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The Lion’s Pride seeks to showcase the creative work of our diverse students and programs of study at Lake Washington Institute of Technology. Please consider submitting your creative work for consideration. For details, please visit the publication homepage: http://www.lwtech.edu/lp

You may also contact wesley.mantooth@lwtech.edu if you have questions.

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Cover Art: “A Day in Skagit Valley,” by Mei-Juen Chen

Artist Statement: I am a MMDP digital gaming student. This artwork is done by acrylic paint on a 11"x15" canvas. I created this painting in my first painting class, Beginning Painting with Professor Jason Sobottka.

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For

Emily O’Grady

In Memoriam

Emily’s contribution appears in this issue of The Lion’s Pride
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Shantha Pathak
My Father’s Eyes

*When I was little my father read books to me in the morning. Frequently he looked at me to see if I followed. His eyes shined in the morning sun. And as I grew older, he read the daily newspaper and kept us current with the latest news. One day, I woke up and noticed he was unwell. He had to be taken to the hospital. In the night, he passed away leaving us in dismay. I miss him until today because he was not only my dad but also my best friend.*

*My Father’s Eyes*

Eyes glistened in the morning light
The mind flickered like a candle
The night rose like a curtain
The tears flowed like a river
The images vanished like a dream.
The Covert Yes
Brie Blackstone

I have loved writing for a long time, but I rarely share or submit it. I hope to do more writing to share in the future. The Covert Yes, just came to me one night. In life, we all go through an evolution. Some of us learn Abbie's lesson much later in life. I think the story is a balance between two story, one of a little girl and one about a parent.

There are times in our lives when we must decide what our destinies are and for little Abbie McCray today was the day. Her dad had bought it for her for Christmas. He had tried to get her to ride it, but she was too scared that she would fall off and get hurt. Her dad assured her that she couldn’t fall off because it had training wheels, but she had still said no. She then realized she said no a lot. She had said no when it came to eating her vegetables, even though she’d never tried them. She’d said no to learn how to play hop scotch, and she’d even said no trying cheesecake because it didn’t have chocolate.

Today, though, she thought to herself, I don’t want to say “no” anymore. “No” was stopping her from trying things and seeing if she liked them. She’d realized this when her mom asked her if she wanted a new stuffed animal and she said no. Not because she didn’t want a new stuffed animal, but it was what she said. So, today, today she would say yes. She walked into the front room, where her dad was sitting on the couch, and she slipped her shoes onto her feet. She could feel her dad looking at her,
but she was determined to not let him know she was doing something that she had been saying no to for 3 weeks. She tried secretly to grab the helmet he had given her from the table next to the garage door, along with the knee pads and elbow pads. She pulled open the door leading to the garage and there she struggled but succeeded at putting on her pads and helmet. She looked over to her new pink bike and looked at the garage door. How was she going to open that without everyone hearing it? She thought for a moment and was getting frustrated. She didn’t want anybody to know that she was saying yes. Not yet.

She looked at the button to open the garage, then back at the garage door and like it was magic, it opened. She turned to see the door between the kitchen and the garage slowly closing. She stood for another moment and decided, yep, it was magic. She grabbed hold of her bike and pushed it outside, down to the bottom of the driveway to the sidewalk. She could feel her dad watching her from the porch. She turned quickly to look at him, but he quickly looked away, pretending to inspect the beam holding up the porch roof. She turned her bike so it was facing her neighbor’s house. She looked at her bike and tried to figure how to get on it. She almost turned to ask her dad, but she was determined to do this. The bike wiggled from side to side, balancing on the tire and the training wheel, as she struggled her way onto the seat. She was scared it was going to fall over. She felt the fear
build up inside her and she thought about giving up, but how would she get off the bike? “No,” she told herself, “today we say yes.” So, there she sat teetering back and forth from training wheel to training wheel. She put her feet on the pedals. Took a deep breath and wobbly started to move, not fast, but move.

She smiled. “I’m saying yes,” she thought to herself. She went a little faster and when she got near to the neighbor’s driveway, she realized she didn’t know how to stop. So, she stopped pedaling and slowed to a stop just before their driveway, which was good because her dad had told her that was her boundary. She didn’t know what would happen if she passed it, but she sat there smiling and knew this little yes to riding her new bike, was a big yes. And that other yes—crossing the boundary line—would have to wait for another day. Abbie looked around, how to turn around? She looked back at her dad who was watching her, the frustration building on her face, then she looked forward. Her dad walked over to her, and she looked up at him and then back down.

“Abbie, would you like help?” her dad’s loving voice asked. As many times, before when asked that question, she was about to say no, but she knew on this day, her learning-to-say-yes day, that was not the answer. So, Abbie very quietly answered, “Yes, please.”
“What may I help you with?” Her dad squatted down to her. She looked at him.

“I need to go that way, please.” She pointed behind her the other way.

“Okay,” her dad stood. “Let’s see what we can do.” Her dad got her turned around so she could ride the other way. She laughed and smiled, as she rode her bike back and forth between one neighbor’s driveway to the other, each time, her dad was there to turn her around. She decided this yes thing wasn’t so bad—it was actually quite fun. That maybe by saying yes to some things she’d have even more fun… except for maybe the vegetables… well, maybe she would say yes once and see how it went, even though some of them looked funny and smelled weird.
The Beast
Ashley Moen

I'm 17 years old. I'm studying at LWTech for an Associate’s degree in Early Childhood Education. On a different note, I'm an artist. I create artwork with pastels, paints, pens, etc. Unwritten art is where my comfort zone is. "The Beast" is my first finished piece of written art. One could call it my first step out of my artistic comfort zone.

The Beast

At 7:00 I thought I had rid of the beast

At 7:10 I felt free

At 7:20 I danced

At 7:30 I admired the world

At 7:37 I touched my side

At 7:37 I brought my hand up

At 7:37 I saw red

At 7:40 the beast laughed
What’s Love
Marc Gouacide (Poet Name: ReMarcable)

I am originally from New York but I have been living in Washington for a few years. I have been writing poetry ever since I was a young child and I have a passion for expressing myself in this form of communication. I’ve always liked writing ever since I was a young child. My mother was a big influence in my love for creative writing as she used to always leave me little notes on the bed that would have encouraging words for me to hold on to throughout the day. I believe that words are very important and thus, they should be used wisely. My hope is that people are encouraged through my words and are inspired to never give up and to keep pushing through no matter what may come their way. Love heals all wounds!

What’s Love?

What’s love when it fades away?
And if you get it back you wish it could be the same,
you try different ways to make it work,
but then you realize it’s lost, and the pain seems to always hurt.
Because that’s the cost of giving your heart away
all you can do now is start over the smarter way.
So next time don’t rush things and then see all the beauty that love brings
and if it’s ever meant to be the next time around I’ll know if she’s meant for me,
by the way she walks and talks to me,
even the way she calls my name and the way she adores me for me
and the way she treats her family and mine.
I’ll know by the way she looks at me directly in the eyes
and we overlook each other’s flaws
and no matter the issue no one walks out the door.
The way I’m going to love is going to be unconditional
you’re going to have to trust me regardless of what they did to you,
because one thing about the past we can’t change back
but any pain in your heart I can help change that,
if you give me a chance to love you,
I know I like you because I stay thinking of you,
I’ve seen her face in a dream I once had, but I never felt her touch
but the fact we have the chance to create magic is exactly what I love.
But for now I must accept it
even though I know one day all of the pieces will be connected,
and one more thing I need to say:
real love, it never fades away!
You’ll see.
Bison Skull
Raquel Piqueras

Bison Skull made with charcoal for the class Introduction to Drawing, with J. Gordon. I had never used charcoal before this class and I am amazed by how much I have learned!
America’s Prison System: Retribution vs. Rehabilitation
Emily O’Grady

*I feel strongly about this topic and hope that this essay will educate people about a topic that is usually avoided.*

Throughout history, the American people have defeated many impossible odds. The Revolutionary War, the Declaration of Independence, the Civil War, and the World Wars have changed and defined America. The writing and amending of the Constitution has brought America together under a great standard. A common thread between these powerful events and documents is the idea of Crime and Punishment. When the freedom of an American citizen is violated, then the culprit must pay for their actions. The victims, their families, and the general community cry out for punishment; the criminal made a choice and now they must suffer the consequences.

But are wrongdoers no longer deserving of basic human rights? Many would argue that a law-breaker lost those privileges when they decided to take the same privileges from another human. This idea is, in fact, quite satisfying in the short term: law and order, crime and punishment, justice served. However, in the long term, this system is simply not sustainable: the cost is too high, not only in the sense of money but in recidivism as well. These people cannot be held in prison forever; even those sentenced
to life in prison have a chance to be paroled eventually. One day those criminals will be back on the streets. They have been punished, yes, but they have not learned skills to integrate back into society. They live with the same unresolved problems that led them to break the law in the first place. Prisons and jails become overcrowded and standards dip to unbelievable lows. Justice is served but nothing is solved. It is a difficult pill for the law-abiding citizen to swallow, but the American judicial system needs to shift its focus away from punishment and toward rehabilitation to create a sustainable system.

Take a moment to consider these facts about our country: “...no other nation incarcerates more of its citizens than we do. We have five percent of the world’s population, but 25 percent of its prisoners” (“Crime and Punishment”). Yet despite the fact that America punishes more of its citizens than any other nation, the majority of those punished will continue to break the law. Furthermore, over half of those who reoffend will end up back in jails or prisons. Research conducted by the Bureau of Justice Statistics estimates that “nearly [three-quarters] of all released prisoners will be rearrested within five years of their release and about 6 in 10 will be reconvicted” (James 5). So the question is: what is America doing wrong? Well, Corrections facilities seem to be doing very little correcting. What is
the use of spending “$80 billion a year” (“Crime and Punishment”) on housing prisoners if so many are bound to be back behind bars before long?

Let us pause in the tearing-out of our metaphorical hair. Not all law-breakers are bound for lives of crime; and maybe punishment alone is not the answer. Perhaps there is a different approach that America could consider. Germany, for instance, seems to have found a way to balance incarceration and basic human rights to produce a more promising outcome. In a recent episode of 60 Minutes called “Crime and Punishment,” reporter Bill Whitaker goes to three German prisons and makes some discoveries that seem incredible: “Germany spends less money on prisons, but gets better results. Their recidivism rate is about half the U.S. rate.” Yet it is not only the numbers that seem outlandish, but the things that are found in the cells of the German prisoners: darts, letter openers, and table legs. Things that would be terrifying to see in the hands of American prisoners are given knowingly and trustingly to their German counterparts. The cells in the German prisons are nicer than some of the studio apartments that I have lived in. There are no bars on these cells, only normal doors to which the prisoner holds his own key. Each cell has its own private bathroom. Prisoners are allowed to decorate as they please and they are even allowed videogame consoles and televisions.
It is easy to imagine the outcry against this ostensibly soft treatment of convicts if it were proposed in America. How is it considered punishment if they are living basically normal lives? German director of prisons Joerg Jesse, who is a trained psychologist, says, “...the imprisonment itself is punishment. The loss of freedom, that’s it” (qtd. in “Crime and Punishment”). The German prison system is based completely on trying to reintegrate prisoners back into society, to try to teach them a new way of life without crime. With this as their goal, Germany sustains far better results from their correctional system. All that America has to boast is the short-term satisfaction of knowing that people who broke the law are wasting away in unconstitutional conditions.

Prison conditions in the United States are among "the worst of the developing world, with prisoners sleeping on filthy floors overrun by rats," (qtd. in “Prisoners’ Rights”) according to Christopher Reed, a journalist who has studied the U.S. prison system in depth. The main cause for these conditions is overcrowding. Because of the inmates’ tight quarters, infectious diseases like Hepatitis C, tuberculosis, and staph infections run rampant. And with the underfunded and understaffed health-care system “many prisoners with treatable diseases are simply ignored” (Prisoners’ Rights). But remember, overcrowding is not a cause in itself for these conditions, it is merely a secondary consequence of carelessness and
disrespect toward these incarcerated humans. They may have broken the law, but how can anyone expect them to reform when they are treated like scum and forced to live in horrific conditions? I know from experience that the less respect you get, the less you want to give. Generally when a person feels the need to Stick It to The Man, it is a result of having felt belittled by authority.

Authority figures play a significant part in a prisoner’s experience behind bars. Prison guards in particular hold the major responsibility of directly supervising their charges. Yet reports of abuse are all too common:

Investigations by prisoners' rights advocacy groups such as Human Rights Watch and the Sentencing Project have revealed abusive patterns throughout the U.S. In Pennsylvania, for example, new inmates are routinely paraded naked in front of their fellow prisoners. At Wallens Ridge prison in Virginia, guards have forced inmates to crawl on their knees, beating them if they did not obey. And in Maricopa County jail in Phoenix, Ariz., guards have made male inmates wear women's underwear in front of fellow prisoners as a form of punishment. (Prisoners’ Rights)

These sickening acts of neglect and abuse can only lead to shame and anger for the inmates, a mindset that is not conducive to becoming a functioning member of society.
On the other hand, Joerg Jesse, German director of prisons, has a completely different view of the role prison guards: “[German prison guards are] well paid and highly trained—they spend two years learning psychology, communication skills, conflict management. Jesse calls them ‘calm down’ experts” (“Crime and Punishment”). According to Jesse, there is very little violent behavior in his country’s prisons. When asked the secret to eliciting this behavior, he explains a simple truth: “If you treat them as if they are your enemy, they will react as enemies. They will react as dangerous” (“Crime and Punishment”).

As well as treating inmates with respect, prison systems need to treat inmates for mental illnesses and provide more accessible treatment options. Offenders commonly suffer from issues like addiction and unmedicated mental diseases that cause them act out, leading them to be thrown behind bars where they are unlikely to find help. One example is the case of Keaton Ferris, age 25, who died of dehydration and malnutrition on April 8, 2015, at the Island County Jail on Whidbey Island. Ferris had been diagnosed with bipolar disorder in 2013; before then he had no criminal record. He had bounced from jail to jail before ending up in Island County; during the transition his medications and medical records were lost. Ferris was reported to be acting erratically, yet cell logs were proven to be falsified or entirely skipped. His water was shut
off to his cell and he was not given enough to stay hydrated. The day before he died, a nurse was asked to see him. The nurse did not enter his cell; only looked in at him, asked if he was alright, and declared him healthy (Stensland). Keaton’s case is not unique. Thousands of inmates die each year from suicide, drug or alcohol withdrawal, overdoses, and illnesses that were not properly attended to (Ginder).

