THE SCRIBLERIAN

Fall 2014 Edition

Sponsored by the English Department and the Braithwaite Writing Center, the Scriblerian is a writing contest and on-line journal for students by students. Revived during Fall Semester 2004 after a two-year hiatus, the essay competition is organized each semester by Writing Center tutors for ENGL 1010 and 2010 students. Winning essays are published on-line on the English Department website and past winners were also published in the print textbook SUU Guide to English Composition 2010-2011. The Fall 2014 Scriblerian Contest was planned and supervised by Chair Chris Christiansen with the help of Allison Borzoni, Hannah Ouderkirk, Rebekah Tobler, Heather Sundblom, Gardner Stevenett, and Jacob Anderson. A total of 41 essays were submitted for the contest.

Contents

Argumentative- English 1010

1st Place Winner: Cassidy Lane, "Identifying the Issues Related to Animal Testing"

For Professor Joy Sterrantino

Ninety-two percent of experimental drugs that are ruled safe and effective in animal trials fail in human clinical trials because they are either too hazardous or don't work (Brewer). Not only are animal tests unreliable, but they are also archaic, cruel, and unnecessary. Advances in technology and science have created better alternatives to animal testing that are more dependable and cost effective. I believe that this is an issue not only among the animal rights community, but also among people who want effective and reliable medical treatments. Growing segments of the population want to purchase products with the security in knowing that they are not a result of cruel and inhumane animal tests.

Supporters of animal testing would say that animals are appropriate research tools because of their similarities to humans. However, the fact remains that animals are not humans. "The history of cancer research has been a history of curing cancer in the mouse. We have cured mice of cancer for decades – and it simply did not work in humans." This statement was made by Dr. Richard Klausner, the former director of the National Cancer Institute in 1998 (Pippin). Scientists have known for at least 16 years the futility of further cancer testis in mice, yet continue to do so. Another example is the 195 published methods that prevented the development of type two diabetes in mice. Though, none of these discoveries were ever used in human medicine, because they were not applicable for humans (Pippin). An additional study demonstrated that over 100 stroke drugs that were effective on animals failed in humans (Akhtar). While animals have the same basic biological structure of a human such as the brain, heart, lungs, and circulatory system, they have very different anatomic, metabolic, and cellular structures. Some examples of these differences in animals to humans: sheep can swallow enormous amounts of arsenic and remain healthy (LCA). Morphine causes extreme excitement in cats and mice, but will calm and anesthetize a person (Sztybel).

Many that promote animal testing say animals must be used in cases when ethical considerations prevent the use of humans. How trustworthy are these animal tests? The 1950's prescription sleeping pill Thalidomide, was tested on animals preceding its release. It is now infamous as the cause of approximately 10,000 human babies born with severe deformities (Kelsey). The arthritis drug Vioxx, proved to have a protective effect on the hearts of mice, but went on to cause more than 27,000 heart attacks and sudden cardiac deaths in humans (NBC). Even though a drug may be safe for animals, does not make it safe for humans. In contrast, drugs that are unsafe for animals may be perfectly safe for humans but will never benefit us because of the results found while animal testing. Case in point, aspirin is unsafe for cats and dogs, but has multiple benefits for human. The drug Tacrolimus, which is used to lower the risk of organ transplant rejection, was almost completely dismissed because of its failure during animal tests (Akhtar). Animals are unnecessarily suffering for drugs that should have been used to treat humans, but were shelved instead.

Animal tests are not only defective, but tremendously cruel. The Draize test exams the irritability to skin that a product can cause. This test is most often done to rabbits where toxic products that burn are rubbed into the rabbit's skin and eyes to see the effect (NEAVS). Vivisection is a procedure where surgery is done on live animals, mostly rats, mice, rabbits, dogs, cats and primates. The primary purpose

of vivisection is for medical research, entailing surgical operations to study the structure and function of living organs and parts, and to investigate the effects of diseases and therapy (Webster's). A prime example of vivisection's unreliability is tobacco research for cancer. Animal experimentation did not link lung cancer with cigarettes. Meanwhile hundreds of thousands of people died from lung cancer without the knowledge of the harmful effects that could have been detected through better science (Cameron).

How often are animals really mistreated in these settings? The University of Pennsylvania conducted an experiment in which live primates were strapped into a machine to take high-impact blows to the head for researchers to study the consequences of head trauma (McLean). Video footage caught vivisectionists taunting and abusing primates who were left with severe brain damage. Harvard Medical School was fined for the death of four monkeys. Two of the monkeys were deprived of water, one died of strangulation, and another died by being given too much anesthetic resulting in liver failure (Abrams). The United States Army conducts experiments on live pigs to examine the effects of flamethrowers on skin. Their scorched flesh was then removed in large pieces for study. Another study conducted at Emory University sought to display that the eyes' protein levels are the same in sight-deprived primates as in ones with average eyes. To demonstrate this, experimenters sewed the primates eyes shut (LCA). In a North Carolina testing lab, lab workers were caught on film throwing a cat, pulling a dog's teeth without proper pain medication, and trying to pull a cats' claws off by yanking it from a wire cage (Elder).

The Animal Welfare Act is the only Federal law in the United States to regulate the treatment of animals in research, exhibition, and transport (USDA: NAL). Advocates for animal experiments argue that there are laws and regulations put in place to protect animals from mistreatment. What about the 95% of animals used in experiments that are not protected by the Animal Welfare Act? Animals that are not protected include rats, mice, fish, birds and coldblooded animals (USDA: NAL). Only 1,134,693 animals were covered by the Animal Welfare Act in 2010, while 25 million were left defenseless to pain and mistreatment (USDA: APHIS). Even the Animal Welfare Act does not always protect the safety of animals that are covered. In 2009, the federally funded New Iberia Research Center in Louisiana had primates that were under such psychological stress, they had been found on video engaging in self-mutilation in which the primates would scratch gaping wounds in their arms and legs (The Humane Society). Video recordings also exposed infant chimps being harshly removed from their mothers as they were screaming, and another recording they would wake up and become alert during painful experiments. In addition to other primates being intimidated and unreasonably shot with a dart gun (The Humane Society).

The Animal Welfare Act's section on violations by research facilities says,

> If the Secretary has reason to believe that any research facility has violated or is violating any provision of this Act or any of the rules or regulations promulgate by the Secretary hereunder and if, after notice and opportunity for hearing, he finds a violation, he may make an order that such research facility shall cease and desist from continuing such violation. Such cease and desist order shall become effective fifteen days after issuance of the order. Any research facility which knowingly fails to obey a cease-and-desist order made by the Secretary under this section shall be subject to a civil penalty of $500 for each offense, and each day during which such failure continues shall be deemed a separate offense (USDA: NAL).

Granting these penalties have been put in place, it is often hard to prove animal cruelty and misconduct without video footage or hard evidence.

There are many alternatives to animal testing that are more accurate, humane, and cost effective. One of these alternatives is in vitro and human cell studies. This is when scientists isolate a specific cell, bacteria, or virus in a test tube. In vitro studies do not always translate well to "real-life" since humans and animals are not test tubes. However, in vitro studies are faster, less expensive and can be done with fewer ethical and safety concerns (Boskey). In vitro and cell cultures have provided significant findings. These include cancer-screening treatments, testing drugs with biochips, and replicating human skin (NEAVS).

While there is controversy over the use of human cells, there are infinite prospects in using them. A woman named Henrietta Lacks died of an aggressive form of cervical cancer in 1951. Controversially, researchers decided to harvest her cells without the consent of her family. Lacks cells have played an immense role in researching genes that cause cancer and suppress it. Lacks cells have also assisted researchers in learning new treatments for herpes, leukemia, influenza, hemophilia, and Parkinson's disease (NEAVS). Epidemiology is the study of naturally occurring diseases, instead of experimentally induced diseases, in human populations. Epidemiology provides researchers with data collected over years to better help health practitioners in understanding the causes, treatments, and prevention of human illnesses (NEAVS).

Epidemiological studies have revealed that smoking is associated with lung cancer. It was also the first area of study to research AIDS when it began surfacing in the late 1970's (NEAVS). Other alternatives include clinical studies, post-mortem and cadaver studies, computer models and simulators, and non-invasive imaging techniques.

If animal testing has been proven to be erratic and cruel, then why is it still used? Researchers are given large grants regardless of the merit of their work. Money that could better serve prevention programs to avert diseases. Instead our tax dollars help government funded programs, such as the $1,329,332 spent on a study done by Boston University that basically starved rats to then study their mentally retarded offspring (LCA). Leading medical schools such as Dartmouth and Stanford have done away with using animals to train their students. However, other laboratories continue to strap cats, dogs, and other animals to tables to then inject them with drugs. These labs, such as the University of Colorado, cost taxpayers approximately 40 thousand dollars for each lab dog. Animal testing can also be more expensive than alternative methods. An unscheduled DNA synthesis animal test costs $32,000, while the in vitro alternative costs $11,000. A rat photo-toxicity test costs $11,500, while the non-animal equivalent costs $1,300. A two-species lifetime cancer study can cost from $2 million to $4 million. The US National Institutes of Health spends $14 billion of its $31 billion annual budget on animal research (The Humane Society).

With alternatives available in the place of animal testing, it is bewildering that such cruel, ineffective, and expensive methods are still used. To phase out the barbaric use of animals in experiments, we need to continue funding and supporting other methods. Such research as in vitro, human cell cultures, epidemiology, clinical trials, cadaver studies, computer modeling, and advanced imaging techniques such as CAT, PET and MRI scans, as well as purchasing the cruelty-free options to cosmetic and household products. As Jeremy Bentham wrote in the introduction to "Principles of Morals and

Legislations", "The question is not, can they reason? Nor, can they talk? But, can they suffer?" (Bentham).

Works Cited

Abrams, Lindsay. "Animal Abuse at Harvard Med." Salon. 20 December, 2013. Web. 14 October, 2014.

Akhtar, Aysha M.D. "Why Treating Animals Better Is Crucial to Human Welfare." Animals and Public Health. 2012. Web. 14 October, 2014

Bentham, Jeremy. "Introduction to the Principles of Morals and Legislation." Principles of Morals and Legislation. 1832. Web. 15 October, 2014.

Boskey, Elizabeth Ph.D. "Glossary." About Health. 16 April, 2014. Web. 15 October, 2014.

Brewer, Ted. "Trials and Errors: Drug Testing Raises Ethical –and Efficacy- Issues." Safer Medicines. 10 February, 2014. Web. 15 October, 2014.

