yan and Fan claim that the spirit of Loong is 'FuSheng' that means to benefit all sentient beings, which is a kind of value and happiness theory. Therefore, Chinese believe the Loong contains the auspiciousness and fortune in people's lives (134). This point is reflected in festivals and folk customs, for example, Lantern Festival carries out dragon lantern exhibition and the 'Loong' dance performance, dragon boat race in the 'Duanwu' ". Festival,

and other traditional festival activities are also full of auspicious and progressive atmosphere. At the same time, this spirit is also reflected in the language vocabulary. For thousands of years, many words about the 'Loong' are still widely used and have strong vitality. For example, anyone who has moral character, talent, or precise writing, or outstanding behavior can be compared to 'Loong', such as 'Loong Fei Feng Wu' (龙飞凤舞) 'Loong Teng Hu Yue' (龙腾虎跃) and so on (Wang 110).

Second, the 'Loong' has the value of cultural cohesion. As Jia and Shi pointed out, Chinese people generally worship dragons, which is the common belief of all Chinese people. This common belief is very easy to make people have a sense of national identity, so as to unite the Chinese nation closely, enhance the consciousness of 'the descendants of the Loong', and arouse the spirit of unity and cooperation (112). Third, Chinese dragons have artistic appreciation value. Simiao Sun, an ancient Chinese scholar, wrote the book Long Hu Tongyuan Jue (龙虎通元诀) and Boyang Wei wrote Loong Hu Dan Jue (龙虎丹诀) and other works about the 'Loong' not less than dozens of. People's love for the dragon is also fully reflected in painting. Kaizhi Gu, a famous painter in the Jin dynasty, was good at painting the 'Loong', leaving many works about it. In particular, the 'Loong' painters who people don't know their names have made great contributions to the 'Loong' art. They painted murals with the 'Loong' as their content in temples all over the country in ancient times and even made many wood and stone sculptures of the 'Loong', which displayed the vivid image of dragon in front of hundreds of millions of people, making the people deepen their impression of the 'Loong'.

On the contrary, because westerners regard the dragon as a symbol of evil, they had formed the concept of killing the dragon. Since ancient times, in western literature, painting, sculpture and other artistic creation, there were warriors and dragons' duel story, for example, the most typical is St. George slaying the dragon. St. George killed the dragon that occupied the only water source in the city, preventing the continued sacrifice of the citizens. The citizens were influenced by his righteous acts, so all of them renounced paganism and converted to God. Ji said: "Westerners believe that the dragon is a vicious basilisk that threatens human safety and is an alien force that human beings must fight against. They took the dragon as a symbol of evil and formed a strong concept of dragon slaughter. They believed that the hero who conquers the dragon should be worshipped and even should be regarded as the patron saint." The flag of the United Kingdom still bears the symbol of St. George Cross. He was hailed as the patron saint of England, Portugal and Yugoslavia. The deification of early dragon slaying heroes reflects the strong desire of westerners to conquer the dragon.

No matter in the west or the east, the mysterious legends about the dragon appeared in the ancient times. The symbolic meanings and cultural values of dragons are obviously different. It is because of the differences between Chinese and western cultures and civilizations, as well as the differences in the physical appearance and physical functions of dragons. In ancient China, the 'Loong' symbolizes auspice and imperial power. Through the process of evolution and sublimation of the Chinese Loong's history and culture, the dragon has become a broad totem, cultural symbol, spiritual symbol, belief carrier and emotional bond of the Chinese nation. The dragon is regarded by westerners as the embodiment of cruelty, greed, evil and disaster, and is proud of killing the dragon. This also shows that the Chinese dragon and the western dragon are not the same creatures at all. The cultural connotations and influences of the Chinese dragon 'Loong' and the western dragon are quite different, and there are huge differences between the two words, which should not be translated straightly. Therefore, in the process of cross-cultural communication, people need to understand each other's culture on the basis of accurate output, rather than mechanical translation of it.