Drug addiction is another huge problem in jails and prisons in America. Ethan Nadelmann, director of the national reform group Drug Policy Alliance, notes the futility of sending addicts to jails and prisons:

500,000 people [were] incarcerated in U.S. prisons and jails for nonviolent drug-law violations; 1.8 million drug arrests last year; tens of billions of taxpayer dollars expended annually to fund a drug war that 76% of Americans say has failed; millions now marked for life as former drug felons (qtd. in “Addiction and Substance Abuse”).

Even people who are arrested for non-drug-related crimes are often driven to stealing or recklessness because of a drug addiction. When the addict is released, they have an extremely difficult time changing their ways because they have a mark on their record, creating difficulties in finding jobs or renting apartments. Addicts are all too likely to fall back into the life of using that they know; they are set up for failure. In the A&E television show “60 Days In,” an ex-marine named Zac spends 60 days
undercover at Clark County Jail in Indiana, posing as an inmate. After sticking out the entire 60 days, Zac states that “the biggest change [the jail] can make is adding more programs for people with addiction” (Depompei). He says that his experience applies to many prisons all across America. Incarceration instead of rehabilitation for addicts is not only ineffective, it is also unnecessarily costly. New Jersey Governor Chris Christie said, "It cost us $49,000…to warehouse a prisoner in New Jersey state prisons last year…A full year of inpatient drug treatment costs $24,000 a year" (qtd. in “Addiction and Substance Abuse”).

The American prison system is deeply flawed at its core. Retribution is ultimately counterproductive without rehabilitation. Yet this is a very difficult mindset for many Americans to get into. Perhaps instead of thinking of this route as being “soft on crime,” it would help to think of it as being “smart on crime” (“Crime and Punishment”). America got itself into this bind by being tough on crime, and now prisons are packed, filthy, corrupt places that do little for the greater good. It is clearly time for a shift. With rehabilitation and humanity as the focus, there would be more taxpayer money to spend on other issues, we could rest easy knowing that no person’s constitutional rights are being violated, and America would be a safer place for our families and loved ones.
Works Cited


The Queen
Mei-Juen Chen

I am a MMDP digital gaming student. This art work is done by graphite and charcoal on 18"x24" newspaper. I created this drawing in Professor J. Gordon's Intro to Drawing class.
Treating Mental Illness with Medication: Exploring the Risks and Benefits
Monica Shoemaker

Mental illness is a topic that is slowly becoming more comfortable to talk about. Yet, there is still a long way to go; there’s a stigma that still hovers just above feeling comfortable with this topic. I suffer from major depressive disorder and severe anxiety, and I am also being treated with medication. Even though my daily regimen helps significantly, it’s crucial to remember that there are times that not even medication can save someone’s life that is living with mental illness. In memory of Emily, I encourage readers to open their minds and choose to fully accept the gravity of mental illness and that it is a disease that is rapidly spreading under the radar. Don’t hesitate in wanting to clarify or understand the actions of someone else because it’s uncomfortable; this is why people display confusion or anger when depression wins, and the victim of it loses their life. For sweet Emily, the darkness is no longer painful...rest in peace.

Stephanie, a college freshman, just wasn’t feeling right. For the past six months, she noticed that, at times, she felt anxious and tense. Her irritability level had increased and she found herself worrying about situations that would generally be insignificant to most other people. She was having difficulty sleeping and her mind was always “racing”. Her thoughts often strayed to family matters, concerns about her health, and worries about her finances, although she really wasn’t having any difficulties meeting her financial obligations.
In addition, Stephanie found that her muscles always seemed to be achy, even when she wasn’t exercising or overexerting herself. Stephanie also noticed that she was tired all the time. Nothing motivated her and she had a very bleak outlook on life in general. She always felt that her situation was dismal and had no possibility of improving. And what made it even worse was the constant feeling that she was going nowhere and that she was worthless. Stephanie was sure that she had no functional place in society (Hecht 9).

According to her symptoms, does Stephanie need medication for depression? Many doctors would of course jump on the opportunity to prescribe; they have the pad and the power to help in ways they were taught. What happens when negative side effects show up? Surely, Stephanie can’t just ignore new health problems because her mental state is better because of medication. That’s not fair to her quality of life. Because of the potential complications, she’s in a position to decide for herself: What are the risks, and what are the benefits, of taking prescription medications for mental illness?

I have enough personal experience with this specific topic to be able to express a well thought out opinion that I feel is justifiable. I have been an individual suffering from clinically diagnosed severe depression and anxiety for four years now. The most unsettling feeling in living with these illnesses
daily is the fact that the “diagnosis” doesn’t ever stay as simple as it sounds. Having anxiety, in my case, also comes with these other syndromes as well: social anxiety and panic disorder, OCD, ADHD, and mild agoraphobia (ADAA). The hard part with battling the mental issues along with my physical disabilities is the fact that stress and pain mixed with medications has caused substantial weight gain. That’s a whole new battle in itself.

Now, as I trudge through life hoping for a magic cure, I must continue to rely on my medication to feel any sense of normalcy so I may contribute to society and enjoy a social life, as mild as it may be.

The arguments I’m presented with the most are the ones dealing with potential prescription medication addiction and whether or not they are beneficial to my diseases. It’s difficult to back up my claim that yes, they do work; no, I’m not afraid I’ll become addicted; and beyond those questions, what evidence does anyone have that makes it appropriate for them to question my choices? The answer I have in attempting to back up my decision to remain on medication, really comes down to something as simple as, “Because it works”. That’s where people start becoming an expert on the subject. Granted, there are plenty of facts to look at that support both sides of the argument, and with those facts carefully researched I definitely have a leg to stand on when it comes to supporting my claim. Some people will undoubtedly stick to what they know best: trusting their
own ignorant opinions about what is good or bad for others. There are more than a few things they should learn before choosing to accost me or anyone else about mental illnesses.

The first thing that people should know about antidepressants and antianxiety medications is the way they work. What changes do they make in our brains that can even out our emotions? What the pills do is affect the brain’s level of serotonin, which is a neurotransmitter (Hall-Flavin). The types of drugs that treat this specific area of the brain are called selective serotonin reuptake inhibitors, or SSRI’s. There is a drug that I take that is considered an SSRI, and it does happen to get along with the other prescriptions quite nicely. A few examples of SSRI’s are: Prozac, Celexa, Zoloft, and Paxil. Before I was put on Zoloft, I had been on Celexa and I quickly discovered that it was not going to work well for me. That’s the nice thing about knowing your own brain: if it doesn’t make you feel better, then it’s time for something new. Taking low doses of Zoloft has drastically changed my daily mood and outlook on life. I keep it paired with the antidepressant called Welbutrin, or Bupropion, for maximum positive effects.

For every study that’s created to prove the beneficial side of this argument, there are salty critics standing by waiting for the opportunity to speak up with jaded opinions and choose to slander those that oppose their
views. What they will try to prove is that the actual intake of the drug will give you no better results than taking a placebo. While this may be true for people suffering from mild to moderate depression, it has been proven to be effective and necessary for those struggling with moderate to severe depression. Roughly, about 13% of people taking antidepressants have experienced severe depression, and have had positive experiences in taking an SSRI medication (Meyer).

As with any unnatural substance ingested into the body, there will always be some form of side effects. Some will be more severe than others, but that’s why the majority of society relies on case studies and advertisements to move forward with a sense of security that they won’t be overcome by the negative. In reality, we must look at the problem from a non-biased standpoint. If a person has had no experience taking any mental illness medications in the past, it’s important to be aware of the potential dangers that may arise once the remedy is started. In most SSRI’s the side effects can include any of the following: agitation, reduced sex drive, dry mouth, and an increase in suicidal thoughts (Hecht). It sounds severe, but the most severe of those is also the least likely to happen, or at least to have been reported. As a safety precaution, though, it’s vital that the risks are shared and company transparency remains intact for the sake of the consumer.
Although the popular opinion of SSRI’s is positive, there is a rumor that they can cause addiction. According to researchers at Nordic Cochrane Centre, yes, they do cause addiction. However, that claim is heavily contended by clinical professors. The claims of addiction symptoms at cessation involve: nausea, headache, fever, trembling, panic attacks, and hallucinations. Although these side effects sound unappealing, what also needs to be brought to light is that those are the symptoms that arise after stopping the intake of the medication abruptly, instead of following the suggested plan to taper down over an extended period of time. It seems as though many of the professionals that are claiming that antidepressants are addictive are jumping to conclusions by trigger words such as “fever” or “hallucinations” (Secher). Those types of words are often associated with addiction. I would agree with that. I also agree that it doesn’t prove that SSRI’s are addictive.

According to the Danish Health and Medicines Authority, the side effects often confused for addiction are actually symptoms of what’s being called “SSRI discontinuation syndrome”. Those that don’t understand the when and why of the equation will not be surprised that Margrethe Nielson, Ph.D. claims that “people get ill when they stop taking the medicine…so ill, that it should be labeled as addiction” (Secher). I find that phrase almost laughable, as it states that it “should” be labeled as
addiction. Where’s the merit? Common side effects of different diseases do not automatically put them in the same category of illness, or addiction, especially one that seems to create great discomfort for patients currently seeking well-researched and effective remedies.

Nielson has spent about four years of research on two of the most common types of antidepressants: SSRI pills and benzodiazepines. The latter of the two was commonly used up until the 1980’s when SSRI’s were introduced. Nielson’s accreditation includes a Ph.D. thesis, and three scientific articles, one of which was published in the American Journal of Addiction. In her published article, Nielson and a fellow researcher, Peter Gotszche, director of Nordic Cochrane Centre, compare the symptoms that arise when people stop treatment with both SSRI’s and benzodiazepines. One thing has become clear because of all the extensive research done: what’s common is that long-term use of benzodiazepines may cause addiction, but SSRI’s didn’t have the same conclusion. What made this research by these experts much less credible? The studies were not done with real people. All the research and conclusions were drawn up because of the amounts of old articles they had found and studied to prove or disprove their claims (Secher).

The studies conducted mostly focused on the effects of stopping the medications abruptly, which is unadvised. After a couple reviews, they
ended up only using 45 articles on benzodiazepines and 31 articles on SSRI drugs (Secher). They found the most effective antidepressants worked best on those suffering from moderate to severe anxiety. The other patients with a lower diagnosis didn’t notice much of a difference and were compared to those that were taking the placebo pill. The fact that the study was done on people suffering from long-term depression that required medication makes it easy to see where the problem would be to accurately record what is labeled as “addictive” or “non-addictive” (Secher).

There is a clinical professor named Lars Vedel Kessing at the Psychiatric Centre Copenhagen who has been researching depression for years. He’s witnessed a fair amount of accusations that SSRI medications are addictive. He provides some information that differs from Nielson’s conclusion to the matter. According to Kessing there must be four fundamental symptoms present before you can categorize something as addictive.

- First, you lose control, and the desire to take the drug becomes compulsive. In some sense, you could say the drug takes control of you.
- Next is the onset of tolerance. The dosage must be increased all the time to get the desired effect and you keep taking more and more of the drug.
• Directly related to this is the third symptom; a strong urge to privately obtain more of the drug so it can be taken without the physician's knowledge.

• Lastly, there will be a detrimental effect to the individual who will no longer be able to function socially or physically (qtd. in Secher).

As Kessing writes, “Not a single one of these phenomena are present in SSRI discontinuation syndrome.” What he does find is that it is present in treatment with benzodiazepines. Thus, he states, “In my opinion this study doesn’t hold much scientific merit” (qtd. in Secher). His conclusion of the studies suggests that the conductors on the opposing side are using much more emotion than actual scientific evidence to make their final claims.

Do I have a sense of hesitation while studying these medications? Yes, I do. But my circumstances and success in my treatment has brought a sense of peace over me that I ultimately made the right choice for myself, which will obviously differ from patient to patient. Had I been diagnosed with mild depression and anxiety, I feel confident that it could be treated without medication. There are many tools available to treat newly birthed mental illnesses. Once I reached the point of absolute despair and zero sense of self-worth in life, it was time to focus on what it was going to take
to make the correct changes. There was a lot of research and many trial and
error steps that eventually led me to the revelation that the right cocktail of
antidepressants AND antianxiety meds was, in fact, possible to find, but
also crucial.

Another theory of medications causing problems in patients after
ceasing the treatment is that instead of the drugs being the culprit in
causing addictive or abnormal behavior, it honestly could be the depression
itself if the imbalance is still present in the brain. When they stopped the
medication plan, many of the subjects that reported negative side effects
were also convinced that they had a problem and believed that they were
addicted to the drugs. Others that experienced the same negative results
were well-minded enough to know that many of the problems that showed
up were simply from their mental illness. The subject of mental illness can’t
always be looked at as a curable disease (Secher). Sometimes, it doesn’t go
away. Other times, it gets so bad that even the closest people around you
start seeing your illness as a nuisance to them. And rarely, depression and
anxiety can be treated partially by seeing a psychologist and/or a
psychiatrist (who can prescribe medication). My advice to you: weigh out
your options very carefully. Is your mental health worth more to you than
your social/working/independent life? It’s ok to be vulnerable and admit
that help is needed. It’s not easy at first, but what helps to heal is when the issues can be discussed openly and without fear of judgment.

To jump to the whole opposite end of the argument, there are many beliefs that natural substances may help with the presence of mental illness. Treating holistically is not recommended for the cure-all process of the treatment. It is still highly advised that you see a professional physician to prevent adverse or non-helpful reactions to any natural substances that your body may start to reject. The top supplements that show promise to the treatment of mental illness are as follows: St. John’s Wort (herbal supplement), SAMe (dietary supplement), Omega 3 fatty acids, Saffron and 5-HTP (Hall-Flavin). The nice thing about researching topics that are meant to better the quality of life for mentally ill people is the chance to see how successful medication has been for them. They get to express their joy, finally, to a world that seems to never try to understand that the sick really are sick. One woman from North England, named Iona, exclaimed that “In both my episodes of depression, medication played an important role for me as it lifted my mood, energy, and motivation enough to engage in therapy which I may not have been able to do alone” (qtd. in Meyer). I myself resemble the way of thinking that Iona has here. Therapy is a huge benefit in the process of treating mental illness. The fact is, though, with severe depression there are many days that getting out of bed is the
toughest task in the world. Mental exhaustion mixed with physical pain put together is like the straw that breaks the camel’s back, but on a daily basis when it’s time to greet the outside world. It’s near impossible to handle without the assistance of medication, regardless of high or low milligram prescriptions.