Cameron, Charles S. M.D. "Lung Cancer and Smoking: What we really know." The Atlantic. January 1956. Web. 13 October, 2014.

Elder, Renee. "North Carolina Animal Cruelty Case." Huffington Post. 6 July, 2011. Web. 14 October, 2014.

Kelsey, F.O. "Thalidomide." Science Museum, London. 17 October, 2013. Web. 14 October, 2014.

LCA. "Vivisection/ Animals in Research: AIDS." Last Chance for Animals. 2014. Web. 12 October, 2014.

McLean, Lesley. "Between The Species." University of New England, Armidale NSW Australia. August 2009. Web. 10 October, 2014.

NBC. "Report: Vioxx Linked to Thousands of Deaths." NBC News. 6 October, 2004. Web. 14 October, 2014.

New England Anti-Vivisection Society (NEAVS). "Alternatives in Research." NEAVS. 2011. Web. 14 October, 2014.

Pippin, John J. M.D. "The Failing Animal Research Paradigm for Human Diseases." Independent Science News. 20 May, 2014. Web. 15 October, 2014.

Sztybel, David M.D. "Facing the Facts of Animal Treatment." Dr. David Sztybel. 2004. Web. 13 October, 2014.

The Humane Society of the United States. "Undercover Investigation Reveals Cruelty to Chimps at Research Lab." The Humane Society of the United States. 4 March, 2009. Web. 10 October, 2014.

"Costs of Animal and Non-Animal Testing." 2007. Web. 11 October, 2014.

US Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS). “Annual Report Animal Usage by Fiscal Year.” USDA: APHIS. 27 July, 2011.Web. 10 October, 2014. “Public Law 89-544 Act of August 24, 1966.” 24 August, 1966. Web. 10 October, 2014.

US Department of Agriculture (USDA) National Agriculture Library (NAL). “Animal Welfare Act.” USDA: NAL. 15 October, 2014. Web. 15 October, 2014.

Webster’s New World. “Vivisection.” Webster’s New World: College Dictionary.” Fourth Edition. 15 July, 1999.

2nd Place Winner: Kelsey Keener, "Slavery and Total Domination: Dehumanizing"

For Dr. Nozomi Irei

Slavery in the United States occurred throughout the 16th and 17th centuries and beyond. Frederick Douglass wrote a detailed narrative of his experiences in slavery, throughout which we see one of the terrible effects slavery has on both slaves and slave owners: dehumanization. Several examples of totalitarianism exist throughout history, one of the most notable being the period of time Adolf Hitler ruled Germany. In Hannah Arendt's Total Domination, where she describes totalitarianism, what makes it possible and the effects it has using examples of concentration camps and three different totalitarian regimes, we see that one of ramifications of total domination is dehumanization. There may be many ways that slavery (in the United States, as described by Douglass) and total domination – as Hannah Arendt describes and defines it – can be compared, but perhaps the most notable similarity is the end result of the dehumanization of slaves, slave owners, and those subjected to totalitarian regimes.

Dehumanizing someone means to take away his rights as a human. More specifically, dehumanization is to treat someone as though he is not a human being ("dehumanization"): he has no freedom, no personality or individuality, he is worthless except for labor, he is not worthy of respect, or of the compassion typically awarded other human beings. Essentially, he is treated as merely an animal, not viewed as human. We see this as one of the goals of total domination: "reduce the diversity and complexity of humanity to a single reaction to terror and pain" (Jacobus 280). Also illustrated in what total domination works to accomplish is "a kind of human species resembling other animal species whose only 'freedom' would consist in 'preserving the freedom'" (Ardent 282).

An aspect of total domination is frequently concentration camps, seen in the Nazi regime and the Soviet Union. Arendt tells us that under the Nazi regime, these camps were used for the purpose of "transforming the human personality into a mere thing" (282). And in these concentration camps, people were put through "sufferings…that transform men into 'uncomplaining animals'" (283). So in only the objectives and use of concentration camps for total domination we can see that people are not thought of as human beings, and that dehumanization is not only a side effect, but also a goal.

We see dehumanization as a common factor in slavery as well; Douglass also notes the "dehumanizing effects of slavery" (330). Slaves in the US were treated as animals, as property, because that is all they were to slave owners. We see this illustrated in The Narrative: "there were horses and men, cattle and women, pigs and children, all holding the same rank in the scale of being, and were all subjected to the same narrow examination" (Douglass 337). Adding to the dehumanization of slaves is the fact that "to treat [me] as a human being was not only wrong, but dangerously so" (Douglass 332). In a slave owner's eyes, a slave is only a piece of property, with no human characteristics or rights.

Slavery's effect was not limited to slaves: it showed its influence on the slave owners as well. In order to see the dehumanizing effect of slavery on slave owners, we must first consider another meaning of dehumanization – "to deprive of human qualities, personality or spirit" ("dehumanization"). In other words, it means to take away, or in the case of slavery demolish, the qualities that make us human. Faulkner does an excellent job of defining these qualities in his Nobel Prize Speech. He calls them "verities and truths of the heart" and tells us they are: love, honor, pity, compassion, sacrifice.

Knowing this meaning and the qualities that make us human, we can clearly see the dehumanization of slave owners illustrated in Douglass' narrative, most notably through his descriptions of Mrs. Auld. Douglass describes Mrs. Auld initially as "a woman of the kindest heart and finest feelings" (329), and when he first went to live with the Aulds, she "commenced to treat [him] as she supposed one human being ought to treat another" (332). Thus far, she had never owned a slave and had been "preserved from the blighting and dehumanizing effects of slavery" (Douglass 329).

Mrs. Auld began to teach Douglass how to read, and when her husband found out he explained to her that "it was unlawful, as well as unsafe, to teach a slave to read" (Douglass 330), and made her stop teaching him. And as Douglass notes, this was the "first step in her downward course" (332). Before becoming a slave owner, "there was no sorrow or suffering for which she had not a tear" (Douglass 332), but after conforming the idea the slaves are not humans, her "tender heart became stone" (Douglass 332). Mrs. Auld not only stopped her efforts in teaching Douglass, but lost any compassion or pity for him as soon as she "commenced to practice her husband's precepts" (Douglass 332). No longer did she have a kind heart or feelings, because her eyes "became red with rage," her soft voice "changed to one of harsh and horrid discord" and her "face gave place to that of a demon" (Douglass, 330).

As we can see, dehumanization is an effect of, and closely connects, both total domination and slavery. While it may be easier to see this effect on slaves and those suffering under a totalitarian regime, it is also evident in slave owners. Though slavery no longer exists in the United States, it is still popular among other countries, and so is totalitarianism. For this reason, it is important for us to see and understand the dehumanizing that takes place under both of these institutions so that we can not only keep it from happening again in the United States, but also so that, as individuals, we can recognize when our rights or qualities as humans are being repressed or deprived. If we can recognize when such a thing is happening, we can resist and rebel, and most importantly maintain our humanity.

Works Cited

Arendt, Hannah. "Total Domination." A World of Ideas: Essential Reading for College Writers. 9th ed. Ed. Lee A. Jacobus. Boston: Bedford/St. Martin's, 2013. 279-290. Print.

"Dehumanization." Merriam-Webster.com. Merriam-Webster, 2011. Web. 23 September 2014.

Douglass, Frederick. "Narrative of the Life of Frederick Douglass, an American Slave." A World of Ideas: Essential Reading for College Writers. 9th ed. Ed. Lee A. Jacobus. Boston: Bedford/St. Martin's, 2013. 327-340. Print.

Faulkner, William. "Banquet Speech." Nobel Banquet. City Hall, Stockholm, Sweden. 10 December 1950. Speech.

Expressive- English 1010

1st Place Winner: Brooklyn Woods, "Light in the Darkness"

For Dr. Julie Simon

I believe that happiness is a choice. As someone who has struggled with depression I can tell you that sometimes however it is a very hard choice. Throughout my life I have come to realize that happiness changes and develops. Happiness, in and of itself, has countless variables and definitions. Throughout my life these three things have impacted me the most in my pursuit of happiness: My environment, my religious faith, and my ability to focus my attention outside of myself.

As a small child I was very happy: I loved to sing and hum and always wanted to be the center of attention. But I was born into an abusive home and from the age of five I knew something was very wrong. How could daddy, my best buddy, yell at mommy and be so angry. As a child I, like all children, thought in very black and white term - good guy and bad guy. It hurt me to realize, in my little head, that my daddy was a bad guy. I started to hate him almost as much as I feared him and it ate at me. I used to wish he would die but then I felt guilty and angry at myself for even wishing that. Even though he has very mean, scary, and said awful things I always knew he loved me. Because of my guilt, I started to wish I could die, maybe if I died then he would feel bad and become gentle and kind. That is how the great conflict started. Even at this young stage, my view of happiness was skewed. Happiness to me became dependent on my dad. The environment around me controlled my every feeling. Happiness became the absence of worry: if I wasn't worried about anyone or anything then I could be happy.

One of the only places I found happiness was church. I belong to The Church of Jesus Christ of Latter day Saints. As a child, I loved all the singing we did in primary and being around all the kids. Being homeschooled, I didn't get to interact as much as I would have liked with other kids. Like a sponge, I soaked up everything I was taught because it brought me so much peace and happiness. These are some of the teachings I learned that helped me. My Father in Heaven loves me personally. The Spirt or The Holy Ghost is always there as a comforter and guide. Jesus Christ is always there to help me up and bless me. Even as a child, these things brought peace to my little heart. It was a comfort to me to know that even if my dad on earth was fallible, I had a Father in Heaven who was the best dad ever. After all, he sacrificed his own Son, the Savior, so I can come live with him again. Leaning to pray and reach for that comfort and receiving it even as a small child helped me find happiness even on the worst days.

As I grew older, things got worse. With a dad who was a time bomb and a mother who was emotionally unavailable; my five siblings and I found it was easier on everyone to just act like perfect little children, to suppress any kind of emotion. Growing up, I became the second mom; I had a lot of responsibilities and felt a lot of pressure - my siblings called me mom more than they did anything else. I worried about everything, especially my mom. No girl should ever have to see her mom crying because of something her dad did or said. He often said unkind things to me: "You laugh too hard it's obnoxious." "You are fat." "Don't ever cry." "Women have only 2.3 brain cells." Needless to say, in an environment like this it was very hard to be happy. Any kind of individuality or opinion wasn't permitted. We were told in great detail how to do everything from washing the dishes to working for hours on yard work. Church was the highlight of my week and something I looked forward to it was the one place I could relax. During this time I don't think I even knew what happiness was anymore, my childhood joys were near nonexistent. I

think I lived in a numb world not really expressing very much. Just repeating my prayer of “Please Heavenly Father all I want is one peaceful day.” But it never happened.