Work Cited

- Shi, Chuanlong, and Dejiang Jia. "On the Differences Between 'Chinese Dragon' Culture and 'Western Dragon' Culture and Their Translating." *Journal of University of South China (Social Science Edition)*, vol. 8, no. 3, 2007, pp. 111–114.
- Dougherty, Michael, director. *Godzilla: King of the Monsters*. Warner Bros. Pictures, 2019.
- Ji, Chengming. "The Comparison of Dragon Customs in China and in West Countries." *Journal of Xiangtan University (Philosophy and Social Sciences)*, vol. 28, no. 5, 2004, pp. 66–68.
- Li, Lin. "Comparative Analysis of Eastern 'Loong' and Western Dragon." *Journal of Puyang Vocational and Technical College*, 2016, pp. 116–117.
- Wang, Yangqin. "The Differences between Chinese and Western Dragon Images and Their Cultural Significance." *Journal of Hubei University of Technology*, 2010, pp. 108–10.
- Xu, Shan. "Lightning Worship and Its Transmutation Form." *Journal of Suzhou University* vol. 4, 1990, pp. 73–75.
- Yan, Zengli, and Xiaoqi Fan. "Cultural Differences between Chinese Dragon and Western Dragon and Their Mistranslation." *Journal of Tonghua Normal University*, vol. 39, no. 6, 2018, pp. 132–37.
- Zhang, Huiping, and Yueqiao Chen. "On the Relationship between the Dragon and Chinese Emperors." *Journal of Guiyang University Social Science (Bimonthly)*, vol. 12, no. 2, 2017, pp. 106–109.
- Zheng, Jun. "A Comparison of Dragon Culture between China and the West." *Overseas English*, 2003, pp. 302–303.
- Zhu, Zhuxin, and Weihong Tang. "Comparison of Chinese and Western Dragon Cultures." *Cultural Corridor*, 2019, pp. 162–163.

2nd Place Winner: Cassidy Wilde, “Eurocentrism’s Influence on Representation in Sci-fi and Why It Should Improve”

For Professor Sterrantino

Eurocentrism’s Influence on Representation in Sci-fi and Why It Should Improve Science fiction, as a genre of literature and of films, encompasses many things. It usually explores the many possibilities of science and the effects that technological and/or societal advancement could have on humans. The futurist concepts of sci-fi include time travel, space exploration, alien life, enhanced humans, robots, and monsters. A lot of notable books fall under the category of science fiction: *The War of the Worlds* by H.G. Wells, *Fahrenheit 451* by Ray Bradbury, *A Wrinkle in Time* by Madeleine L'Engle, and *Frankenstein* by Mary Shelly. Many popular movies do too: *The Martian*, *Passengers*, *Star Wars*, *Ad Astra*, and most movies in the Marvel Cinematic Universe. All these books and films share things in common, but an important similarity is that they are based in Western Culture. Most science fiction is. The characters are mainly white, they are from Europe or The United States, and the themes are usually only applicable to Western society. In other words, sci-fi tends to be Eurocentric.

Eurocentrism is the tendency to interpret material through a European or Western perspective, and to ignore or devalue the history and culture of non-Western societies (encyclopedia.com). This idea stretches back centuries to European colonialism, possible even before, and can be seen in fields like philosophy, sociology, science, and history. When it comes to literature, most stories take place in Western countries. All of the Martians landed in England in *War of the Worlds* by H.G. Wells, and in *1984* by George Orwell, *Airstrip One* is a future version of Great Britain. Authors will also use world-building to create new places based off of Western countries. Science has consistently been seen as something pushed forward by the West, and the contributions of everyone else have fallen aside. Combining these two ideas, the main issue of Eurocentrism in the genre of science fiction is that non-Western societies are coded to be less developed and less technologically advanced, while Western culture is booming with industrious, progressive ideas and innovation (encyclopedia.com). It’s completely plausible that authors do not purposefully include this theme, yet all science fiction taking place in the West heavily implies that non-Western countries are not as scientifically and technologically advanced.