My morning ritual these days consists of waking up, grabbing my medication tray, taking my 50mg of Zoloft, 300mg of Welbutrin, and 600mg of Ibuprofen. My nighttime ritual is a bit more extensive, the timing has to work out just right for me to function at a higher level the next day. I end up needing to take Prazosin (helps with my sleep because of anxiety interruption), two 50mg Hydroxyzine (mild help for anxiety), 2mg Valium (treats anxiety), 5mg Cyclobenzaprine (muscle relaxer), and 600mg Ibuprofen. The very specific cocktail that I’m on has been one of the most rewarding things I could have accepted as a part of my life. I will have bad days on occasion, but at least now I’m able to live a mostly normal life every day. Eventually I will try to taper myself off of some of these medications. Until there is a concrete reason not to, I will rely on them to assist me in the way they are meant to. I value my life, and am willing to do what it takes to live it to the fullest.

What you don’t want to happen is stopping your meds, at any time or for any reason, without talking it over with you doctor first. Mine wants
to know that I’m surviving my day-to-day process with school being upon me. I did, however, go through an episode about a year ago where I consciously chose to go off of my meds in the very way that should be avoided. I reached a place in life where I felt useless. My emotions were no longer controlled by me, so I needed to make a change. Unfortunately, the change I chose was definitely the number one no-no when it came to stopping those specific medications. I figured if I let my body do what it needed to do naturally, then all these crazy emotions (or lack thereof) could even themselves out and I could start over. I was pretty irritated when I found out that it only made things worse. It threw me into a deeper depression than I had been in before; I couldn’t take care of myself or communicate with anyone, including my boyfriend at the time. That’s essentially why we broke up; I completely shut down. It’s terrifying to go through life feeling zero emotion about anything. There’s a sense of paralysis that consumes your brain and turns it into one that lacks the ability to feel, or connect.

The most dangerous side effect of stopping my antidepressants happened just about 7 days after I stopped taking them. One thing I was unaware of, was that my specific medication was one they used to help people stop smoking. Somehow it blocked the addiction part of the brain and ceased any desire for every substance that I have had an addiction to.
On that seventh day of no pills, the most awful, painfully terrifying rush of temptation coursed through my veins. At three and a half years sober, I wanted a drink so badly I thought I would die if I didn’t have one. For someone in recovery, it’s a very real struggle regardless of how many years of sobriety you have behind you. My remedy for that was to take up smoking again. At least then I had a substance that replaced the craving for alcohol. It was a catch 22 either way: there was no winning in that moment. But to choose between tobacco and alcohol, there was only one choice. That choice is still shameful to me. I still feel like a failure because of it. I hadn’t relapsed, but I had never been that close before to where I fell to my knees crying uncontrollably. I lost control. And I had my own actions to thank for it. After a few months passed, my psychiatrist got me back on the regimen of meds I needed, and within that first few days of being back on them, every single craving for alcohol and cigarettes was completely gone. If that’s not a success story in positive outcomes of medications, I don’t know what is. They have saved my life more than once, and are continuing to do so on a daily basis.

Now, the argument of medications being a “crutch”, or a set-back, or an easy way out, in my mind doesn’t carry a lot of merit to go along with those accusations. The people that tend to carry the most judgment are the people that have never suffered from mental illness. If there were a way to
explain what it feels like for the sake of developing a sense of sympathy, I’d be all over it, but there’s not. All of us suffering will continue to suffer, most of us in silence. I, however, refuse to remain quiet about this rapidly growing disease that carries a load of misconceptions. Removing the stigma is something that needs to happen if there is going to be a positive way to react to people that are “different”. All of us need help in one way or another. Are we really going to be so quick to draw a conclusion when most of us are ill-informed? I guarantee there’s near a 100% chance you know somebody with a form of mental illness. Think about that before forming an opinion on whether or not a pill is necessary. Regardless of personal opinion, medication has been proven to help and has given little reason for concern that addiction is imminent.
Works Cited


Foxes and Fire
Raquel Piqueras

"Foxes and Fire" is a digital illustration made with Adobe Photoshop CC 2015. The main purpose of the illustration is to bring the spectator into a mysterious magical realism scene, where the red fur of the foxes is compared with the red fire. "Foxes and fire" is an illustration of contrasts: the textures, the light and the darkness, the experience and the innocence.
Carried Away from Here—An Essay on Storytelling
Paul Lewis

Currently enrolled in the MMDP, I have earned 100 credits in 9 quarters towards my Digital Design degree. I live in a small Motel Room with my disabled partner (also a student) & our 5 cats. We are one step away from being homeless. I love to write and create art. I have written a screenplay and dozens of short stories. This essay explores the feelings existing in those who create and those who participate in the Imagination Storytelling Game. I purposefully invoke controversial myths and literary references as I guide the Reader/Writer towards a conclusion of insight.

BLAZE

It all begins right here. Right here at the beginning. Just by looking ahead, one can see the whitespace that exists blankly before me. How do I transform it? How do I find the path? It is that same path that we all want to go down. The one path that says you are on your way toward something interesting and entertaining. Something to hold all of the attention, spellbound.

Someone has to create this path; blaze the trail, as it were. Once it is made, we can all stroll down and take a look. Our storytelling path can and should be decorated.

There is no turning back now. Let’s go see what the fuss is about.
CREATE

Create another rabbit hole for the people. Why? Because only people will be reading this. They need a rabbit hole to take their mind off things like traffic and ISIS. They need to be carried away. That is my goal as well. To carry you away. I will show you how it’s done. I will show you how it’s begun.

CATCHING UP TO THE BIG BANG

The rearview mirror is right in front of you. Don’t look back. It’s been said before. The Past has lost its presence. The Future is today. Time has come again.

Everything comes full circle. It’s circuitous. Catching up to the Big Bang may be our only hope. It’s hard to grasp. The Universe is expanding. Time, Space, and Matter are on the move. Stephen Hawking says time travel is possible. Look into it. No, read into it.

LET’S GO!

The very first thing is a foundation, of course. A solid point of view. No, it doesn’t have to be a real view, just a very steady and consistent view. This is our Third Eye, in the Mind’s Lie. A consistent Belief is equal to the unwavering Story. The Story that defies imagination. This may be the tale
of a Chosen One or even a Forgotten One. The One Ring or the Lord of Rings. Do not worry. We have the hand of our Protagonist; foul or fair, it matters not. This is our starting point. This is where they all begin. Open Sesame!

We take a path and dig a hole. We find subtractive space with attraction. Opposites’ attract. Atlas shrugged. Find out why. The answer may be John Galt.

So then, who is John Galt? Go back to the beginning and collect $200 for passing Go.


One more thing: Have you heard of the White Whale? Capt Ahab had one.

Find out why and how. Do it now, then go to Act Two.

ACT TWO

Every story has an Act Two. If you don’t know why, then you must grasp at straws for meaning. All good things come in threes. But don’t look
too far into your magic Crystal Ball. Conflict is a-coming around the bend. You may or may not see it. Stay the course. Steady as she goes. This horse may not want to drink the water but that’s okay. Lady MacBeth had blood on her hands. Yes, I believe you should look into it.

There is hope. It’s known as Episode IV. I know of bridges over troubled waters and hands across the sky. Help is on the way. Face the crisis and stand your ground. Are you writing this story or are you living this? Are you blazing this trail or digging a hole? Have you ever dug a rabbit’s hole? What’s so lucky about that? Find your perspective. Stick to it.

THROWN UNMERCILESSLY INTO THE FIGHT

I don’t want to. I don’t want to fight. I don’t want to yield my Point-of-View.

I won’t give in. They can’t have it. They won’t get me.

Unfortunately, something has to happen. Eventually, everything is going to happen. Or at least, everything will have happened. Like at the turn-of-the-century. Remember Y2K? It happened at the end of 1999. Everyone was dancing to that Prince song on New Year’s Eve. The clock struck zero.
And then it struck Ground zero.

After the Millennium, it was time to relax. We had a new President. He was the son of our old President. Rest assured; don’t look to the skies. It came screaming out of the clear blue on one beautifully, unforgettable September day. “We have some planes!” echoed across the Seaboard. Game on; Let’s roll! Time for conflict. Time to make a final stand. It’s time to fight the good fight.

RESOLUTION IS THE SOLUTION

Are we in the Story? Are we writing the Play? Have we turned our backs or fought the law? Plot your points. If Hitler had his way, he would let everything resolve itself. Everything in the Dark Side of Hell. Hitler was not crazy, just wrong. Find out why.

Good versus Evil. The fight for what’s right. Love trumps hate. Rock the Vote.

“Luke, I am your Father.” Darth Vader realizes something is amiss in the Force. Can he change before it’s too late? What would you do? Joseph Campbell had his reasons. Ayn Rand had her methods. There is no absolute. Unless you count absolute zero. The answer is fluid and your Destiny is alterable. Your guess is as good as mine. You can choose a path
that’s clear, you can choose freewill. Either way, it’s all the same. Something happened.

IN THE END

Everything good must come to an end. It’s the closing curtain; exit stage left. That’s okay, we have time travel. We have belief. We have conquered conflict and, just possibly, there is redemption. No matter, never mind. There is light at the end of the tunnel. The Story that’s told will be true. We started the path. We went down the hole where the Mad Hatter holds his tea parties for all eternity. We had found ourselves there as well; taking in the tales and drinking up the lore. Forevermore. Remember what the Dormouse said? Feed your head.

Why is a raven like a writing desk?

Find out why and you will be carried away... Carried Away from Here.

Special Thanks to Jayne Heyde and Kaytlyn Hoch for their inspiration and guidance. You both gave me the greatest gift of all: something to believe in.
Tango Champagne ad
Misty Graf

Created in Photoshop II
Policy Recommendations for an Artificially Intelligent Problem
Shea Cooke

I have an intense interest in engineering and robotics which led me to write about this topic. Although there is not much information currently available on AI, it was still interesting to write about. I hope that people understand this issue a bit more and consider how it will affect their life going into the future. This paper was written for my English 102 class.

As a car travels down the road, it is faced with a dilemma. Should the vehicle, driven by Artificial Intelligence (AI), swerve to protect multiple pedestrians or continue on its path and protect the passengers of the vehicle? Corporations may choose to value the life of the passenger because the passengers are their customers. This is just one of many issues faced today as AI is developed. To protect public safety, privacy, and interest, the government should introduce policy to help regulate AI. While suggesting policy options, the uses of AI, the problems with AI, and the recommended regulations need to be discussed.

Artificial Intelligence is not a new field of study but for many people it is shrouded in mystery. Knowing the different types of AI used, the current applications of AI, and the future of AI is all important to understanding the issues. According to a government paper the term Artificial Intelligence was coined in 1956, but the concept was introduced earlier by Alan Turing who asked the question, “Can machines think?”
(Executive Office, 2016). Despite the concept being around for numerous years, there is still not a strict definition for AI. In his book *The Quest for Artificial Intelligence: A History of Ideas and Achievements* Neil J, Nilsson (2009) defined AI as “that activity devoted to making machines intelligent, and intelligence is that quality which enables an entity to function appropriately and with foresight in its environment” (p. 13). Although AI is loosely defined, there are two main categories - General AI and Narrow AI. General AI is a system that exhibits “intelligent behavior as advanced as a person across the full range of cognitive tasks” (Executive Office, 2016). This AI is the type often depicted in our media. HAL 9000 from *2001: A Space Odyssey* and Cylons from *Battlestar Galactica* are both examples of General AI. Narrow AI is made to address specific application areas. Narrow AI is what is being discussed currently for regulation as General AI “will not be achieved for at least decades” (Executive Office, 2016).

The current applications of AI are all examples of Narrow AI. Highly Automated Vehicles (HAVs) and machine learning are both major applications. HAVs are vehicles that utilize AI to pilot the vehicle with limited to no human interaction. These vehicles are most commonly seen as self-driving cars, but HAVs also cover airplanes, buses, trucks, and other modes of transportation. HAVs will provide new access to transportation to a wide range of people. Self-driving cars will provide opportunities to
“people with disabilities, ageing populations, communities where car ownership is prohibitively expensive, or those who prefer not to drive or own a car” (US. Department, n.d., p. 5). While self-driving cars provide the most benefit to the general public, the application of AI in other vehicles is equally important. The applications of AI in the shipping industry provide enormous benefits. Companies are already testing their ability to transport goods using a completely autonomously driven truck (Santens, 2015). This simply means that the vehicle operates with no human interaction.

Meanwhile, machine learning “is a statistical process that starts with a body of data and tries to derive a rule or procedure that explains the data or can predict future data” (Executive Office, 2016). This AI collects and interprets data to find patterns. The data the AI interprets is often called big data, which simply refers to a large amount of data. Machine learning is commonly used by the government as well as large corporations such as Facebook and Google. Corporations tend to use machine learning to target advertising and services to individuals. They use the AI to gather data and extrapolate patterns in people’s preferences. This allows the AI to form conclusions on the likes and dislikes of any individual therefore increasing an individual’s likelihood to interact with an advertisement. Machine learning can also be used in different ways. For example, credit card
companies use machine learning to detect fraudulent credit card charges which is a useful application. Similar to corporations who use AI to target advertising, the government utilizes machine learning to detect behavior patterns to identify possible terrorists. Unfortunately, the application of machine learning in the government is incredibly similar to how corporations utilize AI. Paul Dempsey (2016), journalist for E&T Magazine, states, “Once you start talking about AI innovation that addresses ‘big data’ as noted earlier, applications with commercial and military value could even prove to be identical.” Despite the intended results being different between the government and corporations, it begs the question of if there should be regulations differentiating between government and commercial use.

Although Narrow AI is more visible in our everyday lives, the development of General AI continues. These types of AI are still decades away, but it is worth looking to the future to be prepared. Currently, deep learning AI is an offshoot of machine learning. Deep learning looks to replicate the human brain by “[using] structures loosely inspired by the human brain, consisting of a set of units (or ‘neurons’)” (Executive Office, 2016). Currently the application of deep learning AI fits more into the realm of Narrow AI, the research being done to replicate human processes in software looks to lead to new research related to General AI. The
research done on AI will continue to advance with time, but the potential problems at our doorstep require our attention sooner rather than later.