Then something amazing did happen: I was given a horse. It came along with a house my dad bought. We had moved nineteen times before I reached the age of eighteen. I loved horses. There ended up being a horse trainer right around the corner from where we lived, he let me become his apprentice. Those few years where the happiest of my childhood, from eleven years old to thirteen I practically lived there and loved every minute of it. The trainer was a gentle man who loved and respected his wife. I idolized him. He was like my second dad, the dad I had always wanted. He took me under his arm, loved me, and built me up. He was the one who taught me that work can be full of fun and that just being with someone, not even talking, can be a happy and wonderful thing. He taught me that women deserve respect. He helped me feel like I was worthy of love and someone people could be proud of. All these things made me happy just knowing that the whole world wasn’t like my home. He gave me hope. Sadly, he and his wife moved away and I cried myself to sleep for months. It was hard for me to keep up that selfesteem with no one around to remind me about the good things in life. That happiness isn’t something that is earned it is something that is all around is in the moments we share with people, in the feeling we get from uplifting influences, and in the experiences we create.

When I was sixteen, my parents finally got divorced. That plunged me into full time public school for the first time. My life was a mess. This is when I started to seriously think about death not so much as a lesson to my father but just as an escape. My self-esteem was twelve feet in the ground already and I didn’t value myself at all. Happiness had lost its value to me; I thought it was over rated and for other people not me. This all lead to some decisions I deeply regret. I had a lot of boyfriends, and, because of my longing for that male affection, for someone to want me, I let them do things to me that there against my personal standards. Somewhere along the way, I had wrapped my identity in others need for me; if no one needed or wanted me, then there was no point in existing anymore. I was so lost in side myself it was like I had fallen in a deep dark hole and all I could see where my faults, my fears, and my hatred for myself. Sleep at night was impossible, and I obsessed over the thought of dying or getting seriously hurt. This was the darkest time in my life, and no one knew it. I had no one to reach out to, who I thought would understand. I didn’t want to be happy; I didn’t want a solution; I wanted to give up to disappear and fade away.

But I couldn’t no matter how much I wanted, and even tried. I never could jump or make that final choice to end it all. Somewhere underneath all my despair and anger, I knew I was loved. I knew that if I would just keep going a little more, I would get out of my darkness. I knew I had a Father in Heaven who loved me and didn’t want me to give up, that he was there to help if I would let him in. I knew that my Savior had felt what I was feeling and that he truly understood when no one else could, and knowing that made all the difference. So I clung to that hope, and even just that hope started to let small amounts of light in. For the first time in a long time, I wanted to be happy even if it was just a little bit. I decided to go to counseling and get help with my depression. I knew it was out of my control; I didn’t know how to be happy. It helped, but not immediately: it took a long time, and it was a lot of hard work, but I could feel a difference.

Around this time, I met a sweet young man who is now my husband, Jason Woods. I fell deeply in love with him. I loved how gentle, affectionate, and patient he was with his down syndrome older sister. He was soft-spoken, a good listener, and a hard worker. But the best thing about him was that he respected

me. He didn't try to get me to do things I didn't want to, nor was he about all that physical stuff that I was used to. We didn't even kiss till four months after we started dating. I loved it; I enjoyed our relationship so much it was unlike anything I had before, he really respected me and listened to me. We were able to confide in each other. We build a lot of trust. We could tell each other anything and be able to know that we would always have each other's back. I was so happy when I was with him I think it was because I was focusing on someone else's happiness not just myself. After nine months of dating, we got engaged and three months after that we were married. People say that marriage is so hard, however we have been married for a year now and I am still waiting for that "so hard" part.

Marriage isn't easy but I have been more happy in this last year then I have my entire life. I think this is why: I have someone in my life who is constant and stable, who always loves me and always wants me to be happy. My husband has my trust that if I need him he will be there for me. In turn, I am focused on making my husband happy and, when I focus my attention outside of myself on someone who I love, it brings more happiness than any other way. We also set long term goals religious, academic, and personal. Achieving those goals together brings me a lot of happiness because I feel that I can do hard things when I have a faithful partner who supports me. Jason and I set a religious goal to be sealed for time and all eternity in the St George Temple a year after we were married, and we did. That was a huge lifelong goal sense primary. I can't express how much happiness it brings me to know that my sweet husband and I are sealed to be together even after death. My religion brings me so much happiness and peace of mind. Without my Faith, I do not think I would have made it through those really dark years in my teens. Choosing to be happy is easier when I have a stable environment and remember my faith.

2nd Place Winner: Anthony London, "My Experiences with English: Tales of a First Generation American"

For Professor Nathan Price

When I was a thirteen year old boy, my mother was obsessed with shopping and naturally we visited the mall often. One day when my mother was shopping, I decided to go to Barnes and Noble to kill some time. Walking through a myriad of books, I happened to spot one that caught my eye. It was George R.R. Martin's Game of Thrones; the sword on the cover was impressive. We'd just had a history lesson about the renaissance in my school and I was obsessed with the thought of what my life would be like during that period of time. Being an impulsive thirteen year old, I asked my mother to buy the book. I began reading it, and it was impossible to put down. This was my introduction into the world of literature. My experience hasn't always been joyous. I actually had a hard time with English for the larger portion of my education. During my elementary years, one teacher even consolidated all my writing into a single portfolio to show students how not to write. In contrast, the eighth grade was a time I explored various complicated texts with authors ranging from Dostoevsky to David Foster Wallace. The experiences I've had with reading and writing have been a dynamic mess of good or bad, and with each new paper I write or book I read, my skills continue to improve.

My early experiences with reading and writing almost always resulted in failure. In my early years of elementary school, students were always surpassing me in English. They could read better, write better, and understand the text better than me. In contrast, I always did arithmetic and science based course work better than my peers; I wasn't a complete idiot. The biggest factor that set me apart from other students was that I was born into a family of immigrants. My parents emigrated from Russia as refugees in the early nineties and always spoke Russian in the home. While other students received English practice in the comfort of their homes, I was forced to speak Russian at home and English only at school which propelled my brain into a state of confusion when switching from one language to another. I experienced disciplinary action often, and I was "too social" in class because I tried communicating with students as much as possible as an attempt to bring myself to their level of fluency in English. My teachers began to dislike me and as a result, I became reserved and fell further behind. My entire elementary experience consisted of a pattern of failures, and, in the fourth grade, I was told that I was reading at a second grade level. By the seventh grade, I was already a year ahead in science and three years ahead in mathematics; yet, I could never seem to succeed in any of my English classes.

Eighth grade became a landmark in my educational career; it was the year I blossomed and my experiences completely turned around. I began to reflect on my own educational abilities and came to the conclusion that class work wasn't helping me. I had to take matters into my own hands. Game of Thrones was the book that started it all. I was so fascinated by the intricate prose and story-telling of George R.R. Martin that I wasn't able to put it down. In the beginning it was tough. I had a dictionary next to me to look up words I couldn't understand. Progressively, the advanced vocabulary began repeating itself and I was able to read the last two hundred pages without picking up the dictionary. Before, I was never able to experience a book, to see, smell, and feel everything the author described. Martin opened my eyes to the world of story-telling. I read his entire seven hundred page book in a matter of a week and a half. I didn't sleep for multiple days in a row because I was so invested in his story that it felt like main-lining the purest form of imagination; I was hooked. I had become a beatnik

William S. Borroughs, and what was my drug of choice? Literature. After I finished Martin's book, I asked my mother for some books that she thought were important. The next day I received Crime and Punishment by Fyodor Dostoevsky, she handed me the book with a smirk and said "I think you're old enough for this now." I read it cover to cover within two weeks. My mother and I discussed the philosophical implications of Raskolnikov's strange journey into Crime and Punishment over some tea. Of course I understood the story, but she opened my eyes to an entirely different realm. There are larger questions that the author always asks and they're masked by their story. She made me understand the sharp contrast between reading for the story and reading for the philosophy. As an eighth grader, I continued to read various novels by classic Russian authors which ultimately had a positive effect in my English class work. For the first time, I felt advanced in a classroom based English class.

In high school, I felt I had reverted back to those years in which failure was routine. High school was often too slow for me. I couldn't pay attention in class because the teachers was redundant. I refused to spend hours on homework reinforcing vapid concepts that I already had a strong grasp on. To add salt to the open wound, my social abilities took a downward spiral; I was awkward. I was still very far ahead of my peers in math and science, taking the highest courses that my school offered. In contrast, English was still a struggle. The biggest mistake was taking AP Language and Literature instead of a regular English class. All our writings were timed, and we were forced to read awful books that the teacher often looked much too far into. "The red on the carpet signifies the undying passion of the main character" my teacher would say. No, the carpet is just red, it's a descriptive color, not some obscure motif. My prose took a turn for the worst, the timed writings forced me to completely ignore any formatting and write one large run-on paragraph separated into five different chunks. This gave my English teacher the opportunity to ridicule my work in front of my entire class as an example of how not to structure a paper. I gave up; I didn't want to write anymore. I never figured out how to write well, structure my prose, or even use proper grammar. I was entirely self-taught through personal reading in high school, similar to Malcom X's experience in prison in his autobiographical excerpt Literacy Behind Bars. Although I didn't excel in my English class, I felt the communication between my peers was at a lower level than what I was learning at home. High School had become too slow, it wasn't structured for my learning style.

My last year of high school was filled with accomplishments masked by one big failure. At 17 years old, I basically gave all my teachers the middle finger. I went against my mother's wishes and due to pressing financial concerns, I dropped out of high school. The high school degree wasn't necessary for me. I had taken a residual ACT with the University of Utah during my sophomore year and received a 34 composite. The University of Utah would accept me without a high school transcript. However, during this time, I was also recruited to my high school's academic decathlon team two weeks before the regional competition. Having dropped out of high school, my academic decathlon coaches enrolled me in their classes so they could maintain my enrollment in school in order to participate in the competition. Out of eleven events, I received five medals: two gold, one silver, and three bronze. My gold medals were in the speech and essay categories. Immediately I knew I had done something right; the consistent reading had finally paid off in my writing. The team later went to the state competition where I would receive a total of nine medals, again, receiving gold in the essay category. Our team did so well in fact, we were invited to the national academic decathlon in Honolulu, Hawaii. This became first time I was genuinely valued during my high school education. After the competition, I went on to

receive a GED with honors. I was in the top three percent of the entire country compared to all recent high school graduates. After academic decathlon ended, I met Rita Osbourne; the pre-med advisor for Southern Utah University. She convinced me to come to SUU and take advantage of all the resources she could offer me for the beginning of my college education. After looking at different statistics, I decided SUU would be an excellent choice as a beginning to my higher education.