This ingrained Eurocentrism in literature and sci-fi means that traditional Western culture is the focus, and non-Western culture and those who do not follow the structure of traditional Western culture cannot be fairly represented. This idea is particularly focused on sci-fi consumed in the West. For the most part, science fiction from China or Japan isn’t prevalent in Western media. Ideas and literary tropes based in Eurocentrism inherently exclude marginalized groups of people, like various ethnic groups and the LGBTQ+ community, and non-Western culture. Why limit the types of people and culture represented in sci-fi? There is no reason that all people should not be able to see themselves depicted in the field of science and in media other than media following Eurocentric ideals. The representation of non-western culture and LGBTQ+ themes is severely lacking in the genre of science fiction, and if authors and filmmakers were to break away from the overused tropes formed from Eurocentrism, sci-fi books and movies would be much more interesting.

There are a few more specific examples to discuss before considering why representation is important

in the first place. Various harmful tropes of the previously mentioned big themes of Eurocentrism in sci-fi, like stories taking place in the West and Western science being more advanced, help to further prove why Eurocentric themes are unnecessary. Most science fiction takes place in Western countries. We can see in *Fahrenheit 451* by Ray Bradbury that the city is Western by looking at the type of house Guy lives in, the activities his wife does, and the culture that is shown throughout the book. In *Hitchhiker's Guide to the Galaxy* by Douglas Adams, Arthur and Ford are clearly stated to be in England before the world ends. *A Wrinkle in Time* by Madeleine L'Engle takes place in New England when the kids are on Earth, and on Camazotz, even though it's a different planet, there is still a suburb and a newspaper boy. Even when the story doesn't have anything to do with Western culture, it is still ubiquitous. In regards to the second big theme, the best example is the story *Brave New World* by Aldous Huxley. It portrays extremely negative stereotypes of Native American culture. The book describes an outdated society with ratty clothing, lack of sanitation, strange rituals, and uncivilized behavior. All of these ideas are racist stereotyping, and show a culture represented from a completely Eurocentric view. Huxley's writing implies that this Native American-coded community is lesser than the advanced, civilized, Western-coded society. He did not, for any reason, need to abuse Native American culture in this way, and could have easily used something else to make his point.

By removing these problematic Eurocentric themes, science fiction would be opening itself up to representation, but why is that important? As shown in the last paragraph, lack of truthful representation often leads to villainization of non-Western culture. Media has an incredibly large role in shaping beliefs, attitudes, and opinions of oneself and of others (Blackburn). Having representation helps to normalize non-Western culture and helps people understand it. To those of marginalized communities, representation can mean everything. Seeing people who are similar to one's own ethnicity or sexuality can help to form personal understanding and invoke deep emotional responses of hope and validation. Your lovely author has personal experience with this. Very few shows or books that I have seen/read have included LGBTQ+ representation. *She-ra and the Princesses of Power*, which falls loosely into the sci-fi genre, has been extremely influential for me. I cried tears of joy while watching the last season. It was so validating to see two women, two characters I felt connected to, in love and happy. It can mean so much to have people in media to relate to and look up to. The reason that representation might be important to traditional Western society is that it is proven that representation sells. The game *Undertale* created by Toby Fox in 2016 became one of the most popular games sold, and now has over a million copies in distribution (Ruberg). *Undertale* features a non-binary main character, and many other characters of varying sexuality or gender identity. It can be easily inferred that, along with the very interesting story and graphics, the LGBTQ+ themes added to the popularity and sales of the game.