As AI research continues, new problems and questions arise. The future uses of AI, large data collection, and HAVs all introduce issues that need to be addressed with government policy. Due to the rapid rate at which AI development occurs, it causes difficulties in government regulation. There is no way to predict where AI development will go, so any policy looking to regulate future AI is difficult. Even AI that exists currently is under constant development. This requires any regulation introduced to be flexible so it can adapt to new research. For example, HAVs are slowly being introduced to the roads. As testing occurs and new data is collected the functions that HAVs are able to undertake increases. Some predict that HAVs will eventually be linked to a network in charge of regulating traffic. However, this is only a prediction and is currently not integrated into HAVs. This uncertainty is just further reason that any enacted policy must be flexible.

The issues involved in large data collection are commonly debated. From the public outcry after Edward Snowden released NSA documents proving the existence of large data collection by the government to large corporations collecting data on its customers. In both cases, the use of AI is at the forefront. AI gathers large amounts of public data to interpret in
both commercial and governmental applications. Both use AI to notice patterns in the data. However, the patterns the AI looks for are different between the two applications. Where the government looks for patterns related to national security, corporations look for patterns to increase their profits. In both cases the amount of data collected is enough to make people question their personal privacy. It is easier to justify the government’s usage of machine learning than it is to justify commercial use. While the government looks for patterns exposing terrorism efforts, corporations look for patterns to best market to an individual. While corporate uses can increase convenience, for many it does not justify the use of data as effectively as the government use. So, should regulations affect corporations and government differently when they are using the same technology?

HAVs are faced with similar issues. There are ethics concerns, questions of fairness, safety issues, and legal issues. A common ethical question when it comes to self-driving cars is the ‘Trolley Problem.’ Larry Greenmeier (2016), an associate editor for Scientific American, described the Trolley Problem as a situation where a car is approaching a group of pedestrians and must make a decision on whether to swerve and potentially harm the driver, or to protect the driver and passengers while choosing to harm the pedestrians. Although the Trolley Problem is only a theory, its
practical application raises interesting questions about what sort of decisions HAVs will have to make and how they will make them. Researchers at the Massachusetts Institute of Technology (MIT) created a website to address this issue. The goal of the “Moral Machine” is to “take the discussion further, by providing a platform for 1) building a crowd-sourced picture of human opinion on how machines should make decisions when faced with moral dilemmas, and 2) crowd-sourcing assembly and discussion of potential scenarios of moral consequence” ("Moral Machine," n.d.). An interesting twist that the Moral Machine introduces to its examples are a difference in “social value.” They provide examples with athletic people, doctors, convicted felons, older people, younger people, and more. This raises an interesting question of if HAVs could or should discriminate based on these defining factors. Whatever the answer to this question, the decision would need to be enforced by the government to protect public safety. The U.S. Department of Transportation (USDOT) (n.d.) has already proposed regulation to allow for safe testing of HAVs, but it is currently only a proposition. Artificial Intelligence needs the ability to act safely outside of a controlled environment, which is why standards for safe testing are needed. Beyond that, how should accidents involving HAVs be handled? Should the manufacturer of the car be held responsible for the decisions made by its AI? If there is a lack of standards for an AI to
follow then companies have the authority to make decisions similar the Trolley Problem on their own. This could harm public safety as corporations might make the choice to favor the safety of passengers over the safety of the public. Another question of safety is if HAVs should require a licensed driver to be behind the wheel. While initially this requirement is reasonable to ensure the safe operation of HAVs, down the line as HAVs are refined would it still be necessary? While having a human behind the wheel is a good precaution to have, it may not be necessary when every car is a HAV and the risks involved in everyday transportation decrease. Even though not every issue or question can be answered right now it is important to consider policy options to protect public safety and privacy.

What government action should be taken? Currently there are recommendations for regulation, but no definite policy or legislation. These recommendations include the introduction of ethics education, the standardization of safety procedures, and the role of government in these policies. Ethics education is a great first step to take in the discussion of AI. By promoting education on ethical issues it allows future industry professionals to make informed decisions on the moral obligations of an Artificial Intelligence. As mentioned in Preparing for the Future of Artificial Intelligence released by the White House, “Schools and universities should
include ethics, and related topics in security, privacy, and safety as an
integral part of curricula on AI, machine learning, computer science, and
data science” (Executive Office, 2016). Although safety regulation does
relate as well to data collection as it does to HAVs, it is still an important
part of AI regulation. The proposed “Safety Assessment” from the USDOT
outlines areas of importance when it comes to safe operation of HAVs. The
USDOT recommends that:

The Safety Assessment [should] cover the following areas: Data
recording and sharing, privacy, system safety, vehicle cybersecurity, human
machine interface, crashworthiness, consumer education and training,
registration and certification, post-crash behavior, federal, state, and local
laws, ethical considerations, operational design domain, object and event
detection and response, fall back (minimal risk condition), [and] validation
methods (US. Department, n.d., p. 15).

Much of this suggestion is targeted towards HAVs, but some of it
could be retooled to apply to machine learning and data collection. For
example, the recommendation for privacy in the USDOT document
discusses the importance for transparency, choice, and security (US.
Department, n.d., p. 19). These are aspects that could be the basis for a law
regarding the commercial use of machine learning. Other than passing laws
regulating AI, the government is expected to be involved in many aspects of
the policy. For example, the USDOT provided a framework for the federal and state roles in HAV policy. They recommend actions such as “issuing guidance for vehicle and equipment manufacturers to follow” and having “each state identify a lead agency responsible for consideration of any testing of HAVs” (US. Department, n.d., p. 40).

While these recommendations are a start, there is concern over whether or not future regulation will stifle industry growth. To address this concern it was suggested that “policies should be designed to encourage helpful innovation, generate and transfer expertise, and foster broad corporate and civic responsibility for addressing critical societal issues raised by these technologies” (Stone et al., 2016, p. 42). The White House has adopted this stance in Preparing for The Future of Artificial Intelligence.

Government has several roles to play. It should convene conversations about important issues and help to set the agenda for public debate. It should monitor the safety and fairness of applications as they develop, and adapt regulatory frameworks to encourage innovation while protecting the public (Executive Office, 2016).

This statement along with mentions of wanting to work with the industry show that the government is looking to cooperate, not dictate. Hopefully these suggestions combined with the government’s willingness to communicate will lead to effective and safe regulations.
As Artificial Intelligence grows regulation must grow with it. This does not mean that regulations must restrict AI. Regulations can be put in place to protect public safety without harming innovation. Protections need to be put in place to protect public safety, and I believe that the actions being taken by the government along with their efforts to foster an environment of communication are effective ways to handle an unpredictable industry. As of this writing the Executive Office of the President has not released a follow up document which would “further investigate the effects of AI and automation on the U.S. job market, and outline recommended policy responses” (Executive Office, 2016). I look forward to the release of this document because I am interested to see what AI policy the White House recommends. AI has great potential to help our society and moving forward it must be utilized responsibly to ensure the safety and privacy of everyone. Yes, the unknowns of AI are terrifying, but at the same time they are equally exciting.

References


Pultarova, T. (2016, June 3). Humans will need to be upgraded to keep up with AI says Musk [Newsgroup post]. Retrieved from E&T website: https://candt.theiet.org/content/articles/2016/06/humans-will-need-to-be-upgraded-to-keep-up-with-ai-says-musk/


study on artificial intelligence. Retrieved from https://ai100.stanford.edu/sites/default/files/ai100report10032016fnl_singles.pdf


Worf
Shavonne Crawford

Taking this class rekindled my love for taking meaningful and artist photographs, rather than just silly selfies with friends. This was for a project titled "In Your Face" for ART 140 - Photography Appreciation.
Animal Training: No More Monkeying Around
Britney Corsini

I am a student at LWTech pursuing a career as a Dental Hygienist. My love for animals and my fascination with understanding their behavior served as inspiration for this research paper about animal training methods that I wrote for my English 102 class.

Introduction

The communication barrier that exists between humans and nonhuman animals can make training an animal feel overly ambitious at times. Pet owners strive to achieve obedience from their pets with a multitude of training techniques that they see on TV. Zoologists and researchers attempt to train wild zoo animals, primates, and other lab animals to cooperate with medical care, hygienic procedures, and various experiments, much of which is trial-and-error based training (Bliss-Moreau, Theil, & Moadab, 2013). Though training an animal takes quite a bit of effort, people have been training animals for “thousands of years” (Sea World, 2014, para. 1). Historically, dogs have been trained for companionship, for herding livestock, and for hunting. Elephants have been trained to perform manual labor like pulling logs, and horses and camels have been trained for transporting humans and other types of cargo (Sea World, 2014, para. 1). Additionally, animals receive training in working professions, and researchers have begun to realize the importance
of training primates to comply with research procedures. Widely used animal training techniques have varied from using force and sedation to make an animal comply, to dominance training, to reinforcement training. There has been much speculation about the most effective training methods for different types of animals, and training philosophies have shifted throughout the years.

A restored awareness surrounding the psychology and welfare of animals has generated a significant amount of social change in the last few decades. Many view the animal-welfare movement as a separate entity from social change; however, the two are interconnected because the animal-welfare movement seeks to change society’s perception and treatment of animals. The movement has been a slow march toward broad awareness because various organizations and individuals view animal welfare differently. For policymakers, it is often necessary to view animal welfare through the lens of other social causes that involve human needs, which are usually of greater concern than animal needs, rather than as its own altruistic cause. This mentality is one of the many issues correlated with the sluggish pace of animal-welfare awareness and has often caused change to be present only in areas in which animal welfare aligns with more significant human interests. Prior to the last 30 years, the ethical foundations of society were highly human-biased. Only recently, with the
development of the Animal Rights and Green movements, has ethics shifted to include a focus on the non-human world as well. Proponents of such movements view animal welfare as a cause for social change and recognize the importance of animal welfare in its own right by acknowledging the underlying injustice in the way that current systems treat animals and by fighting to see the issue corrected. This modernized framework of social reform has brought awareness around animal welfare to an international level, both in terms of its business activities and its political pressure, albeit at a slow rate of progress. Due to the rise in activism and public awareness surrounding animals and their treatment, many animal trainers and researchers are ditching traditional methods of training and opting for the more modern approach known as positive reinforcement training (PRT). Research has shown that PRT is more effective in animal training than other traditional methods of training, as it promotes obedience through a trusting relationship, reduces stress on the animal, and benefits the well-being and safety of both animal and trainer.

**Literature review: Animal training methods**

With influence from John B. Watson and Edward Thorndike, B. F. Skinner introduced a new training perspective known as operant conditioning. Operant conditioning is a type of training in which an
animal learns to perform or not perform a specific behavior based on its positive or negative consequences. Skinner believed that reinforced behavior tends to be repeated, and behavior that is not reinforced tends to diminish (as cited in McLeod, 2015). Operant conditioning includes positive reinforcement, which is the application of a reward after a desired response occurs in order to strengthen the good behavior. Operant conditioning also governs negative reinforcement, which is the removal of an adverse stimulus after a desired response occurs in order to strengthen the good behavior. Additionally, operant conditioning defines punishment as a way to weaken a behavior by taking something rewarding away or applying something unpleasant after an undesired response occurs (McLeod, 2015).

Skinner learned through his experiments that in order for reinforcement to be effective, it must be delivered based on a schedule. Positive reinforcement can occur on four reinforcement schedules: fixed interval, fixed ratio, variable interval, and variable ratio. Reinforcement schedules are utilized to prevent the animal from getting bored and to prevent noncompliance due to the animal figuring out the technique. Because animals can easily become bored, using a combination of all of the reinforcement schedules can be highly effective.
Many professional dog trainers and animal-training manuals encourage various training methods for dogs. Though there are numerous approaches, two techniques are most common in dog training: the dominance method and the positive reinforcement method. The dominance method was the traditional training technique for decades, but is now viewed by many as inhumane. Dominance is used to establish the human owner as the pack leader, thereby forcing the dog to show respect and obedience. An owner can achieve dominance over a dog by pinning it on its back until the dog stops resisting, by firmly holding the dog’s shoulders down while growling at the dog each time it struggles to free itself until the dog finally stops struggling, by subjecting the dog to something it does not like in large doses, or with a hand squeeze that mimics a quick bite. Other tools used in dominance training include choke chains, prong collars, and shock collars. Trainers who teach the dominance method usually promote punishment by application of an adverse stimulus after an undesired behavior occurs (McLeod, 2015). For example, if a dog jumps onto a table, a dominance trainer may administer a shock from a collar or a smack on the head with a newspaper to deter the dog from jumping on the table again. Unfortunately, this use of punishment in the dominance method often instills fear in the animal. Fear causes some animals to shut down completely, to become aggressive, to attempt to
escape or avoid their trainer, or to become anxious or fearful of things associated with the punishment (“Behavior Matters,” n.d.).

The dominance method in dog training derived from the assumption that, because of their biological descent from wolves, dogs are pack animals (“Behavior Matters,” n.d.). Cesar Millan of the popular TV show “Dog Whisperer,” has gained popularity through the success of his alpha-dog technique, which he claims is based on a prevailing understanding of wolves. In the distant past, researchers have claimed to observe the pack mentality in groups of wolves where there is a battle for leadership over the pack. Millan claims that a dog displaying aggression is exhibiting this pack mentality and fighting for dominance not in a pack but in a household. However, through more relevant and updated research, this assumption has proven to be a misguided interpretation of the true nature of dogs. An expert on wolf behavior at the University of Minnesota named Dave Mech asserts that the majority of research conducted in the past was done using captive wolves. His recent research conducted on wolves in their natural habitats shows that this long-lived tale of the pack mentality and fight for alpha-dog status does not exist (as cited in Peeples, 2009).

In the 1980s, operant conditioning began to influence many animal training techniques, and the shift from dominance training to PRT began. The dominance method is still slowly being replaced by the positive
reinforcement method as researchers continue to better understand animals and their behavior (Eberhart, n.d.). Where dominance training uses punishment for its effectiveness, PRT uses rewards and praise to achieve a desired behavior. A behavior is rewarded by giving the animal something it wants or likes in order to increase the likelihood that the desired behavior will continue to occur (Veeder, Bloomsmith, McMillan, Pearlman, & Martin, 2009). Positive reinforcement trainers most typically use “verbal cues, hand signals, treats, clickers, toys, and even games to help modify behavior, correct bad habits, and even teach tricks” (Babcock, n.d., p. 1).

Saul McLeod (2015) states that “Positive reinforcement training strengthens a behavior by providing a consequence an . . . [animal] finds rewarding” (para. 13). PRT discourages unwanted behaviors by simply ignoring the behavior in order to eradicate it. For example, if a dog sits when asked a positive reinforcement trainer would administer praise such as a treat or a scratch on the head to encourage the dog to continue the behavior. If a dog does not sit when asked a positive reinforcement trainer would simply ignore the behavior to inform the dog that such behavior will not generate a response the dog wants, therefore discouraging the dog from continuing the behavior.