My experiences with reading and writing have taken twists and turns that I never expected to take. It was important to recognize my failures in each step towards my accomplishments. Sal Khan, creator of Khan Academy, once said, “I’ll never tell my kid he’s smart.” This is the same principle I’ve experienced throughout my educational career. An individual doesn’t learn from success. Success brings comfort whereas failure allows for an opportunity to approve, apply yourself, and correct the mistake. Recognizing failures as a learning experience rather than something that can’t be fixed is one of the most important philosophies in my life today. Being proactive as opposed to reactive is the philosophy I hope to apply to the rest of my life.

Works Cited

"Framework for Success in Postsecondary Writing." Council of Writing Program Administrators. 1 Jan. 2011. Web. 23 May 2014.

Raymond, David. "On Being 17, Bright, and Unable to Read." Language Awareness: Readings for College Writers. 9th ed. Karen Henry. Boston: Bedford / St. Martin's, 2005. 48-50. Print.

X, Malcolm, and Alex Haley. "Literacy Behind Bars." The Norton Field Guide to Writing with Readings. 3rd ed. New York: Norton, 2013. 577-581. Print.

Argumentative- English 2010

1st Place Winner: Kasen Lisonbee, "Nuclear Power"

For Dr. Bryce Christensen

If there is one word that has sparked more controversy than almost any other word in the past century it may well be the word nuclear. When the United States dropped two atomic bombs on Japan to end World War II, it started a worldwide race to develop similar weapons as defense and, if necessary, as a potential method of attack. With the agreements to limit atomic arsenals which most countries with nuclear weapons have signed, and the generally less tense worldwide political atmosphere, nuclear war is not the source of fear that it once was. Even so, the word "nuclear" still inspires some measure of fear and foreboding in the general public; even with the ever advancing knowledge we have of how to safely control radiation and nuclear processes. This fear probably results from anti-nuclear propaganda from various sources, and what we see in Hollywood-style disaster movies which graphically detail the horrendous side effects of excessive radiation exposure. It is true that there are severe problems which can result from such exposure, including the possibility of developing cancer, traumatic radiation sickness with symptoms such as nausea, hair loss and internal bleeding, genetic mutation, and in extreme cases death. In reality, the chances of enough exposure to cause these results are small and most people imagine the effects of radiation to be worse than they are.

Everyone is exposed to varying amounts of radiation on a daily basis, mostly from natural sources such as radioactive elements in the Earth, radon in the air, cosmic radiation from the Sun and stars, and emissions from the myriad electronic machines that surround us. These common sources of radiation do not normally create enough exposure to cause health issues. Sources of radiation that are strong enough to cause radiation poisoning are usually contained in a small area under protected conditions, and don't affect the general populace. Nuclear power plants are a prime example. Although they contain tremendous radioactive sources, with proper regulation nuclear power is safe and can serve as a useful tool. What makes it so useful to the power industry is its immense energy output from a small source, allowing it to be used to create a lot of power from a small amount of resources, with smaller waste output than other energy sources. Scientists and engineers have learned to harness that power to generate plentiful amounts of electricity safely and efficiently ("Outline History of Nuclear Energy"). Power plants have been built in many parts of the world, and have an overall good record of reliable use. There is a current proposal by Blue Castle Holdings Inc. to build a nuclear power plant in Green River, Utah, a remote town in Emery County with a small population. While having a nuclear power plant in Utah would increase available energy for use and export and create jobs for that area, when also considering the costs involved to build the plant and the amount of energy production already in Utah, it can be argued that this new power plant is essentially unnecessary.

As may be expected with anything which uses the word "nuclear", this project has aroused a lot of controversy. We will consider some of the arguments for and against building this nuclear power plant. The loudest arguments against this plan come from environmentalists who are concerned that it could contaminate the water of the Green River, affecting popular recreation sites and the national parks through which it flows. They are also concerned that the amount of water available for use in the sparsely populated desert area won't provide enough water to meet the needs of the power plant (Utah

Chapter Sierra Club). Caring for the environment is a responsibility of all who share it, and the corporations which build nuclear power plants need to be mindful of environmental concerns. Modern nuclear power plants are built to avoid harmful emissions of any kind into the environment. The water consumed is for cooling the nuclear reaction, and water that is released into the environment is protected from contact with and contamination from radioactive materials. Furthermore, nuclear plants do not release pollutants into the air either. The nuclear reactions that generate electricity are completely contained, and do not involve the consumption of fossil fuels. This means they are very environmentally friendly for both water and air. Environmentalists would argue that the nuclear waste generated is dangerous and does cause harm. These are concerns that the nuclear power industry is well aware of. They have taken care to reduce the impacts of this waste and protect communities and the environment with onsite and offsite storage facilities.

Even though there has been much opposition, there has also been support from some governmental agencies, businesses, and individuals. Aaron Tilton, CEO of Blue Castle Holdings stated in an interview that, “The Blue Castle Project success is rooted in the support we have received from the public, state and local governments to deploy clean, predictable, long-term nuclear electricity generation” (Winslow; Par. 3). Some potential benefits to having a nuclear power plant in Utah would include the creation of several hundred high paying jobs, boosts to the construction and service industries, and the generation of additional energy surplus which can be sold to neighboring areas and states. Since substantially large amounts of concrete, steel, tubing, wiring and multiple other components are necessary to the construction and operation of nuclear power plants, suppliers of these commodities would experience an increase in business, helping these markets substantially. It would also be economically beneficial to the Green River area through increased traffic to the town, more new working residents and more incoming taxes.

Like other nuclear power plants in their respective locations, the plant at Green River would greatly increase the amount of energy available in Utah. In fact, it is predicted to increase the amount of power available to the state by about fifty percent (Blue Castle Holdings). Considering that most of Utah’s power is generated by the combustion of coal, which is pointed to as a major source of pollution, it would seem highly desirable to have a source of clean, environmentally friendly energy, which then may decrease our reliance on coal-fired plants (“Utah - State Profile and Energy Estimates”). The increase in Utah’s energy market and correlating increase in energy exported to surrounding areas would increase income to our state. The other pros of the project are mostly economic in nature, including the monetary benefit to the owner and investors in the project, and the jobs and new business in communities immediately surrounding the new power plant.

Those opposing the project are of the opinion that the majority of citizens of the state would receive the metaphorical short end of the stick, meaning that they will be paying more for power which will economically benefit a select group of people with little or no benefits to them. One of the biggest problems is the funding required to begin a project of this magnitude in the first place. These plants can cost billions to build and more to maintain and refuel. This partially explains the high cost of energy produced by such power plants. Another problem with this new power plant would be its cost of energy production. According to the Energy Information Association, power from nuclear plants costs on average $1.51 per kilowatt hour, much more than the $.897 per kilowatt hour average cost of energy in Utah for October 2014 ("Independent Statistics and Analysis, Electric Power Monthly"). This higher price may seem reasonable as an environmentally friendly alternative to consuming fossil fuels. However, if

new power production from nuclear energy costs more than the energy that we currently produce, mainly from coal along with other sources, would it not stand to reason that customers will end up paying a higher price for the electricity they use? Seeing this difference in cost should cause the citizens of Utah to question the value of bringing a nuclear plant into Utah at all, even though such plants do generate very high quantities of electricity. It seems wiser to pay less, especially considering that Utah not only produces sufficient electricity for the whole state, but already exports twenty-nine percent of its electricity to other states ("Utah - State Profile and Energy Estimates"). Do we really need to invest in another mass producer of electricity when no extra electricity is needed in the first place? And could the money, man-hours, construction materials and other resources which would be expended on such a massive project be put to use in other, more beneficial ways?

And finally, some of the major concerns about nuclear power plants are the potential environmental impacts. Opponents are very vocal about the dangers of radiation exposure from accidents and the problems of storing radioactive waste. To understand the environmental impact of nuclear power it is important to understand how it works. Nuclear power plants rely on radioactive Uranium as a fuel source. These plants are built to be safe, protecting the surrounding environment and plant personnel from excessive radiation exposure. The water that is taken from the surrounding environment to cool the reactors is protected from taking radioactive material back out into the rivers and lakes it comes from. Nuclear power plants generate electricity by placing fuel rods containing radioactive Uranium or Plutonium in a reactor surrounded by water to keep them cool. The rods are then bombarded with neutrons accelerating nuclear decay and therefore, energy release. As the decay of the radioactive material releases energy the water surrounding the rods heats up. The water is then circulated through another water tank which takes water from an outside source. The water from the reactors and the water from the second tank do not mix, preventing the transfer of any radioactive material. The water from the second tank is converted into steam and is passed through turbines generating electricity, then it is cooled and essentially recycled. The walls in these plants are thick and designed to keep radiation from escaping, especially from directly around the reactors. The areas inside and surrounding the plant are constantly monitored for excessive radiation release so that if an emergency shutdown were necessary it could be performed before major damage was caused (Ferguson, 40-47). Even considering these protections there have been accidents in the past that have ruined homes and lives and damaged environments (Rogers, Data Summery). Unfortunately, several of these have been caused by human error and could possibly have been avoided. Accidents have also been caused by natural disasters which damaged and disrupted the normal operation of the power plants.

Another environmental concern regarding nuclear power is the disposal of spent fuel rods which still contain radioactive materials. Eventually the fuel rods no longer produce enough energy to be of value to the plant and are replaced. Even though they are of no use they still emit unsafe amounts of radiation. The only way to stop the emission of these particles is to allow the fuel to undergo normal radioactive decay, which can take hundreds of years. If simply dumped in a landfill or open storage area like normal waste, this would pose a significant radiation risk for natural habitats. The nuclear power industry knows how to safely remove, transport and store radioactive waste. Containment facilities exist both on the plant site and in remote locations to house the spent fuel rods and contain the radiation from them until they can decay to safe levels ("Radioactive Wastes – Myths and Realities," 4). The potential hazard that poses the greatest risk is an emergency at the plant, where something either malfunctions or is damaged and radioactive material is spread to the surrounding environment. Because

the threat of dangerous accidents at nuclear power plants has been proved to exist, it is worthwhile to examine some past occurrences. Some of the most well-known radiation leakage emergencies are Chernobyl in Ukraine, Three Mile Island, New York, and the recent Fukushima, Japan accident.