Also seen through the *Undertale* example, adding representation can improve overall quality and popularity. Science fiction would also be benefited from adding more diversity of non-Western Culture, People of Color (POCs), and the LGBTQ+ community. For a start, by introducing a variety of themes and characters sci-fi creators are increasing the narratives and storylines they can include. By excluding Eurocentric ideas, the possibilities of the story may be slightly lessened, but by including portrayals of different cultures and POCs, or thematically queer narratives like exploration of sexuality or gender identity, the genre is ultimately opened up to a greater range of options. More representation simply means more material to work off of. Also, any book or film will be expanding its reach by diversifying its story. Representation attracts those who are represented, so by including POCs or queer characters, the

target audience is widened. More people, then, means more popularity, more sales, and ultimately more profit if that is a main goal.

Science fiction is rooted in Western culture and Eurocentrism, but it does not have to stay there. There are genuinely harmful ideas in Eurocentrism that impact not only the way traditional Western culture sees marginalized groups of people, but also how those people see themselves. There are also no downsides to including diversity and moving away from Eurocentric themes. Science fiction would gain a larger audience and creators would get more ideas. That means more science fiction all around! Representation is starting to become more mainstream, but there is still more that can be done. Black Panther and Blue Remembered Earth are both popular sci-fi that is based around African culture, and 2321 is based in China (Greene). There is also all the science fiction created in non-Western places that is very important to recognize, like The Wandering Earth from China, or the Japanese anime Parasite. Godzilla, although westernized in the modern adaptations, is also rooted in Japanese culture. Maybe in the past it was easier to keep sci-fi contained, but everyone ought to know and do better by now. Science fiction is for everyone, and it's time to start showing it.

Works Cited:

Adams, Douglas. *The Hitchhiker's Guide to the Galaxy*. Del Ray, 2002.

Ahmed, Dur-e-Maknoon. "Eurocentrism In English Literature Classes Has Global Consequences" *Mount Holyoke News*. Dec. 7 2017.

<http://www.mountholyokenews.com/books/2017/12/7/eurocentrism-in-english-literature-classes-has-global-consequences> Accessed Nov. 21 2020

Berkday, Halil. "Eurocentrism: A Many Layered Thing" *Youtube*, uploaded by Tedx Talks, Oct. 8 2019.

<https://www.youtube.com/watch?v=uckm0z4QJys> Accessed Nov. 20 2020 Blackburn, Mollie V., et al. "Examining Queer Elements and Ideologies in LGBT Themed Literature: What Queer Literature Can Offer Young Adult Readers." *Journal of Literacy Research*, Mar. 2015. <https://journals.sagepub.com/doi/full/10.1177/1086296X15568930> Accessed Nov. 20 2020

Bradbury, Ray. *Fahrenheit 451*. Harper Voyager, 2013.

"Eurocentrism" *encyclopedia.com*. Nov. 2020.

<https://www.encyclopedia.com/history/dictionaries-thesauruses-pictures-and-press-releases/eurocentrism> Accessed Nov. 18 2020

Gillig, Traci, & Sheila Murphy. "Fostering Support for LGBTQ Youth? The Effects of A Gay Adolescent Media Portrayal on Young Viewers." *International Journal of Communication* 10(2016).

<https://ijoc.org/index.php/ijoc/article/view/5496/1741> Accessed 24 Nov. 2020

Greene, Robert. "Science Fiction and (No) Fear of a Non-Western Planet" *Society for U.S. Intellectual History*. Mar. 20 2016. <https://s-usih.org/2016/03/science-fiction-and-no-fear-of-a-non-western-planet/> Accessed Nov. 18 2020

Huxley, Aldous. *Brave New World*. Harper Perennial, 2006.

L'Engle, Madeleine. *A Wrinkle in Time*. Square Fish, 2007.

Orwell, George. 1984. Berkley, 1983.

Ruberg, Bonnie. "Straightwashing *Undertale*: Video games and the limits of LGBTQ representation"
Transformative Works and Cultures. Sep. 15 2018.
<https://journal.transformativeworks.org/index.php/twc/article/download/1516/1866?inline=1> Accessed Nov. 20 2020

Wells, H. *The War of the Worlds*. Reissue, Signet, 2007.