Similar to the reignited popularity of dominance training through celebrity endorsement, PRT has been made popular by trainers such as
Victoria Stilwell of Animal Planet’s TV show “It’s Me Or The Dog,” and by Dawn Sylvia-Stasiewicz, who is known for training President Obama’s dog (Babcock, n.d.). Positive reinforcement in dog training is based on the assumption that dogs want to please their owners. Sylvia-Stasiewicz contends that “If you train using positive reinforcement, you’ll get a trained dog and you will maintain the spirit of that dog” (as cited in Babcock, n.d., p.1). Although the use of dominance and the application of a negative stimulus in dog training can produce faster results than positive reinforcement training, it often has negative psychological consequences. In contrast, as Sylvia-Stasiewicz argues, “results can come slower with purely positive reinforcement, but … the method has even saved so-called ‘death row dogs’ who some thought impossible to rehabilitate” (as cited in Babcock, n.d., p. 2). The shift to PRT is especially prominent in professionally trained dogs that earn titles such as search & rescue dog, bomb-sniffing dog, service animal (including dogs, parrots, ferrets, and miniature horses), seizure alert dog, cancer-sniffing dog, mine-sniffing dog and more (“Behavior Matters,” n.d.). Numerous celebrity animal trainers, organizations such as PAWS and SPCA, and veterinarians around the world are advocating positive reinforcement techniques and encouraging the abolishment of dominance training.
Nonhuman primates are another type of animal that require training because they are often used for biomedical and psychosocial research in a lab. This type of research involves injections of various substances and the collection of data samples from the animals while they are conscious. Since a lab is not the natural environment for a primate, these types of procedures can impose a great deal of stress. Traditionally, for research to be effective primates have to be restrained and trained to be restrained. Typical restraints include straps, jackets, tethers, and the most common, primate chairs. Traditional restraint training involves aluminum collars that are fitted to the animal’s neck and long metal poles that can attach to the collars and be used to guide the primate to the chair where it is then restrained. The training methods used to accustom primates to being restrained do not often use positive reinforcement techniques or allow the animals to be voluntarily restrained (Bliss-Moreau, Theil, & Moadab, 2013). The forceful methods used in a lab create unnecessarily high levels of distress in the animals, mental vacancy, and non-compliance from the animals, and put the safety of the animals and the trainer at risk.

The growing concern for safety and fair treatment of animals has shifted the traditional training techniques used by researchers in a lab to a more humane approach. A recent scientific study, aimed at testing the effectiveness of positive reinforcement in restraint training, proved effective
in 100% of the test subjects. The use of positive reinforcement was effective in acclimating the primates to being restrained in the majority of subjects, and some negative reinforcement was used in subjects that demonstrated initial defiance (Bliss-Moreau et al., 2013). Treats, fun activities, and toys are just some examples of the positive reinforcement used to train primates.

Research has also shown a significant reduction of cortisol levels in monkeys with the use of positive reinforcement as opposed to force and sedation (Behringer et al., 2014). Cortisol, also known as the stress hormone, is a hormone produced in the adrenal gland of most animals; this hormone is released into the bloodstream and can induce a fight-or-flight response when an animal is stressed. According to Veeder et al. (2009), “PRT has been successfully used to train diverse primate species to execute a variety of behaviors helpful in daily husbandry procedures, facilitating research, and promoting the well-being of the animals” (Abstract section, para. 2). Additionally, PRT has been effective in training primates to volunteer themselves for the collection of blood, semen, and urine samples, as well as for intramuscular and subcutaneous injections. Furthermore, PRT has been used to enhance social interaction between primate groups by reducing competition and aggression (Veeder et al., 2009). The success of these studies is a promising development in the pursuit of more humane training techniques.
The training techniques established for other wild animals, such as marine mammals and zoo animals, are fairly humane. Marine mammals and other zoo animals, such as parrots, tigers, giraffes, and bears, have been effectively trained using positive reinforcement. Like primates, most zoo animals and marine mammals respond well to treats, stimulating activities, and toys as a reward for good behavior. It is known that PRT is effective in adjusting animals to husbandry and to veterinary and experimental procedures, but in zoos and conservatories it can be challenging to get close enough to an animal to use only positive reinforcement, so negative reinforcement is occasionally used. Punishment is never used in training wild animals because of their tendency to become aggressive in response to such treatment. Sea World, for instance, claims to use only positive reinforcement to train all of their animals (Sea World, 2014).

Conclusion

Animal training has experienced numerous adjustments as researchers, trainers, and animal lovers have made new developments regarding the natural behavior of animals and their cognitive abilities. Positive reinforcement is taking the place of dominance in training techniques, and while punishment and negative reinforcement are still occasionally used in animal training, PRT has shown great promise
through research in the field and in the lab. PRT produces positive side effects as opposed to the negative side effects that dominance training produces. Positive methods provide an experience for both animal and trainer that create a “powerful bond of trust and cooperation” without the use of force (“Behavior Matters,” n.d., para. 17). By avoiding dominating techniques, the animal has the opportunity to choose to participate in the training and work toward an achievement.

According to the website Behavior Matters (n.d.), “Behavior science is continually providing evidence that by using positive reinforcement, you develop a relationship with an animal that is founded on trust, cooperation, low stress, and a long history of pleasant experiences” (para. 23). The modern, positive approach to animal training is promising because it creates a fun, interesting, and stimulating environment that encourages the animal to offer desirable behavior rather than teaching the animal to be fearful. The respect and care that is demonstrated through the use of positive reinforcement cause the animal to want to be around the trainer more often and enjoy being asked to do things (“Behavior Matters,” n.d.). Other training techniques can be effective, but PRT promotes benefits such as “reducing distress, increasing choice and control for the animal, and improving well-being” that other training methods do not (Veeder et al., 2009, para. 2).
References


Veeder, C. L., Bloomsmith, M. A., McMillan, J. L., Perlman, J. E., & Martin, A.
Grisaille Elephant
Misty Graf

Created in Jason Sobattka’s Painting class
Benefits of Physical Activity
Yuliya Gracheva

I have been a student at LWTECH for three and a half years. Now, I am taking some prerequisites for a nursing program. I took English 102 in order to improve my English skills and learn how to write research papers. This research paper was my final assignment for English 102. I was always interested in positive effects of exercise on the body and people’s health, and so I decided to write about it. I hope my work will be interesting to everyone and maybe change readers’ habits in a positive way.

Abstract

Plato, a Greek philosopher, said, “In order for man to succeed in life, God provided two means, education and physical activity. Lack of activity destroys the good condition of every human being, while movement and methodical physical exercise save it and preserve it.” Most know that physical activity is beneficial, but the modern life does not allow people to care about their health as it is desired, and a large part of global population remains sedentary. These days, to stay healthy is a huge struggle for everyone, especially considering such an abundance of easily accessible fast food all around in the U.S., technological advancements, and social changes. People spend most of their day time sitting in chairs at the job or lying on couches at home in front of computer or television screen. All factors of sedentary lifestyle mentioned above lead to obesity and other health-related problems. Due to the epidemic of obesity in the U.S., the
interest in and attention to the benefits of physical activity have risen among scientists and researchers. This paper discusses the abundant health benefits of physical activity that are observed in multiple studies.

Despite all known numerous benefits of physical activity, people on average are exercising less and less so that it contributes to the worldwide obesity epidemic and to rising rates of obesity-caused diseases. The growing number of people suffering from obesity and overweight in the U.S. has attracted the interest of scientists and medical professionals to explore the relationship between regular exercise and health. According to the Centers for Disease Control and Prevention (CDC, 2016a, 2016b), “more than one-third (36.5%) of U.S. adults” and “about 17% . . . [or] about 12.7 million children and adolescents [have obesity].” Obesity can increase the risk of the development of hypertension, heart disease, diabetes, and certain cancers. Among these illnesses, heart diseases and cancer are leading causes of death in the U.S. (CDC, 2015c). Most of such conditions can be prevented or even cured if a person exercises regularly. Exercise increases the quality of life in the following important ways: it brings significant health benefits, reduces stress, and saves people’s money. Quality of life (QOL) is a multidimensional and complex term; retired professor of the Department of Psychology at Hastings College, Dr. Robert Schalock
mentioned that “there is a very wide range of definitions and interpretations of QOL - over 100 definitions” (as cited in Galloway, Bell, Hamilton, & Scullion, 2006, p. 11). One of the closest definitions of QOL in scope of the discussed topics in this essay was provided by Cummins: “Quality of life is both objective and subjective, each axis being the aggregate of seven domains: material well-being, health, productivity, intimacy, safety, community and emotional well-being” (as cited in Galloway et al., 2006, p. 117). This paper will focus primarily on health benefits of physical activity, so to better understand this aspect, it is very important to define the meaning of health-related quality of life (HRQOL). In 2014, Brown, Carroll, Workman, Carlson, and Brown defined health-related quality of life as “a multidimensional construct, and measures of HRQOL typically assess aspects of physical and mental health, social functioning, and self-perceptions of health” (p. 2673).

Physical activity helps improve many of the dimensions of HRQOL. The first obvious benefit is that it helps maintain normal weight and reduce the risk of obesity and obesity-caused diseases. In the U.S., experts usually define obesity according to individual’s body mass index (BMI). It is measured as “a person’s weight in kilograms divided by his or her height in meters squared, or the weight in pounds divided by height in inches multiplied by 703. … An optimal weight is a BMI between 21 and 24.9. A
BMI of 25–29.9 constitutes overweight, while obesity is defined as 30 or greater” (Petit, Petit, & Adamec, 2005, para. 1). Physical activity increases people’s total energy expenditure which can help them maintain energy balance or even lose weight. Many researchers and medical professionals who have conducted trials related to obesity problems debate how much activity people need to have in order to lose or avoid gaining weight. Carroll, a professor of pediatrics at Indiana University School of Medicine (2016), wrote, “The recommendations for exercise are 150 minutes per week of moderate intensity physical activity for adults, or about 30 minutes each weekday.” Another exercise scientist, Steven Blair who has been studying the health benefits of physical activity for about 25 years said, “Thirty minutes of moderate intensity exercise on five or more days of the week is really the bedrock dose.” Many authorities assert that this “dose” of physical activity is sufficient to lower the risk of chronic diseases, but is not enough to maintain normal weight. Edward R. Laskowski (2012), a Sports Medicine Physician and a Professor of Physical Medicine and Rehabilitation at Mayo Clinic in Rochester, Minnesota, reported that “exercise can help sustain long-term weight loss and minimize weight gain over a lifetime, especially if exercise volume is in the range of 300 minutes of moderate activity per week” (p. 842). As Reynolds (2016) explained, moderate activities can be “brisk walking, bicycling gently, or raking
leaves.” Being active moderately for at least 30 minutes a day on most days of the week decreases the risk of chronic diseases, but staying at healthy weight or losing weight is a more difficult task and requires greater physical activity with calorie restriction.

Exercise not only prevents obesity and obesity-related illnesses, but regular physical activity has positive effects on all systems and organs in the body and prolongs the lifespan. Exercising activates blood and lymphatic systems and enhances the delivery of oxygen to the body cells and tissues. So, it improves blood circulation in all organs of the body. Exercise speeds up breathing, so it hastens elimination of carbon dioxide and other wastes from all the body cells and tissues (House, 2004). Physical activity also positively affects blood composition, including cholesterol level. In the interview, Steven Blair said, “Exercise raises lipoprotein lipase (L.P.L.) levels, and this helps the body get rid of fats called triglycerides. High triglyceride levels are associated with atherosclerosis and increased risk of heart disease. People who go from a routine sedentary existence to including a 30-minute run daily get a 22 percent increase in L.P.L.” The impact of physical activity on the cardiovascular system can be clearly observed in people who had already had a heart attack: “exercise therapy reduced all causes of mortality by 27 percent and cardiac mortality by 31 percent” (Carroll, 2016).
Second, exercise decreases the risk of colon cancer and breast cancer. In spite of improved medical technology for diagnosis and awareness of new treatment methods, cancer diseases remain a leading cause of mortality in the U.S. (CDC, 2015c). Scientists and researchers continue to look for new methods that can help prevent or cure cancers. The idea that regular exercise can be helpful in preventing cancer is not a new one. There have been a lot of studies that have examined the connection between physical activity and the risk of certain cancers. CDC research (2016d, 2016e) showed that the most commonly occurring cancers in the U.S. among men are prostate, lung, and colorectal cancers, and among women these are breast, and also lung and colorectal cancers. Kruk and Aboul- Enein (2007) in their review article asserted that “epidemiological evidence exists that physical activity reduces colon and breast cancers. … The available data indicate that 30-60 minutes per day of moderate-to vigorous physical activity is needed to be protective against breast and colon cancers” (p. 169). Recently, the other group of scientists from Iran conducted a study over 100 people aged 40-65 diagnosed with colorectal cancer and concluded the following: “We observed 27 % decrease in the risk of CRC [Colorectal Cancer] in individuals with high level of leisure physical activity” (Golshiri, Rasooli, Emami, & Najimi, 2016, p. 3). More studies have to be conducted to know the impact of exercise on the risks of other
types of cancer because there are still many unknowns. For example, limited information is available regarding relation between physical activity and prostate, lung, and endometrial cancers, and further research is needed (Kruk & Aboul-Enein, 2007, p. 169).