The accident at the nuclear power plant in Chernobyl, Ukraine took place in April 1986. While the workers were running some tests, they disabled some of the equipment and regulatory processes due to inadequate training. There was a power surge to the reactor, which overheated and caused a buildup of pressure. There was a resulting explosion, blowing off the thousand ton reactor cap and spewing radioactive material high into the atmosphere. This was carried into the surrounding area by winds, contaminating the environment for miles around. Evacuation orders to the surrounding cities were delayed and as a result many people suffered severe problems due to the high levels of radiation. Although only about thirty five people died at the time of the disaster or shortly thereafter from radiation poisoning, an estimated 600,000 people may have received enough exposure to cause long-term effects (Greenfacts, 2). A concrete shell was erected over the destroyed reactor to allow for continuing use of the other reactors. The shell was hastily erected and still contains about two hundred tons of radioactive material that pose an environmental hazard until they can be properly contained. A new, safer structure is set to be completed in 2016. People have been allowed to return to live in the contaminated areas (“Chernobyl Accident 1986”). A study published this year by Timothy A. Mousseau of the Department of Biological Sciences and the Environment and Sustainability Program, University of South Carolina and Anders P. Møller from Université Paris-Sud in France shows that many of the animals and vegetation surrounding Chernobyl still suffer the effects of the radiation in their physiology. Traces of radioactive material remain in the area and have caused changes in the DNA of the local plants and animals (Mousseau, 704-709). This accident and its long lasting repercussions could be viewed as a reason to oppose the construction of new nuclear power plants to avoid risk of emergency. Plans and blueprints for nuclear power plants have improved since that time, increasing safety and reliability. While having a safe plant is of utmost importance, having qualified personnel running the plant is just as important so that they can run the plant safely, and can identify and control situations before major problems occur.

If the planned nuclear power plant in Green River were to experience an emergency, the citizens of the town and surrounding areas could potentially be exposed to high enough levels of radiation to cause serious health problems, like what happened to the residents of the Chernobyl area. All extreme exposure to radiation increases the risk of cancer, acute radiation sickness, burns, prenatal problems including infertility and birth defects, and the possibility of psychological problems from worry and stress. Radiation affects the cells in the body disrupting the proper functions they have and often leading to radical replication of cells causing tumors among other problems. One of the quickest results of excessive radiation exposure is acute radiation sickness. This is a group of symptoms that can include nausea, vomiting, diarrhea, headaches, internal bleeding, and hair loss. It can be of short or long duration or come and go. Radiation can also cause burns just like heat exposure. Since it affects the cells of the body, changing their functions and disrupting their systems, it can cause problems in development of prenatal children and can cause infertility. As mentioned previously, everyone is exposed to low levels of radiation every day from natural and man-made sources. The level of exposure from these sources is low enough that it is not likely to cause even minor reactions, except perhaps with extended or repeated exposures, such as sunburn or concentrations of radon gas which collect in low areas like basements. High exposure levels can have one or more of the side effects mentioned (U.S.

National Library of Medicine). The risks of excessive exposure and especially extended exposure can be avoided with prompt evacuation in the event of an emergency. This was key in protecting many of the citizens of Fukushima from radiation related problems. As it stands, the majority of Utahns would be at low risk of radiation exposure were this power plant to be completed, especially with current safety precautions.

Three nuclear power plants were mainly involved in the recent emergency at Fukushima, Japan ("Fukushima Accident"). Everything was normal until a powerful earthquake caused a tsunami which hit the plants. This natural disaster disrupted the flow of water to cool the reactors and the result was a nuclear accident later classified as a class 7 disaster by the INES. While other Japanese nuclear power plants were affected, the three in Fukushima were the cause of what became a large and devastating disaster. All of the reactors were shut down when the earthquake hit and were found undamaged immediately afterwards. The real problem was the tsunami, which disabled some backup generators and heat exchangers whose function was the transfer of used heat into the sea. Circulation of water stopped, causing some of the reactors to overheat which caused some explosions. In another plant the batteries and the plant circuitry failed causing a blackout complicating cleanup and repair efforts ("Fukushima Accident.", Events at Fukushima Daiichi 1-3 & 4). Water that had become contaminated with radioactive material flowed back into the sea for the next two months as well as seeping gradually into the water table. This water is still a concern today. Cleanup at all plants on all levels was difficult and dangerous as a result of the tsunami. One of the biggest tasks for the crew was containing the leakage of radioactive material and especially contaminated water from the overheated reactors ("Fukushima Accident." Managing contaminated water).

Within a few weeks the situation was stable, but there was still significant work to be done. Some workers were killed by the earthquake and the tsunami, however there are no deaths on record that were caused by radiation from the nuclear accident. Prompt evacuation of the surrounding areas ensured protection of the populace and it is expected that no one was exposed to enough radiation to cause much harm ("Fukushima Accident.", Events at Fukushima Daiichi 1-3 & 4). Japan has already reopened some surrounding towns as they have been deemed safe, allowing many to return to their homes ("The Situation at Fukushima"). While modern nuclear reactors are built to withstand radiation from within and the elements from without, major natural disasters can still pose a threat.

Water is a valuable resource, especially in desert areas like Utah where there is a limited supply. The use of water from the Green River has some people worried because of the additional question of water availability (O'Donoghue).. If the water of the Green River became contaminated, like the water at Fukushima did, many people, plants, and animals that depend on the water from this river would suffer. The Green River flows through popular rafting and recreation areas and a few national parks, which could be rendered dangerous through radiological contamination in the event of an emergency. If a disaster were to occur and water to the plant were to be cut off, an accident similar to the Fukushima accident could be the result. Environmental reporter O'Donoghue's article documents statements about the approval of the water rights for the project. The approval process has taken two years to complete. The article states that the water needed to run the plant represents one percent of the water in Utah. Although that may not seem like very much, the question is exactly how much water can the Green River area specifically supply. As a protection against a water related emergency occurring, the plant may store additional water for emergency use, solving this problem. Even though nuclear power plants

run without depositing radioactive material into the rivers, if there is insufficient water to the plant to regulate the nuclear reaction, there is the risk of an emergency.

All aspects of the plan to build a new nuclear power plant at Green River, Utah need to be carefully analyzed, and the balance of power production and economic benefits contrasted with safety, environmental and cost concerns. Modern nuclear power plants are designed and constructed to be safe, with safety controls built in to prevent excessive radiation exposure from man-caused errors and natural disasters. They have less environmental effects than other forms of power production. The electricity provided would serve much of Utah and provide surplus for exportation, providing greater energy self-sufficiency and revenue for the state. The plant would generate many skill based jobs and give investors and the state significant profits. In contrast to these benefits there is no guarantee for complete safety in the event of a natural disaster, such as a major earthquake, or water to the plant being cut off. The danger exists and it is natural to be concerned about it. No matter how well the environment is protected, there are still impacts of any new construction, as well as possible effects of nuclear disaster and the resultant contamination which could last for many years as shown by previous accidents. While the thought of having a nuclear power plant here in Utah should not be terrifying or objectionable, the benefits of this alternative are outweighed by the cost and current availability of other types of energy production. Utah does not need additional energy at this time, and the extremely high cost of building and maintaining these plants is unnecesary. For these reasons it is not a wise decision for the citizens of Utah, investors or government to support this project. It can be expected that in the future nuclear power plant designs will improve their safety and operational systems, and the costs of construction and production may be brought down. Populations will also continue to increase, requiring more power to be created and at that time, the construction of a nuclear power plant in Utah may prove useful or even necessary.

Works Cited

Energy Information Association. "Independent Statistics and Analysis. Electric Power Monthly" Energy Information Association. EIA, 24 Oct. 2014. Web. 6 Nov. 2014.

Energy Information Administration. "Utah - State Profile and Energy Estimates" U.S. Energy Information Administration (EIA). Web. 6 Nov. 2014.

Blue Castle Holdings. "FAQ What Are the Considerations for Water Use." Blue Castle Project. Blue Castle Holdings Inc. Web. 6 Nov. 2014.

Ferguson, Charles. "Fundamentals." Nuclear Energy: What Everyone Needs to Know. New York: Oxford UP. 2011. 40-47. Print.

Greenfacts. "Chernobyl Nuclear Accident." Greenfacts. Greenfacts. Web. 18 Nov. 2014.

Mousseau, Timothy A., and Anders P. Møller. "Genetic And Ecological Studies Of Animals In Chernobyl And Fukushima." Journal Of Heredity 105.5 (2014): 704-709. Academic Search Premier. Web. 10 Oct. 2014.

Nuclear Energy Institute. "Costs: Fuel, Operation, Waste Disposal & Life Cycle." Nuclear Energy Institute. Web. 6 Nov. 2014.

O'Donoghue, Amy Joi. "Fate of Proposed Green River Nuclear Power Plant Depends on Water." DeseretNews, 29 Sept. 2013. Web. 8 Nov. 2014.

Rogers, Simon. "Nuclear Power Plant Accidents: Listed and Ranked since 1952." The Guardian. The Guardian News and Media, 18 Mar. 2011. Web. 15 Nov. 2014.

Utah Chapter Sierra Club. "Blue Castle-Green River Nuclear Power Plant." Utah Chapter Sierra Club. Web. 8 Nov. 2014.

U.S. National Library of Medicine. "Radiation Sickness: MedlinePlus Medical Encyclopedia." U.S National Library of Medicine. U.S. National Library of Medicine. Web. 10 Nov. 2014.

Winslow, Ben. "Deal Inked to Develop Nuclear Power Plant near Green River." Fox 13, 20 Aug. 2014. Web. 7 Nov. 2014.

World Nuclear Association. "Chernobyl Accident 1986." World Nuclear Association. Web. 9 Nov. 2014.

World Nuclear Association. "Outline History of Nuclear Energy." History of Nuclear Energy. 1 Mar. 2014. Web. 14 Nov. 2014.

World Nuclear Association. "Radioactive Wastes - Myths and Realities." World Nuclear Association, 1 Oct. 2012. Web. 15 Nov. 2014.

World Nuclear Association. "The Situation at Fukushima." World Nuclear Association. Web. 8 Nov. 2014.

World Nuclear Association. "Fukushima Accident." World Nuclear Association, 1 Nov. 2014. Web. 8 Nov. 2014.