Third, exercising helps fight daily stress and increases physical self-esteem and psychological well-being. Stress in an inevitable part of modern life; however, regular physical activity helps people to relax and forget about troubles they have had during the work day. Recent studies have shown that exercise stimulates the production of endorphins, which are the body’s mood elevators, and antagonize stress hormones, such as adrenaline. In his book *The Anxiety & Phobia Workbook*, Edmund J. Bourne, PhD (2015), an American psychologist and researcher on anxiety disorders and the treatment of anxiety disorders, wrote that one of general psychological benefits of exercise is the “stimulation of the production of endorphins, natural substances which resemble morphine both chemically and in their effects: endorphins increase your sense of well-being” (p. 111). Daily exercises and other physical activities normalize night sleep and generally improve the quality of sleep. If a person exercises during the day, he or she becomes physically tired, and thus falls asleep faster and has a deep sleep at night. A full-fledged night rest also helps people reduce stress and be more disciplined and well-organized during the day. Physical activity increases
the supply of blood and oxygen to the brain, and this, in turn, improves mental functions and “concentration” (Bourne, 2015, p. 111). In another interesting study, 395 inactive women and 479 inactive men, ages 35 to 75 years were divided into three groups randomly: the first group was getting a “physician’s advice,” the second – “advice plus behavioral counseling” during appointments, and the third – “also included telephone contact and behavior classes” (Anderson, King, Stewart, Camacho, & Rejeski, 2005, p. 146). Researchers were monitoring how the reported health-related quality of life was changing as the result of increasing physical activity. Anderson et al. concluded, “At 24 months, women who received counseling or assistance had significant reduction in daily stress and improvements in satisfaction with body function compared to those receiving advice only. Men had reductions in daily stress across all treatment arms” (p. 146). The trial also showed that beneficial health results are much higher under continuous supervision of a specialist or health provider rather than without counseling. In another similar study conducted in 2014, Brown, Carroll, Workman, Carlson, and Brown concluded that “for a large majority of adults, doing some physical activity [PA] is associated with better HRQOL than doing none” (p. 2680). The response to the increased exercise intensity was measured for adults with and without limitations and
showed that “PA is positively associated with HRQOL among persons” in both groups (Brown et al., 2014, p. 2673).

The next important benefit of physical activity is that regular exercise saves people’s money. According to CDC (2016a), “The estimated annual medical cost of obesity in the U.S. was $147 billion in 2008 U.S. dollars; the medical costs for people who are obese were $1,429 higher than those of normal weight.” Obesity and obesity-caused illnesses is difficult and thus expensive to treat. Scientists and medical experts know that inactive lifestyle is a precondition for developing different diseases mentioned previously in this paper: heart diseases, stroke, and breast or colon cancers. The annual Medical Expenditure Panel Survey interviewed a group of Americans, who were asked about medical expenses in the past year, diseases that were diagnosed, and physical activity habits. The participants were divided into two small groups: the first, who met national recommendations and exercised at least 30 minutes 5 times a week, and the second, who did not meet these criteria. The researchers concluded that “someone who met exercise guidelines paid $2,500 less in annual health care expenses related to heart disease than someone who did not walk or otherwise move for 30 minutes five times per week” (Reynolds, 2016).

In conclusion, without a doubt, exercise and physical activity on a regular basis are a great incentive to be healthier, live a longer and happier
life, and even save money. They make the body stronger and fit and reduce the risk of life threatening health conditions. Thus, it is vital for everyone to find time to gain these beneficial health outcomes from exercise. Of course, before exercising people should consult with their health provider and know about contraindications for specific types of physical activities depending on their health condition and what intensity, duration and frequency of some exercises are best for them.

Nowadays, sedentary lifestyle is not purely an individual choice. The environment strongly influences people’s behavior about how active they are and thus forms their habits. The increase of car driving and technological advancements and the decline of public transportation system are several main reasons of people’s chronic physical inactivity. It is essential at the governmental level to improve public transportation and create safe and active environments that include more parks with playgrounds, more sidewalks and bike paths to make walking and cycling safer. Such steps can help to make physical activity a natural and integral part of people’s daily lives, and ultimately to stop the obesity epidemic and improve the nation’s health.

The environmental factors, such as lifestyle, diet, and physical activity play a crucial role in predisposition to cancers. Scientists have conducted many “investigations” regarding the relationship between exercise and
incidents of breast, colon, and colorectal cancers and have found that with increasing physical activity, rates of these cancers declined in the population. Although, there are still a lot of unknowns and knowledge gaps in cancer preventive measures, and although more studies and trials are needed in order to clarify the effects of specific types of physical activities on particular types of cancer, it is certain that physical activity is rewarding for everyone. It brings a wide spectrum of benefits that help maintain physical and emotional well-being and thus indirectly reduce the risk of developing many types of cancer.
References


Deer in Winter Wonderland
Raquel Piqueras

"Deer in Winter Wonderland" is a vector illustration made with Adobe Illustrator 2015. The image wants to create a perspective scene where the warm colored fur of the deer is contrasted with the cool winter scene in the background. The illustration blurs in the back to help create the perspective effect, and it also darkens in the right in order to make the sunlight hit the main deer on the left.
The Paleolithic Diet: Is an Eating Plan Modeled on Prehistoric Human Diet Right for Us?
Farah Esaghi

What we take as food every day is very important, not only for our physical health, but also for our mental and emotional health. Therefore, we should really pay close attention to what we eat and how we eat. There have been always many types of diets out there and Paleo Diet is one of the recent ones which has some strict followers. I was interested to learn more about it and had my class research on it which I would like to share.

The Paleolithic diet is based on foods that were hunted and gathered by our Paleolithic ancestors. Some experts believe that a Paleo diet is the healthiest human method of eating, while agriculturally-processed foods could be dangerous to our well-being. There are many theories that explain Paleo diet as a perfect lifestyle to promote healthy eating habits which include using the best ingredients, especially when it comes to meat consumed. The Paleolithic diet, also known as Paleo diet—or the Caveman diet, or the Stone Age diet—is a modern nutritional plan based on the foods, like animals and wild plants, that were consumed during the Paleolithic period. The Paleolithic diet could be a case when it is wise to look back through the history and learn from experiences in order to build a stronger present and future. But we should consider the differences between Paleolithic era and modern Western life.
Gastroenterologist Walter L. Voegtlin discovered the modern version of the Paleolithic diet in 1975. In his book, The Stone Age Diet, he describes that our “ancestors were exclusively flesh-eaters for at least two and possibly twenty million years. That ancestral man first departed slightly from a strictly carnivorous diet a mere ten thousand years ago” (1). He explains that during these years “Man continued to make minor changes in his victuals as new plant substances were discovered and cultivated. These changes contributed nothing nutritionally but a more abundant supply of calories. They did promote cultural progress from feeding to eating” (1).

What Voegtlin means is that our eating habits have changed from a rich-quality feeding diet of our ancestors to the low nutrition eating diet of modern Western culture. He brings up this question, at the introduction of his book: “Is modern Man actually better or worse off nutritionally than was his Stone Age forbear?” (xv).

According to Dr. Loren Cordain, founder of the Paleo movement, the healthiest diet is one that our ancestors ate 10,000 years ago during the Paleolithic era. His diet, The Paleo Diet, restricts the foods to what the hunter gatherers of the Stone Age ate. He emphasizes that “The Paleo Diet is the one and only diet that ideally fits our genetic makeup” (3). Cordain notes that “In 1985, Dr. Stanley Boyed Eaton published a revolutionary scientific paper called “Paleolithic Nutrition” in the prestigious New
**England Journal of Medicine** suggesting that the ideal diet was to be found in the nutritional practices of our Stone Age ancestor” (4). Cordain suggests that although there were other scientists, anthropologists, and physicians who had known about our ancestors’ eating habit, “it was Dr. Eaton’s writings that brought this idea to center stage” (4).

The Paleolithic period began approximately 2.5 million years ago, when the first human started to use stone tools. Cordain argues that about the time our ancestors figured out that eating meat gave them much more energy. That was a turning point; changing from vegetarians to meat eaters: “Their bellies began to shrink -because they didn’t need the extra room to process all that roughage. All their energy formerly needed by gut was diverted to the brain, which doubled and then tripled in size. Without nutrient-dense animal food in diet, the large brains that make us human never would had the chance to develop. Meat and animal foods literally shaped our genome” (38).

The Paleolithic period ended with the emergence of agriculture approximately 10,000 years ago. The Paleolithic diet is principally based on wild animal and uncultivated plant foods, such as lean meat, fish, vegetables, fruits, roots, eggs, and nuts. The diet excludes grains, legumes, dairy products, salt, refined sugar, and processed oil, all of which were unavailable before humans began cultivating plants and domesticating
animals. Such a diet provided abundant protein; a fat profile much
different from that of Western nations; high fiber; carbohydrate from fruits
and vegetables (and some honey) but not from cereal, refined sugars and
dairy products; high level of micronutrients (any substance, essential for
healthy growth and development) and probably of phytonutrients
(nonnutritive bioactive plant substances considered to have beneficial effect
on human health) as well.

The Paleolithic age began to come to end in Middle East, with the
first ancient farms. Because of rise of population and shortage of food
resources, people started farming and then domesticating wheat, barley,
and legumes, and later livestock:

With the emergence of agriculture, humans have introduced to a
heavy grain diet. No other primate eats cereal grains, except human. This
has led to a cut back in the intake of fruits and vegetables and increase in
empty carbs. As a result, humans have lowered their immune system and
increased their susceptibility neoplastic disease. It has been proven that
consumption of fruits and vegetables have potential to increase the immune
system and prevent Cancer. (Eaton and Eaton III)

The Industrial Revolution, around 200 years ago, has changed food
production dramatically, which has resulted in today’s dietary patterns.
Our diet has changed significantly, and not necessarily for the better.
Today’s diet contains far more packaged and commercially processed food than ever: Grain-based desserts, yeast breads, chicken-based dishes, ground meats, sweetened beverages, pizza, and alcoholic drinks. Obesity, diabetes, cardiovascular diseases, and cancer have dramatically increased over the past 50 years. Our modern western diet is not healthy. Today the average person is overweight: “63 percent of all American men over age twenty-five and 55 percent of women over age twenty-five are either overweight or obese” (cordain 29). People are stressed, depressed, and sleep deprived, and they suffer from several types of preventable diseases.

Fortunately, many of symptoms and conditions can be turned around through a healthy diet and lifestyle. According to Loren Cordain, generally acknowledged as the world’s leading expert on the Paleolithic diet, the healthiest diet is one that our ancestors ate 10000 years ago during the Paleolithic era. “The Paleolithic Diet” restricts foods to what the hunter-gatherers of the Stone Age ate. Cordain and his research team suggest a high percentage of our calories, 55 percent, has to come from lean meats, organ meats, and sea food. And the rest of the calories should come from fresh fruits and vegetables, nuts and non-processed oils. Cordain suggests a diet that contains “19-35% Protein, 22-40% carbohydrate, and 28-47% good fat” (21).
Cordain claims that “the Paleo diet is particularly helpful for people with type 2 diabetes, cardiovascular disease, high blood pressure, kidney stones, asthma, and osteoporosis. There is a significant body of evidence suggesting that the paleo diet may be helpful in certain autoimmune diseases such as celiac disease, dermatitis, herpetiformis, rheumatoid, arthritis, multiple sclerosis, and sjogren’s syndrome. It also reduces your risk of many types of cancer” (36).

Not all nutritionists agree with the principles of the Paleo diet. Elizabeth, in an article posted in *Harvard Health Publications*, argues that “There is no strong scientific evidence at this time for claims that a Paleo Diet helps prevent or treat many medical conditions. Much of what we know about 10,000 years ago is an inference, based on studies of skeletal remains and human artifacts. Our understanding of exactly what composed a true Paleolithic diet, and in what quantities, is at most an educated guess” (Elizabeth).

Certainly, foods offered by Paleo diet are excellent of healthy choices. Paleo diet suggests whole fresh foods, rather than processed and packaged foods. However, there are controversies among dietitians on cutting out entire group of whole grains; legumes and beans; potatoes; and dairy products out of the diet which could cause serious deficiencies. Cordain, however, does not agree with them (25).
John Berardi, founder of Precision Diet, in his blog on The Huffington Post, argues about “Pros and Cons” of paleo diet: “Research suggests that the benefit of legumes outweigh their anti-nutrient content. Cooking eliminates most anti-nutrient effects, and some anti-nutrients (like lectins may even be good for us.” As for grains, he notes: “[S]ubstantial body of reliable research suggests that eating whole grains improves our health”.

However, the importance and benefits of lean grass-fed meat and fresh pesticide-free fruits and vegetables in daily human diet is known. But how can we make such a diet affordable? What percentage of people can follow such a diet, and for how long? The Paleo diet is pricey. Usually, the meat counter and produce section in the priciest corner of the grocery store.

Even though Paleo eating has a lot of good qualities, despite of lacking legumes, grains, and dairy products, we should not to compare the modern western life style to that of our Stone Aged ancestors. Our bodies compared to our ancestors’ bodies could be the same, but we live in a completely different world. The major difference between the contemporary American diet and Paleolithic diet is not only the consequence of adopting agriculture, but also the result of the Industrial and Fast Food revolution.
Still, by using our past as a guide, we can salvage our bodies and our health. The simple idea of this diet is to eat like a caveman. During the Paleolithic era, processed foods did not exist. There were no preservatives, no food colorings, no artificial flavorings, or other additives. The challenge is to find food in their simplest and most basic form that resemble what the caveman ate. The meat preferred in this diet is meats from grass-fed or naturally-fed animals since the meat from wild animals are favored. Grass-fed meat is promoted because it is the closest and most natural form of protein that can be consumed without being worried about industrial diseases.

Paleo Diet suggests good, richly nutritious foods. If you can afford it, follow it, but it’s not necessary to go to the extremes. The strongest argument against it is that cuts out some good foods (legumes, grains, dairy, potatoes), which could be your choice to have them in your diet moderately. What should really concern us the modern day processed and gluttony food.

Works Cited


Cannabis Consumption: Oral Harm
Jorgie Kinerk

Currently, I am taking prerequisite classes for the Dental Hygiene program at Lake Washington. In my English 101 class, I looked into cannabis effects since the drug had become legalized, and in English 102 we were asked to write a research paper relating to something in our intended career field. Professor Mantooth gave me the idea and I began my work.

Abstract

With the legalization of recreational marijuana use in over half of the United States, dental hygienists are going to see more and more avid cannabis consumers. Abuse of any substance has the potential for detrimental harm and cannabis is no exception. In recent years, marijuana has become more and more publicized and researched; as a result, researchers are advancing our knowledge even more about the possible harmful effects of this drug. This paper compares the effects of cannabis consumption on oral health - in particular, the dry mouth and carcinogenic effects. As well, the paper supplies background information on marijuana and the more well researched tobacco to work as a knowledge base. Supported with many studies and data, this research paper goes over the adverse oral health effects of cannabis.
In twenty-eight states, including Washington D.C., Minnesota, Colorado, Rhode Island, and Washington state, the consumption of marijuana (also known as cannabis) has now been legalized. The legalization of marijuana will increase this drug’s consumption in a larger variety of people by making it more mainstream. While the cannabis consumerism may see a positive rise from an economic standpoint, the harmful effects will also rise. Consuming marijuana can have many negative effects on a person, including their oral health.

Cannabis is consumed in three forms, hash oil, hashish and marijuana. All three varieties contain THC (Tetrahydrocannabinol), the main active hallucinogenic chemical in the drug. These three forms are all ingestible, but vary in strength (the ‘strength’ of the drug refers to the effects it has on the consumer). Hash oil is the strongest or most powerful, followed by hashish, with marijuana bringing up the rear. All forms are derived from the cannabis sativa plant. Hashish is more of a paste, where marijuana is the dried leaves and flower buds of the plant. The hashish paste is concocted with the sativa’s resin. Users are searching for the state of ‘high’ created by cannabis, which is accomplished by THC in the bloodstream. When smoked, the chemical quickly enters the bloodstream, where it is then transported to the brain. The THC excites the brain cells, releasing the pleasure chemical, dopamine (Oleson & Cheer, 2012). Even
though marijuana may not be as powerful as the other two forms, it is the most commonly ingested as the hallucinogenic and relaxing properties more quickly than the other two forms to take effect.

Potential health concerns of cannabis use include those related to oral health. Cho (2005) found that “cannabis abusers generally have poorer oral health than non-users, with an increased risk of dental carries (more commonly known as cavities) and periodontal diseases” (p. 70). When Cho states that marijuana worsens the oral health for smokers compared to nonsmokers, Cho is referring to the yellow staining caused by smoking as well as the dry mouth. These consequences increase the risks of cavities and oral diseases, such as gingivitis and periodontal disease. This high-risk behavior creates new obstacles for patient care and gives dental hygienists reasons to alter their approach to marijuana consumers in their dental treatment. The effects of marijuana on oral health, and on overall health, is an important factor that must be taken into account when treatment planning. As Maloney (2011) has noted, “There are a number of systemic, as well as oral/head and neck manifestations, associated with cannabis use. Dentists need to be aware of these manifestations in order to take whatever precautions and/or modifications to the proposed treatment that might be necessary”.
Treatment alteration is not the only effect of cannabis on oral health. One main consequence is dry mouth. Xerostomia, the scientific name for dry mouth, caused by smoking either tobacco or marijuana, reduces the production of saliva; this is a result of smoke changing how the nervous system functions. The alteration of the nervous system’s production of saliva comes from the parasympathetic properties cannabis contains; salivary glands are inhibited, lowering the average yield of saliva.

Xerostomia creates tissue irritation and can lead to edema (swelling), erythema (reddening) of the oral cavity (ie. gums, tongue and even the uvula), as well as increased tissue sensitivity. The lack of production of saliva increases the likelihood of cavities simply because there is no longer enough saliva to remove food, plaque and bacteria. Additionally, saliva is naturally alkaline and without the alkaline saliva to neutralize the acid that surrounds teeth, cavity risk in greatly increased. The oral environment becomes increasingly acidic, cavity causing bacteria thrive, and enamel becomes compromised. While this lack of acid neutralization leads to tooth decay, it can also cause mouth sores, such as aphthous ulcers (canker sores). As the acid and bacterial load continues to increase it can further result in periodontal disease (destruction of the tissue and bone surrounding the teeth) and dangerous oral lesions, such as Leukoedema, which is a “whitish–gray edematous lesion of the buccal and labial oral mucosa” (Duncan &
Su, 1980). Xerostomia affects the whole oral cavity, leaving much room for lesions. Sores can form around the lips and mucous membrane that lines the entire mouth; allowing Leukoedema a wide range of space to work with. These lesions, if not treated, can worsen and become dangerously painful.

Debra Ferraiolo and Analia Veitz-Keenan (2011), professors at NYU, warn dental hygienists to take note of patients who smoke marijuana so they can adjust and care for the increased risk of oral issues associated with smoking. The two professors also suggest advising marijuana-smoking patients to suck on sugar free candies and mints, as well as chew sugar free gum since these simple tasks can help increase saliva production and decrease the likelihood of dry mouth.

Oral lesions left unchecked and untreated can later result in cancer. In 2014, Siegel, Jiemin, Zhaohui and Ahedin estimated 42,440 cases of cancer in the oral cavity/pharynx region (p. 364). A main source of cancer in the oral lesions is Benzyprene, which is “in the tar of both tobacco and cannabis cigarettes. We know that benzyprene causes cancer. It alters a gene called p53, which is a tumor suppressor gene. We know that 3 out of 4 lung cancers (75%) occur in people who have faulty p53 genes. The p53 gene is also linked to many other cancers” (Does smoking cannabis cause cancer, 2013).
Multiples findings connected cannabis consumption to an increase in concerns of oral hygiene and was recorded by extensive research conducted by Versteeg, Slot, van der Velden and van der Weijden in 2008. Three main discoveries included an increase of plaque/gingivitis, oral cancer, and xerostomia. Cited in research by Versteeg, Slot, van der Velden and van der Weijden in 2008, was a study regulated by Darling and Arendorf (p. 319). Darling and Arendorf’s research concluded that a “significant difference between lesions and conditions in cannabis users and controls occurred with respect to leukoedema, dry mouth, and traumatic ulcer” (p. 318). As explained earlier, xerostomia is dry mouth. Darling and Arendorf’s work showed that dry mouth was caused both by the increased temperature of the cannabis smoke (when consumed similarly to smoking a cigarette) as well as the chemicals burning away and altering the salivary glands of the mouth. Results of abuse of cannabis show that “gingival and periodontal effects, such as a fiery- red gingivitis, leukoplakia on the gingiva, gingival inflammation, gingival hyperplasia and alveolar bone loss have been documented” (p. 317).

Researching any topic takes time and involves a multitude of variables. Thomson et al (2008) performed a case study in 2005 over a group of people age eighteen, twenty-one, twenty-six and thirty. The results of the study showed that 610 of 903 participants reported using marijuana. From those 610 smokers, it was concluded that consumption
doubled from age eighteen to twenty-six, and the dental visits of these smokers decreased during that time. Also, the plaque levels (plaque is the typically soft white buildup of debris on teeth that leads to gingivitis and cavities) were higher in the 610 individuals who smoke compared to the 293 who did not. The overall outcome of this study showed that cannabis increases the risk for periodontal and other oral health diseases (pp. 525 – 531).

People who are pro-marijuana consumption may argue that the positive effects of this drug outweigh the negative. While there are many other carcinogens (cancer causing agents) in the world, cannabis is used to relieve pain brought on by other diseases, such as cancer and cancer treatment itself. Cannabis has mending properties that help aid in refuting cancer-induced pain, emesis (vomiting) and nausea: “cannabis may be used for cancer patients, AIDS patients, and other chronic disease states to produce a sense of euphoria” (Burkhart, n.d.). Various medically approved cannabis products such as Dronabinol (Marinol) and Nabilone (Cesamet) are used to suppress chemotherapy-induced side effects. The main active hallucinogenic chemical in cannabis, Tetrahydrocannabinol, has the anti-emetic (anti-vomiting) properties mentioned above and can increase hunger. These characteristics of THC have given doctors a means to treat not only cancer patients but also those battling eating disorders.
Nevertheless, it should be noted that the cannabis prescription is only recommended after the patient has exhausted other routes of relief.

People who have consumed this drug medically to relieve aches and pains should take only the dose of marijuana prescribed by their doctor. Those who use marijuana for its medicinal purposes should not use it recreationally to help avoid the likelihood of abuse. People who do abuse marijuana have a higher incidence of cancer as their intake is not controlled. One study also found that patients with Multiple Sclerosis who were prescribed cannabis spray, which is a liquid form of cannabis sprayed under the tongue, for the treatment of spasms developed “a stinging sensation and white lesions in the floor of the mouth” (Burkhart, n.d.); all treatments come with their possible side effects, cannabis does too.

For many years, cannabis had not been as widely publicized as tobacco products. As a result, the long-term effects of the drug have not been as widely researched as cigarettes and tobacco products. There are similarities and differences between smoking tobacco (which has been heavily researched) and smoking marijuana. According to Melamede (2005), there are approximately fifty of the same carcinogens found in cannabis that are also in tobacco. As Ditmyer et al (2013) explains, the starting point of possible oral cancer begins with “tobacco and/or marijuana use [which] will often produce stains (greenish-gold in
appearance) and xerostomia, which is associated with an increased risk of dental caries and breath malodor. Consistent marijuana use can create chronic inflammation of the oral epithelium and leukoplakia, increase the risk of periodontal diseases and delay wound healing” (p. 642).

In order to understand the comparison of tobacco and marijuana, researchers must take a step back and understand the differences and effects between the two drugs. According to a study done by Dr. Wu of the University of California, it was found that “compared with smoking tobacco, smoking marijuana was associated with a nearly fivefold greater increment in the blood carboxyhemoglobin level” (Wu, Tashkin, Djahed & Rose, 1988, p. 350). This study was performed with men who had been smoking for the past five years; all fifteen of them had been consuming marijuana and tobacco. With the help of other researchers, Dr. Wu measured the carboxyhemoglobin level (basically the level of carbon monoxide in red blood cells) of each smoker prior to and after smoking both tobacco and marijuana separately, setting the basis for the research. Researchers considered the varied methods of the way the two drugs were ingested; that consideration lead to the observation that there was a “two-thirds larger puff volume, a one-third greater depth of inhalation, and a fourfold longer breath-holding time with marijuana than with tobacco” (Wu et al, 1988, p. 347). The conclusion of the study led
the team to interesting results; the team’s findings stated that smoking marijuana created a higher possibility of breathing problems than tobacco.

With the multitude of carcinogens in cannabis it “has the potential to contribute to the risk of head and neck cancer. Cannabis smoke is qualitatively similar to tobacco smoke, although it contains up to twice the concentration of the carcinogenic polyaromatic hydrocarbons” (Aldington et al, 2008, p. 374). One study performed by Marks et al (2014) researched nine case-control studies of approximately 2,325 cases of oropharyngeal and oral tongue cancer sites. This extensive research concluded that “compared with never marijuana smokers, ever marijuana smokers had an elevated risk of oropharyngeal [adjusted OR (aOR), 1.24; 95% confidence interval (CI): 1.06–1.47] and a reduced risk of oral tongue cancer (aOR, 0.47; 95% CI, 0.29, 0.75)” (Marks et al, 2014, p. 163). OR or aOR means the adjusted odds ratio; this is the relationship between the outcome of an exposure and the absence of that exposure. In other words, it is a way of saying the possible difference in the sets of data. Confidence interval is a focus on the population of the study, the range of which the data will fall into bound between an upper and lower limit. For this data, the population lies within 0.29 and 0.75 at a 95% confidence level (95% is the preferred interval level because it leaves 5% for error). The confidence levels and the adjusted odds ratio help to explain how the researchers
concluded there is an increased risk of oral cancer among the ever marijuana smokers.

While cannabis’ positive effects create pain relief for those suffering from illnesses, marijuana’s negative effect on the oral health of individuals causes many issues that are easily preventable. Avoiding marijuana consumption lessens the chance for dental caries, periodontal disease and oral cancers. Those who abuse the substance often find that their dental hygienist will alter their treatment. As Ditmyer et al (2013) explains “tobacco use negatively affected dental hygiene status with marijuana having the largest negative effect” (p. 642). Dental hygienists often treatment plan more frequent cleanings which include increased oral cancer screenings and head/neck exams and will encourage increased use of fluoride and Xylitol containing products. One more major consequence of cannabis is dry mouth, which has the possibility of developing into cancer as a result of the oral lesions. While medical cannabis can have positive results for patients who have been unable to find relief with other treatments/prescriptions this does not mean the relief marijuana provides gives reprieve from the possible side effects of ingesting the drug. Finally, the carcinogens found in smoking and marijuana use combined with the abuse of these products show increased chances of cancer and other health issues. All of these harmful side effects can be prevented by avoiding
marijuana consumption Overall it “can be concluded that cannabis users [have] a poorer oral health condition” (Versteeg et al, 2008, p. 319), and all of these harmful side effects can be prevented by avoiding marijuana consumption.
References


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Magenta
Kara Pfaff

I am a budding Digital artist who enjoys creating creatures of any origin through my tablet and pen. Having said that, I do not have a lot of experience when it comes to the specific stages a conceptual artist will take in order to help bring to life their own creatures; however, that is why I am in college. To better myself and my digital creatures. This particular creature was originally inspired by a silhouette I created in one of my classes, the picture itself was not part of the original assignment. I still had fun bringing her to life.
Can Intervention Work Universally on Post-Divorce Conflict?
Rui Li

I've taken English and psychology classes at LWtech. This was the work I created for my final paper of English 102. It's an argumentative essay that required persuasive technique, adequate research, and a certain position on a controversial issue. The topic was associated with my personal life. Considerable effort had been devoted to exploring such an issue for months. I've consequently gained a new understanding of cultural differences.

Abstract

In recent years, interventional methods have been very popular in Western cultures for dealing with post-divorce conflict. Research claiming the positive effect of interventions can be seen anywhere. However, virtually all happy beginning-sad ending marital stories have unique structures based on the protagonists' identities: who they are and where they came from. This article argues the limitations of the currently popular interventions through multicultural and technological perspectives. Several solutions are also offered at the end of the paper.

As laws changed to allow no-fault separation, divorces increased dramatically in the United States over the past decades (Wilcox, 2009). After reaching a peak rate in the 1970s of 1 in 2 marriages ending in
divorce, it’s now predicted that 1 in 3 married American couples will eventually divorce (Miller, 2016). Intense conflict arises among these broken families and many children silently struggle with the feeling of loss and insecurity. Time alone won’t heal the wounds.

Facing complex family issues that usually involve emotions, the law has lacked the ability to effectively solve marital problems. In fact, their involvement might intensify the conflict. Many countries like Australia, the UK, and Germany have taken a step-back from overly involving themselves in parental conflicts underlying divorce and instead have required an interventional and educational program to be completed before starting a court process (Atkinson, 2014; Fthenakis, 1999, p.1).

Following the divorce-rate peak in the 1970s, studies and experiments about psychological approaches and their effects on post-divorce conflict have gradually emerged. Various types of interventions including education programs, counselling, and psychotherapies are frequently proposed by courts for high-level disputes. Meanwhile, many peer-reviewed articles have asserted the significant positive effect of interventional approaches on reducing disharmony between ex-spouses and psychological stress on their children. However, interventions might not work universally for easing post-divorce conflict because they typically
don’t take into consideration multicultural circumstances or address the weaknesses of existing methodology.