2nd Place Winner: Payton Yerke, "The Science of Ghosts and the Essence of the Human Soul"

For Dr. Bryce Christensen

Ghosts and the sense of an afterlife have enthralled our imagination, media, and religions for centuries. In a recent poll, it was found that 45% of all Americans believe ghosts to be real (Gayomali). In a separate poll, 22% reported sensing a ghostly presence or experiencing an apparition (McDonald). As a young teenager, I remember going out on late night ghost-hunting trips with the latest teenage-ghost-hunting equipment: a camera phone to record what we saw. Most of the time we never saw anything at the reportedly haunted locations we visited, but there were also the rare occasions where unexplained shadows, movements or, even, figures occurred. With so much reported phenomena, can the existence of poltergeists be supported or proven scientifically or is it merely an illusion born of religious faith?

Religion contributes significantly to the belief in the human soul and ghosts. For those of Christian-based faiths, a common belief is that eternal life will be awarded to the faithful. With such views, death is seen, not as a termination, but as a transformation from their corporal selves to an eternal being that will then go to Heaven and return to God or their Creator. This conviction of the essence of a human soul is essential to support the tantalizing idea of everlasting life after death (Handley).

Religious beliefs in the afterlife have prompted the scientific investigation to determine whether we, as humans, possess a soul and if the soul continues to live after our mortal death. A study was conducted by Robert Schoch, the Associate Professor of Natural Science at Boston University, on the near-death experiences and the correlation between geomagnetic waves on brain waves. The study resulted in the theory of crisis apparitions, which occur when an individual sees the ghost of a faraway relative moments before the individual dies. In regards to the study, Schoch explained, "Some people will dismiss this as coincidence, but there have been, in my assessment, very good statistical studies of such things that take it out of the realm of coincidence" (McDonald).

Further studies regarding the existence of a human soul have been conducted. One such experiment done by Dr. Duncan MacDougall in 1907 studied the weight fluctuations during the death process. Six terminally ill patients were observed before, during, and after the death process. They were placed on a bed that would record the patients' weight, sensitive to twotenths of an ounce. In detailed, written accounts of his study, MacDougall explained that, with every patient, the rate of weight-loss, due to perspiration, evaporation of moisture and moisture of respiration, during the death-process was calculated. At the exact moment of death for each patient, there was a sudden loss of weight of approximately 21 ounces. Further investigation of this sudden weight loss found that the bowels did not move, no urination occurred and the loss of air in the lungs did not affect the patients' weight. MacDougall concluded that the loss of weight was not a product of physiological attributes, rather from spiritual. He theorized that the loss of weight is a result of the human soul leaving the body (MacDougall).

Another experiment investigating the correlation of the human soul and near death experiences (NDEs) was conducted by Kumar Pranab Bhattacharya in 2013. According to Bhattacharya, an NDE refers to a broad range of experiences of people associated with impending death. However, somehow these people managed to be revived back to life. Cases of NDEs are often reported after people have been pronounced clinically dead or close to death. These reported experiences include a review of one's life,

an out-of-body experience or astral projection, visions of themselves passing through a dark tunnel, seeing a bright light, seeing and talking to God, seeing foreign lands, seeing dead relatives, or seeing the future. To further support these reports, most people who underwent a NDE, even people who are non-religious, reported substantially decreased fear of death and an increased acceptance of an afterlife and reincarnation (Bhattacharya).

Many skeptics challenged the results found by Bhattacharya. The major controversy occurred when other chemical factors were found that produced experiences similar to that of NDE. Chemicals such as Ketamine, Phencyclidine, LSD, pilocarpine, and mescaline induce experiences that consist of unconsciousness, out-of-body experiences, and occurrence of a bright light. Nonetheless, these experiences are not identical to NDE in that they are characterized by fragmented and random memories rather than a recollection of one's entire life. They also lack the decreased fear of death that individuals who experienced an NDE obtained (Bhattacharya).

The presence of near death experiences and the faith in a human soul evokes the mystery of life after death. Like Christians, Hindus, Buddhists, and Jews believe in spirits. However, Hindus, Buddhists, and Jews believe that the spirits of the dead can attach themselves to places, people, possessions or pleasures that cause the individual to be in spiritual limbo. These spirits are seen as suffering people that need help moving on to the afterlife. Buddhism teaches methods on how to free ghosts from earthly bondage by directing them toward the golden light. These religions also believe that spirits of deceased individuals can attach and possess the bodies of the living in order to influence the host. As a result, Judaism teaches rituals of ghost exorcism that both heals the ghost and the host. Although the West is highly influenced by the Christian belief, the idea of ghosts walking among us, haunting a location, or possessing the living endures throughout the generations and has both frightened and fascinated us (Handley).

Ghost stories have endured throughout the centuries. The first reported poltergeist experience dates back to Pliny the Younger in the first century A.D. in Athens, Greece. He described his poltergeist experience in a letter to Licinius Sura:

> There was at Athens a large and roomy house, which had a bad name, so that no one could live there. In the dead of the night a noise, resembling the clashing of iron, was frequently heard, which, if you listened more attentively, sounded like the rattling of chains, distant at first, but approaching nearer by degrees: immediately afterwards a spectre appeared in the form of an old man, of extremely emaciated and squalid appearance, with a long beard and disheveled, hair, rattling the chains on his feet and hands (Younger).

The existence of earthbound spirits, or ghosts, has been questioned and studied upon multiple accounts. In an interview with ghost expert, Michael Lopez Sr., he explained that the human body is composed of energy. As humans, we all give off different types of energy, or auras. The energy within us can be measured on a spectrum of high to low. Bad spirits and demons give off low energy levels, while good spirits give off high energy that the living can physically feel. Some people, including himself, are more sensitive to energy and can sense or even see and converse with spirits. He gave detailed experiences where, as a child, he would ask spirits for a ride on his sister's bed. In response, the bed would begin to shake and move around the room. He theorized that the spirits were able to accomplish this action because they were composed of energy and had the ability to manipulate the energy around them (Lopez).

Most theories involving ghosts as beings of energy claim that the transition between the mortal and spiritual worlds are in relevance to Einstein's Law of Conservation of Energy. The Law of Conservation of Energy states that the total amount of energy in an isolated system remains constant over time. For an isolated system, this law means that energy can change its location within the system and change its form within the system, but that energy can be neither created nor destroyed. The human body generates enough electricity to sustain a small flashlight. If energy cannot be destroyed, rather it can be transformed, then what happens to the electricity in the human body after death? Ghost researcher and notable author, John Kachuba, wrote:

> Einstein proved that all the energy of the universe is constant and that it can neither be created nor destroyed. ... So what happens to that energy when we die? If it cannot be destroyed, it must then, according to Dr. Einstein, be transformed into another form of energy. What is that new energy? ... Could we call that new creation a ghost (Kachuba)?

Skeptics dismiss John Kachuba's theory of the Law of Conservation of Energy as a false explanation of ghosts, claiming that after death the energy of the body passes through an ecosystem via photosynthesis and the consumption of organisms. When the human body is deceased, it begins to decompose and the energy stored within the body is lost to heat or is consumed by microorganisms and other organisms. Though Kachuba uses the language of science to support his theories, he lacks the understanding of energy processes, scientific experimentation, and data to support his ideas. In a sense, Kachuba is attempting to use science to explain phenomenon that exist beyond the realm of normal science.

While Kachuba tried to use science to justify his spiritual beliefs, real scientists have used new technology to discredit many reports of haunting and poltergeist experiences. In a careful case study, William Holland Wilmer examined the past documentation of a haunting witnessed by the "H" family after they moved into an old, large and gloomy house that was presumable haunted in 1912. Mrs. H kept a journal of the odd happenings within the house. She described pots and pans that crashed seemingly on their own, strange voices calling out the names of Mrs. H and her children, and footsteps that could be heard throughout the hallways. She also described feeling presences and seeing dark figures. She wrote, "On one occasion, in the middle of the morning, as I passed from the drawing room into the dining room, I was surprised to see at the further end of the dining room, coming towards me, a strange woman, dark haired and dressed in black." In another account, she wrote, "It had always been Mr. H's habit at night before going to bed to sit in the dining room and eat some fruit. In this house when seated at night at the table with his back to the hall, he invariably felt as if someone was behind him, watching him. He therefore turned his chair, to be able to watch what was going on in the hall." Over time, the inhabitants of the household grew extremely tired, depressed, and sluggish. They all developed colds and headaches that couldn't be relieved. After a while, all the plants within the house withered and died (Wilmer).

After investigating the house, Wilmer found an odd culprit behind the presumed haunting; it was carbon monoxide poisoning. He found that the furnace was leaking the odorless gas through the chimney, thus causing oxygen deprivation. The deprivation of oxygen was causing the illnesses and hallucinations witnessed by the "H" family (Wilmer).

Other surprising factors have also led to the perception of paranormal activity. Stimulation of the Angular gyrus within the brain creates similar experiences that are often reported as paranormal.

Excessively stimulating the Angular gyrus results in the perception and hallucination of shadowy figures. In a study done by Michael Persinger Spain, he utilized a helmet that emitted electrodes into the brain to directly stimulate the Angular gyrus in order to induce the presence of angels and demons. Eighty percent of all the participants reported seeing a shadowy figure standing beside them in the experimentation room. Furthermore, the location and presence of the figure could be directly controlled by the currents of the electrodes emitted from the helmet and the location at which they stimulated the Angular gyrus (Green).

How the brain reacts to energy waves and electrical impulses plays a key role in reported hauntings. In a published encounter, Vic Tandy, from the School of International Studies and at Law Coventry University, was working in his classroom medical lab in 1998. Ghostly encounters began to be reported from both the staff and students. A custodial lady even resigned after witnessing a paranormal apparition. Many of the students, and Tandy himself, reported seeing a dark figure out of the corner of their eye watching them. However, whenever someone turned to face the figure, it had vanished. One day, Tandy brought a fencing sword into the laboratory. As he entered, he noticed that the free end of the blade was frantically vibrating up and down. The vibrations were varying in intensity at a rate equal to the resonant frequency of the blade, which is a characteristic identical to that of energy emitted by sound waves at a low frequency, otherwise known as infrasound waves (Tandy and Lawrence).

Infrasound waves usually can't be perceived by human ears because they vibrate 1 to 20 vibrations per second, which is too low for the human range of hearing. However, humans can sense the presence of infrasound waves. Encountering infrasound waves can cause nausea, anxiety, and chills. It can also trigger the brain to slightly vibrate the eyeballs, which can make the victim experience hallucinations, such as shadowy figures (Tandy and Lawrence).

Further investigation into the source of the infrasound waves established that the vibrations got bigger as the blade was moved towards the middle of the room and the amplitude of the vibrations greatly reduced or stopped altogether as the sword got closer to the walls of the room. The culprit behind the infrasound waves was a newly-installed fan, with a frequency of 18.98 hertz. The sound waves originating from the fan resonated around the room and bounced off the walls which caused it to collide with itself, creating a strong standing wave in the middle of the laboratory (Tandy and Lawrence). Other researchers used Tandy's scientific findings to discredit other reported hauntings. However, these researchers have not succeeded in tracing all reported encounters with the supernatural back to psychological misperceptions.

Tandy's discovery of environmental factors contributing to poltergeist events prompted Richard Wiseman to investigate, through multiple experiments, other environmental factors resulting in the perception of a presence or paranormal encounter. One such experiment conducted by Wiseman involved South Bridge in Edinburgh, Scotland. South Bridge was constructed in the late eighteen century. For a public service, a series of rooms and corridors were built under the bridge to house the poor and homeless. Due to overpopulation, these vaults became disease-ridden and abandoned in the late nineteenth century. In 1997, the vaults were reopened and became an attraction for public tours. Not long after the reopening of the faults, tourist began to report feeling presences, unusual footsteps, and the appearance of spirits in some of the rooms. Wiseman designed an experiment to see if people who were not familiar with the reputations of each of the rooms would sense anything unusual with them (R. Wiseman, C. Watt and P. Stevens).

In a four day trial, volunteers toured the vaults and recorded any unusual experiences of phenomenon they experienced. Architecture, lighting levels, air movement, temperature, and magnetic field levels were also prerecorded. When the final data was examined, the volunteers were consistent with rating certain rooms as more haunted than others. This data also correlated with past records of haunting reports kept by the tour company. However, when the environmental factors of all the rooms deemed as haunted were taken into account, the volunteers were more likely to have reported unusual experiences in rooms with high ceilings, high levels of exterior lighting directly outside the vault, and high magnetic field levels. Wiseman concluded that people report more haunted experiences because they feel more vulnerable in a room with a high ceiling and when they walk from a well-lighted area to a darker room. Furthermore, the strong magnetic waves found in all the reportedly haunted rooms stimulates the Angular gyrus, creating a feeling of anxiety and fear (R. Wiseman, C. Watt and P. Stevens).

In another experiment conducted by Richard Wiseman, he investigated the correlation between reported hauntings and the belief in ghosts. His experiment took place in Hampton Court Palace, one of the most reportedly haunted places in England. His experiment was meant to discover the extent that belief in ghosts, suggestion, and magnetic fields accounted for the alleged hauntings. Over 600 participants took part of the experiment, and each participant was given a questionnaire that measured their belief in ghosts, past unusual experiences and whether they believed ghosts were the underlying reason behind the unusual experience. After reporting all the occurrences of unusual happenings while in Hampton Court, Wiseman concluded that participants who had previous beliefs of the paranormal reported experiencing more frequent anomalous activities and were more likely to attribute them to a spiritual presence (R. Wiseman, C. Watt and E. Greening).

In the second portion of the experiment, half of the participants were told prior to entering Hampton Court that it was historically associated with hauntings and other paranormal activity. The second half of the study group wasn't told anything about the area's history before entering. The relationship between suggestion and the reported results of paranormal activity was significant. Also, results supported the association between reported poltergeist and magnetic waves (R. Wiseman, C. Watt and E. Greening).

Psychological advancement and understanding has explained many physiological effects that correspond with a spiritual encounter. Oftentimes, the encounter with a threatening spirit is reportedly characterized by a sense of awaking from a sleep with bodily paralysis. Imagine trying to move or scream but, regardless the struggle, the body won't respond. In addition, many reported experiences described feeling crushed by an invisible presence. During these experiences, many reports of unnerving blurry figures, whispers, and footsteps occurred. This phenomenon is commonly referred to as "ghost press" in the Chinese culture. However, further investigation behind the psychological aspects of ghost press presented a new understanding of this spooky occurrence. Rather than a poltergeist experience, ghost press is simply sleep paralysis. Dr. Priyanka Yadav of the Somerset Medical Sleep for Life Center in New Jersey explains that the phenomenon occurs when there's a disconnect between the mind and body as people enter or exit REM sleep. In a sense, it is equivalent to dreaming while awake. "It seems like you're paralyzed, which naturally occurs when you're sleeping, but this somehow happens while you're awake. It can last from a few seconds to a minute or two and is often associated with hypnagogic hallucinations, things you might see when trying to fall asleep or hypnopompic hallucinations, things you see when you're trying to wake up." To further support this theory, 79% of ghost press occurrences were reported between 2 a.m. and 5 a.m., the most common time-frame that the human brain causes hallucinations (Gayomali).

In conclusion, both believers and skeptics approach the human soul and the existence of an afterlife, whether on Earth as a ghost or in some other realm, as a metaphysical idea that is difficult to verify with concrete scientific evidence. Believers regard the soul as the essence of our consciousness; skeptics regard it as an illusion. Scientists have yet to prove or disprove its existence. Scientists have explained some supposed spiritual encounters as illusions caused by biochemical disruptions. Still, they have not yet fully explained other reports, particularly those of near death experiences. Skeptics still discredit those reports saying they are from individuals drawing on hope and religion, not science. But when will science disprove hope or religion? When exploring the realm of the metaphysical, we find the door to faith is always open.

Works Cited

Bhattacharya, Pranab Kumar. "Is there science behind the near-death experience: Does human consciousness survives after death?" Annals of Tropical Medicine & Public Health (2013): 151-165. Academic Search Premier. 21 October 2014.

Gayomali, Chris. "4 possible scientific explanations for ghosts." The Week 25 October 2013. Web.

Green, Laci. Do Ghosts Exist? Exploring the Paranormal 2013. Web.

Handley, Sasha. Visions of an Unseen World: Ghost Beliefs and Ghost Stories in Eighteenth-Century England. London: Brookfield, 2007. Print.

Kachuba, John. Ghosthunters: On the Trail of Mediums, Dowsers, Spirit Seekers, and Other Investigators of America's Paranormal World. New Page Books, 2007. Print.

Lopez, Michael I. Interview. Payton Yerke. 18 October 2014.

MacDougall, Duncan. "Hypothesis Concerning Soul Substance." American Medicine 2 (1907): 395-397. Web.

McDonald, Glenn. "Ghost Stories: The Science Behind Sightings." 29 October 2013. Web.

Tandy, Vic and Tony R. Lawrence. "The Ghost in the Machine." Journal of the Society for Psychical Research 62.851 (1998). Web. 1 November 2014.

Wilmer, William Holland. American Journal of Ophthalmology 17.6 (1934): 522–523. Web. 29 October 2014.

Wiseman, R, et al. "An investigation into the alleged haunting of Hampton Court Palace : Psychological variables and magnetic fields." Journal of Parapsychology 66.4 (2002): 387-408. Web.

Wiseman, Richard, et al. "An investigation into aleged ‘hauntings’." British Journal of Psychology 94 (2003): 195–211. 30 October 2014.

Younger, Pliny the. Pliny the Younger (A.D. 62?–c.A.D. 113). Letters. 27 March 2013. Web. 21 October 2014.

Expressive- English 2010

1st Place Winner: Heidi Parker, "Birds of a Feather"

For Dr. James Aton

I walked past the room that used to be mine, intentionally keeping my breathing shallow. However, try as I might to hurry past the opening, the waft of air was too highly diluted with stench to avoid; I had to smell it. The room that no longer belonged to me was being cohabited by Digger and Dumbo, and their equally disgusting counterparts, my new stepbrothers Brian and Ethan. Digger and Dumbo were two of the ugliest looking rats that I had ever seen, bought by my dad and step-mom to "bring our family together." What a joke that was; I hated those rats. Not only were they ugly, but they squeaked every night and they smelled like they lived in feces. They probably did, knowing the amount of time the boys put into taking care of them.

Digger was a toilet-colored rat, about six inches long (although his tail made him almost double that), and he was the noisiest of the two. His incessant squeaking could silence the devil itself, but brought it out in all of the kids. His companion, Dumbo, was larger than Digger, about eight inches long. He was a musty brown color, his fur always coated in the paper shreds that were meant to cover the floor, due to his constant lack of motion. This laziness may have, in part, been attributable to the behavior exemplified by that of the humans sharing a room with him.

Brian and Ethan did nothing all day aside from eat, sleep, and smell bad. Having boys in the house was a new experience altogether; I grew up with just four sisters, aside from my parents. The two boys that I was supposed to welcome into my life were lazy and needy, and I thought that having the rats live with Brian and Ethan was fitting; after all, birds of a feather flock together.

Several months later, I joined my siblings in the living room to play with the rodents. I allowed Dumbo to crawl up my arm and lace its long tail around my neck, cradling me in its strong grip. I felt his soft fur tickle my ear, and I laughed. After it was out of its cage, it really didn't smell all that bad. I looked over to my brothers; Digger was just crossing to Ethan's arm from Brian's outstretched one. They were really becoming a part of the family—the rats, that is. Just as this thought crossed my mind, Dumbo ran down my arm, leaving inch-long scratches all down it.

I still hated them.

With a huff, I stormed off to my room. All I wanted, as a naïve twelve-year-old girl, was a normal family with normal pets in a normal-smelling house. These rodents living in our house were just signs of our dysfunction; they weren't meant to be there. I sat in my room and thought for a while. I thought about how different my family was from all of the others in my conservative, suburban neighborhood. I thought about how "life wasn't fair" and other adult aphorisms. Lastly, I thought about those filthy rats.

If I was asked now why I hated those rats, I don't think I would be able to answer. Yet in that room, on that day, I felt nothing but disgust and loathing for those harmless creatures. In my mind, these four-legged monsters were doing more damage to our already-broken family than reparation, when my own stubbornness was doing just that. I distanced myself, both physically and emotionally, from my family by refusing to become close to Digger and Dumbo. The two rats that, in my mind, were, in habit,

synonymous with my two new stepbrothers came to metaphorically resemble my own insecurities about my family. I refused to accept change, whether it be with the pets we owned or the structure of our family. As it turned out, change was for the better.

The three months that followed did so in a blur. I was learning to not only live with changes, but to embrace them as well. While the rats and I were still at odds, I learned to tolerate and even welcome their presence in times of leisure. I remember a time when all of us eight kids were once again sitting on the lush carpet in the living room. I was laying down, minding my own business, when I came nose to nose with Dumbo. His beady eyes stared into my blue ones as I recognized, for the first time, that I had no connection with him. It saddened me to realize that all the months I spent avoiding I could have spent learning about this other living being.

I often think upon this and all of the things that I could have learned were it not for my pride. We gave the rats away just weeks after my encounter with Dumbo, and in the words of William Shakespeare, parting [was] such sweet sorrow. I regretted living with two living creatures and knowing nothing about them. Along my path to understanding the rats, I also opened up to my new family. Over the years, Brian would become one of my closest confidantes.

I eventually realized that my problem wasn't the smell of the rats, the noises they made, or even the marks they left on my arms; it was the change they signified. I may not have been ready for an adjustment to be made in my life, but I certainly needed it. I was meant to mature at that time, and the rats (as much as I would have hated to admit it) helped me to realize that. I have grown up thinking that "living is learning", but I have come to know that living is growing up through changes encountered.

While I may have learned this same lesson without the help of Digger and Dumbo, the impact of it came with more force because it was learned through understanding other forms of life. Although my time spent with them was short, that lack of acceptance that I gave them affected me more than if I would have loved them from the beginning. I had to learn from what I missed out on to realize what I could have gained.

2nd Place Winner: Damon Day, "Toto with Muscles"

For Dr. James Aton

Ten years ago, when I had just become a teenager and my family was still recovering from the loss of my step-father, my mother surprised my brother and me with a puppy. In an attempt to heal the wounds inflicted by our hardship, she thought an animal would be able to stitch some of those wounds up. We had owned two dogs in the past, so a dog joining the family was nothing new to us, but we didn't have the shadow of a clue what our new canine friend had in store for us.

Kirby, the name we quickly decided to call him because of his vacuum-like eating habits, was a Cairn terrier. If you have no idea what a Cairn terrier is, picture Dorothy's dog Toto from The Wizard of Oz, but with a black coat and longer ears. Unlike the brand of vacuum, however, Kirby didn't seem to have an 'off' button. When he wasn't in the house consuming everything out of his bowl and on the kitchen floor, he was outside hopping around the yard and sticking his nose into a million different places. While we were home, Kirby rarely left our sight. It wasn't long until his charm had turned us into best friends. Being the lonely kid I was, it was a friendship I direly needed.

Well into the following year, our family started moving into a house across town. With the sea of cardboard boxes that littered our front lawn, I decided to arrange them into a giant maze for Kirby, just to see how well he'd fare trying to solve it. Rather than bumping into deadend after dead-end like I was expecting, Kirby simply gave the boxes a brief glance and jumped over them, like they were hurdles in a foot race. I tried placing him several more times in the maze again, hoping he wouldn't outsmart me several more times, but he did exactly that. It was clear that this dog, despite his cute exterior, was a fighter. Boundaries literally weren't a concern for him. I think I really liked this dog.

Months later during the summer, after we had settled into our new home and I started working at my first job in drywall, I received a phone call from my mother while at work one day. She informed me of the tragic news that Kirby had just been hit by a dump truck out near where she worked. Because my mother didn't have the heart to leave him alone all day at home, she liked to take him out to work with her. On the day she called me, while she had the door ajar, Kirby had taken off outside and toward the road. Before my mother could call him back, he had reached the road and ran into the path of the dump truck. By the time she had arrived at the road, Kirby was lying of the side of the road, motionless, and one of his legs sticking out at an odd angle. Although the truck hadn't turned him into a pancake, he was presumed dead.

When I received this phone call, I was sure my best buddy of two years had just met his demise. I found concentrating on work that day to be excruciatingly difficult, because all my thoughts lied on Kirby. I just couldn't bear the thought that the good times between us had already screeched to a halt. There just had to be hope.

Well, thankfully, my hopes came true. Several minutes later, my mother called back to inform me that a miracle had just happened; Kirby had survived. He had also not just survived, but when my mother had him in the car and was taking him to the animal hospital, Kirby had regained consciousness and was sitting up in her car. He ended up suffering no more than a broken leg. My thoughts from moving day were reconfirmed; Kirby was indeed a fighter.

After the incident with the dump truck, except for a broken nail or two, Kirby went through a long period of time without a single injury. His adamant personality had also become more noticeable when he was confined to a small area. Every single time, like the canine-version of Houdini, Kirby was able to eventually break out of his pen, no matter how well the pen was fortified. The power he had within his legs was incredible, whether it was used to dig, climb, or jump. Packing rocks around in his mouth also seemed to become a new favorite of his for some reason, and he often brought several-pound specimens in the house, much to the annoyance of my family. Kirby was also determined to attack the lawn sprinklers in the morning during the summer. Mysteriously, my mother discovered one day that a few of the sprinkler heads had been entirely broken off. The antics of this dog could have filled several books.

As I progressed through high school, Kirby's personality had won over the hearts of many. In my sophomore year, I had made dozens of friends during soccer season, so they would often come over to my house. Kirby was an instant hit among all of them. He had always been a people person, but his popularity had soared to new heights. I don't think he could have been happier. I felt likewise.

Some nights, when I neither sought company from my family or my friends, I would hang out with Kirby. Although I wasn't very talented at it, I would play him music on the piano, and he would just lay down and listen, often falling asleep in the process. When I could sense we were both coming down with cabin fever, our medicine was a long walk. I would gain solace in these walks, even if we didn't really see anything interesting at all. Just walking along the trails with Kirby tagging along beside me was all I needed. True friends only need each other's company.

Eventually, we decided to let Kirby have even more fun, so we took him to a breeder who also had a Cairn terrier. A couple months later, the female terrier had puppies, and we ended up taking one of them home with us when the pup was big enough. Within a very short time, Tigger, the name we decided to give him based on his bouncy personality, was inseparable from his father, Kirby. As the months went by, and Tigger grew older, it was hard to tell which was which from a distance because they looked so alike.

Because Kirby now had a new friend to occupy him instead of us, and in combination of me growing older, I was beginning to see less and less of them. Because we were gone so often and they tended to be mischievous while together, Kirby and Tigger became outdoor dogs. Some days, I didn't even see them at all, except when they came up to the door from their adventures in our big backyard. At first, every single time they did so I would let them in and play with them a bit, but even that side of me started to fade as I became more preoccupied with my life.

Years later, my friendship Kirby had become routine, rather than spontaneous. I would let him and Tigger out in the morning, go to school or work, maybe take them for a short walk when I got home, and then at nighttime, I would put them to bed. As I grew into my early 20s, when I was busier than ever, the routine began to turn over to my brother. There were many days I didn't see Kirby at all. Often I would glance back at the back door when I heard him scratching to come in and visit, but I would turn the cold shoulder and do other things. It was evident my teenage self was history.

As Kirby grew even older and the wiry hairs on his chin turned grey, we decided to adopt yet another dog, a Bichon Frise named Dexter that once belonged to my aunt. We now had a trio hanging around our household. Unsurprisingly, Kirby and Tigger quickly accepted Dexter into their group. Although

Dexter enjoyed playing with the other two out in the yard, my mother preferred to keep him indoors. Often, Kirby would become jealous and try to barge in at every opportunity he could, assuming his alpha male stance of the pack. I assured Kirby, that no matter how many dogs we owned, he would always be the alpha male, both among the other two dogs and to me. Dexter would often try to battle for the alpha male position, but with minimal effort, Kirby was able to overpower him. He did this in a variety of ways, from stealing all his toys to eating all his food from his dog bowl. Kirby may have been old at this point, but his camouflage collar reflected the ongoing truth: he was a fighter.

This past summer, however, tragedy struck: Kirby was developing problems with his prostate. The veterinarian we went to assured us this was normal among older, unneutered dogs, so he sent us home with medicine to help him recover for a while, until the problems started to resurface again. Even though the medicine worked and Kirby was back to his old self for the next few months, just recently, his health problems relapsed.

About a week ago, we were horrified to notice a red bubble protruding from his rectum. After we rushed him to the animal hospital, we received the news that it was his rectum, and the veterinarian had to sedate him at the hospital to push it back in. Although I was disgusted such a thing could happen, I was also deeply worried for my old friend. It was then when I truly became to realize that it was very possible that I was going to lose him. The feeling hit my harder and faster than a speeding train.

The veterinarian sent us home with a bunch of antibiotics and some other clear liquid medicine that would hopefully aid the problem, but he told us we were most likely reaching the end of our road with Kirby. They could do further screenings and tests to more accurately diagnose Kirby's health problem, but because of his age, the problems were likely to resurface. Despite all this, however, he sent him home with antibiotics, a surgical collar, and some other clear liquid that would help alleviate the problem. We could only hope the medicine would fix the poor dog up as long as possible.

Over the next several days, however, Kirby just didn't seem to be getting better. By this time, we had given Tigger away to a more active household that could look after him better than we could. I knew Kirby could realize this, because in the garage pen they usually slept, Kirby was becoming more restless and woke us up at all hours of the night, wondering where his friend was. Although he was still determined to be as active as he could be, his spirit was dying. His favorite trucks and cats he liked to bark at left him uninterested. Even his appetite seemed to diminish, which I think became the straw that broke the camel's back.

On Monday night, our family made the ultimate decision to put Kirby down. Deeply concerned for our old friend, who had now been with us for ten years, we brought him into the kitchen and took off his collar. We brushed him, fed him a treat, and then gave him his favorite ear scratches. Looking into his eyes, encompassed by white rings of old age, I could see his pain. He stared at us, turning his rear-end toward us, obviously begging us to fix him. It was heartbreaking to witness.

After an extremely long night, we woke up early the next day and took him to be put down. The morning was beautiful and completely calm. The veterinarians doing the procedure were nice and could understand our pain. After they injected him with the deadly dose, I saw the last signs of life leave Kirby's eyes and his legs become limp. Unable to take any more of it, I hugged my dog one last time and fled from the room. The world swam around me, surreal, cold and unforgiving. I hadn't expected Kirby's death to hit me so hard.

Since we euthanized Kirby, though, I understand why the loss hit me so hard. My mom's initial plan of giving us a dog to heal our broken hearts had done so in flying colors. Kirby had not only healed our hearts, but reinforced them. His strong, independent, yet loving and gentle nature affected us deeply. I can't stop feeling guilt for those years I ignored him by the back window, or all the countless times I decided to play Xbox rather than take Kirby for a walk. I no longer have any opportunities to make up from those mistakes with him. It's something I now have to live with.

Kirby's example taught me a powerful lesson, and that lesson is to love those who are close to you. Animals, just like people, come and go, so we must cherish their present existence. I didn't realize how much of an impact he had on my life until he was gone. Absence does that; it makes the heart grow fonder. However, despite my sorrow, I have solace knowing his is at peace, free from all his pain and the boundaries he always hated. Although our hearts may once again be broken, life will heal them once more. No matter where life takes us, however, we will never forget the little black dog who changed our lives. We will never forget Kirby, the funniest dog for miles around. We will always remember Toto with Muscles.