**Current Situation of Interventions for Divorce**

The common types of current intervention are mediation, counselling, education programs, and psychotherapy. As an initial stage of the intervention that deals with the low-conflict divorce, mediation is required by some countries as an initial step before the court process begins. Based on the principle of voluntariness and agreement of the two conflicting parties, a mediation usually lasts a couple hours with a mediator involved as a third party. Partly in conjunction with this mediation, a parenting education program is also a couple hours of short-term work, which is demanded by family law in some countries. For high-conflict divorces, longer-term interventions like counseling and therapy are better choices. The psychologists Gaulier, Margerum, Price, and Windell discussed the specialties of counseling and therapy in their book *Defusing the High-Conflict Divorce*. “[Counseling and Therapy are] offered by a range of mental health professionals, including family therapists, social workers, psychologists, psychiatrists, and counselors. Such programs are offered on an individual or family basis” (as cited in Divorce Magazine, 2015). This source indicates that both counseling and therapy have become
more scientific and technical in using psychological theories to work on divorce conflicts.

Indeed, all interventions for relationship problems can be characterized as community-based and skill-building. Psychological evaluations and treatments contribute to analyzing minds, behaviors, and personalities. Such a psychological process that develops along the interaction between intervener and participants and deals with psychosocial issue of life should have something to do with cultures. However, almost none of those interventions address the power of culture. Indeed, very few psychology-related studies about the effects of intervention have considered thoroughly and comprehensively the cultural role in forming attitudes and behaviors toward divorces. Some experiments just simply used dozens of samples that are assigned by court and divided them into parallel groups based on only ages and socio-economic status. For example, in one experiment, researchers tested the effect of group therapy for children with “Parental Alienation” (when children unreasonably refuse to contact or respond to un-custodial parents because they strongly ally with custodial parents). Researchers had 70 participants divided into study and control groups, but didn’t mention or examine any cultural background (Toren et al., 2013). Another experiment aimed to study how parenting relationships affect children’s resilience after their parents’ divorce. It involved 240 youth
aged 9–12 years and consisted of 11 sessions of group treatment. The researchers focused on intervention-induced changes in the quality of mother–child relationships. Although the ethnic diversity of the participants was listed, researchers didn’t see this diversity as an influential factor to evaluate; only “age, gender, and time since separation were examined as potential covariates” (Vélez, Wolchik, Tein, & Sandler, 2011). Without a cultural perspective, how did researchers really know what the underlying causes of an individual’s behavior?

**Why Is Culture So Important in the Study of Human Behavior?**

When studying human beings’ traits and seeking to understand why and how a particular behavior occurs, culture is an important clue that cannot be ignored. As human beings, we are conceived naturally, but we are shaped by an epigenetic environment. Epigenetic environments cooperate with genetic roots working on an individual’s temperament, personality, brain activity patterns, and further, thinking and behaviors. This process starts from the moment of implantation in the womb and is a lifelong process of interacting with the outside world. How does that happen? The environment shapes us from the very beginning since we take

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1 The term “epigenetic” defines the influence of the environmental factors, such as what a pregnant woman eats, on an individual’s the genetic expression.
in nutrition through what our mother eats from the first day in utero. The documentary film *Nine Months That Made You*, aired by the Public Broadcasting Service (2016), has presented this profound impact on genetic expression that occurs when certain nutrients from a mother’s diet switch a particular gene on or off during the germinal and embryonic stage (PBS, 2016). The gene expression, to various degrees, determines our inborn personality: easygoing or difficult, open-minded or close-minded. Also, the science author Paul (2011) asserted in her TED talk that an embryo can sense what the outside world looks like, peaceful or disturbing, by feeling the mother’s emotions and reactions to the surrounding, and that can affect the baby’s brain pattern. The diet habit and surroundings are all dependent on the mother’s cultures. This is the evidence that culture can deeply exert an influence on how individuals think and act even from the unconscious and innocent time in the womb.

The postnatal cultural effect is likewise significant. It can result in an individual who is genetically easy-going turning into one who is difficult, or vice versa. Every trait of an individual forms in ways of developing along the ongoing maturational and cultural processes. Making a decision, taking a stand, and interpreting information—all of these are associated with life values that are fostered by the culture in which a person lives. With the understanding of the significance of the environment’s effect on
individuals, it’s important to have a life-span perspective on the study of human beings, which includes multi-contextual and multicultural aspects. The multi-contextual aspect focuses on three levels of surrounding, from inside outward: family, school or work place, and cultural context. The multicultural perspective was discussed by Berger (2014) this way: “It is necessary to study people of many cultures. … Culture is ‘the system of shared beliefs, conventions, norms, behaviors … that persist over time and prescribe social rules of conduct.’ . . . Culture is a powerful social construction . . . [that] affect[s] how people think and act—what they value, ignore, and punish” (p. 11). Without cultures, people cannot figure out who they are, where they come from, and why they are so different.

**Cultural Differences Related to Divorce**

To learn the way different cultures affect divorce, Afifi, a professor at University of California, Santa Barbara (UCSB), and her partners Davis, Denes, and Merrill (2013) conducted research by interviewing 60 Mexican Americans, 19 males and 41 females who were either divorced themselves or experienced divorce as a child. Afifi et al. gathered and analyzed the information from a multicultural dimension that contained the
examinations of social network density,\(^2\) power distance,\(^3\) and familism (p.250). After comparing and combining the data with the previous literatures, they concluded, “in some [collectivist] cultures, extended family might view one’s divorce as ‘our divorce,’ which can affect how divorce manifests” (p. 240). This can be seen in China where a divorce between an adult male and female usually intensifies into an overreacting battle between two families. By providing suggestions and making decisions together, parents and siblings of each divorcing person actively get into the fight over custody and property division. Generally, the more the people involved, the more intense the conflict would be. And it’s not realistic to have the extended family from collectivist cultures taking part in the interventional programs.

Some researchers have noted that elders of collectivist cultures have supreme power on family issues. The authors Tse, Ng, Tonsing, and Ran (2012) reported this phenomenon in their article “Families and Family Therapy in Hong Kong.” This article was published by the *International Review of Psychiatry* in April 2012. The authors wrote, “Chinese culture has

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\(^2\) Social network density reveals how significant the role of social relationship is in contributing to individuals’ lives by describing the degree of interconnectedness that connect individuals with each other.

\(^3\) Power distance is a dimension of cultural differences referring to social functioning pattern. In a high power-distance society, individuals are assigned roles in a hierarchy of power and accept or abide by inequality without consciousness or defiance.
a strong emphasis on filial piety, obedience, respect for elders, and maintaining harmony” (p.119). In a high power-distance and collectivist culture, private information is typically shared within families. People put family or group values above their own and commit to take responsibilities in the power of hierarchy. Professor Afifi and her partners (2013) also made the same assertion when discussing how a collectivist-culture family functions: “senior members may become stakeholders in couple’s marriage and divorce decisions as a way to preserve the family and protect its identity” (p. 250). Most importantly, no matter what kind of intervention type is used, positive outcomes occur only when people are willing to listen to the opposite voice and learn something new. However, elders are more likely to stick to their gun and to reject contrary opinions and new ideas.

Social circumstances can also determine whether or not an interventional method is effective. Social Learning and Sociocultural Theory both reveal significant social influences as people learn behavior through observation, imitation, and social interaction with others, all of which shape the individual’s cognitive and psychosocial development. These theories can explain or predict how and why people change or stay the same over time, in other words, how and why an intervention may or may not work. Let’s look closely at China, which has a thousand-year-old tradition of the elderly relying on their offspring physically and spiritually. In this
tradition, children are consequently treated by their parents as precious personal property. Particularly when the one-child policy was implemented nearly 50 years ago, birth rates decreased. There is a direct link between the elderly having less support from descendants and feeling greater pressure in retirement. Tse et al. (2012) provided a statistical analysis of this reality in today’s society in China: “In 1998 there were more than six working-age adults (15 to 59 years) for every one elderly person (aged 60 and over); by 2040, there will be only two working-age adults for every one elderly person” (p.116). For most Chinese parents, their children are everything—hope, happiness, security, purpose, and a guarantee of a comfortable future. When divorce happens, custody battles are intense and consistent. Instead of considering custody fights as harmful to children’s psychological development, Chinese parents think their fights express care for their beloved kids. Certainly, while encouraged by external social drama and driven by internal personal desires, a behavior cannot be easily changed.

In collectivist cultures, maintaining good family and social relationship is a collective priority. Unlike individualist cultures, collectivist cultures don’t encourage individuals to be unique no matter how right these individuals feel. People tend to modify themselves to fit into groups and thus avoid isolation. Another culture-focused study focused on how cultural differences impact the dominant ethical belief. In China,
researchers Zheng, Gray, Zhu, and Jiang (2014) had 134 Chinese and 47 American psychologists participating in an anonymous survey. They designed 20 scenarios based on the American Psychological Association’s (APA) Ethical Principles of Psychologists, such as “One of your friends knows that you are a graduate student or a psychologist in clinical psychology. She wants you to provide psychotherapy for her uncle. How likely is it that you would accept your friend’s request?” (p.513). Zheng et al. (2014) concluded that Chinese psychologists are more likely to make decisions based on implicit role-related or relation-related norms rather than explicit professional rules (p.518). In such a relation-related society, people have a tendency to prefer keeping good relations in groups rather than abiding by rules. When going through divorce, they are likely to do what their family endorses or encourages no matter if it is right or best for the children. Divorced couple tend to refuse co-parenting at all cost because they want to keep their children under their own control since their ex-spouse is not in their group anymore. In some extreme cases, children are isolated from a nonresidential parent for years.

**Methodological Limitations of Intervention**

Many evaluations and research studies have declared the positive change of intervention in post-divorce family relationships; however, some
methodological limitations and weaknesses of intervention method might make the result uncertain and inconsistent. Psychology studies the human mind and behavior in context. Without a specific and natural context, the mind and the behaviors are not able to be accurately studied. The leading developmental psychologist Urie Bronfenbrenner deeply believed that “people need to be studied in their natural context…he never asked people to come to a scientist’s laboratory for a contrived experiment” (Berger, 2014, p.8). A clinic or a consulting room is a place out of the real world. Similar with people in laboratory experiments, clients who attend group therapy are divided into parallel groups and are placed in a designed program for a particular period of time. In such an ivory-towered context, people might not show their true selves. Small-scale studies that target a few aspects of the adaptation of the participants may not predict how it would work with larger populations.

In addition, the assessments used for participants before and after the intervention are usually conducted through surveys. A survey is a quick and direct way to get information, but results might be unstable since they mostly depend on the wording of questionnaires and the attitude of responders, especially when there are many children in the family therapy. Interventions like counselling and therapy are based on the analysis of cause and effect, so more sensitive measurements may be required for this type of
study. If researchers lack effective measuring tools, they cannot get usefully detailed data to accurately diagnose a condition like the level of conflict. Much research about the effect of a treatment for divorce conflict has just simply drawn a conclusion based on comparing the results between two contrasting groups of participants. One group is given treatment, while another is not. How can a conclusion be reliable if the participants in two contrasting groups cannot be matched at same conflict level in divorce? Can a therapist be able to choose a proper program for their patient if the prediction of the root cause of conflict is has a large margin of error?

An individual’s traits are shaped for decades, while therapy generally lasts a couple of months. Change needs time. How long does it take to change? It depends on change types and individual differences. Researchers Lally, Van Jaarsveld, Potts, and Wardle (2010) from University College of London found out that it takes an average of 66 days, a range from 18 to 254 days, to form a new habit. Starting to do things is much easier than ending things that a person habitually does, especially the things make them feel good. How long will people take to stop doing a thing? Or, to the point, can people be changed by psychotherapy? This is a question with no simple answer, but BBC Science gave a relevant viewpoint: “CBT [cognitive behavioral therapy] may not be for everyone, . . . relies on commitment from the individual, including ‘homework’ between therapy
sessions” (British Broadcasting Corporation, 2013). A range of variables swirl around the effectiveness of prediction. These include the strength of motivation, the consequences of keeping the habit, the existence of an obsessive personality, and self-awareness of one’s problems. Furthermore, long-term results of the effect should be obtained from longitudinal research. Berger believed this kind of research “is particularly useful in tracing development over many years” because the same samples can be followed-up and evaluated in regular intervals over time (p. 27). However, there is rarely any research that provides such a follow-up of results. In the case of post-divorce intervention, the real long-term effect cannot be known.

A serious problem arises when a person doesn’t want to attend interventions at all. In many studies, there are participants quitting or rejecting the treatment for no stated reason. In an experiment conducted by the psychiatrists Toren et al. (2013), the court and the social welfare authorities assigned to their clinic 35 children who had PA (parental alienation) and excluded the standard intervention. However, thirteen children were removed due to the parents’ objections. Often, those who refuse to take part in any intervention are the most high-conflict personalities because they don’t want to compromise at all. The
interventions, especially psychotherapies and mediations are conducted on a voluntary basis. That makes it impossible to reach the high conflict cases. In some ways, the experience of family therapy is emotionally traumatic. It might undermine children’s feelings of safety and security. How much pain depends on what culture a participant comes from. In other words, it depends on how strong the conflict is between the value that he/she holds and the idea that the therapy proposes. According to Piaget’s Cognitive Theory, ongoing effort to reach individuals’ cognitive equilibrium is the process through which cognitive advancement happens. When facing a new experience, people achieve cognitive equilibrium via two ways: assimilation and accommodation. Assimilation refers to a new experience that can be fit into a preexisting category through interpreting it with old ideas. On the other hand, accommodation occurs when people are challenged by a totally different experience to which they cannot adapt. In order to achieve cognitive equilibrium from the disequilibrium that is caused by such a completely new experience, people need to take a longer period of time than with assimilation to re-structure the existing cognitive system to create a new category. Surely, the process of accommodation is more difficult than assimilation. It causes confusion, discrepancy, and dissonance, but also results in greater intellectual advancement since the cognitive system is upgraded and expanded. As a consequence, people learn
something new. What if a new experience is entirely opposite from the beliefs that a person has been holding? This is probably equivalent to denying ones’ life and oneself, which might be miserable and frightening, especially for children. The educator Berger has described the vulnerability of children, stressing that children feel less sense of security than adults do. They are eager for “protective, predictable routines” and vulnerable to feeling guilty (Berger, p.375 & p. 279). This vulnerability can be worse in collectivist cultures. If family therapy makes a child aware of the problems, but their high conflict parents are still obsessive, then the child would likely struggle more between doing the right thing and obeying his or her parents.

Is There a Solution?

Licensed marriage and family therapist Gilbert (2013) once claimed that the essentials of an intervention’s success are self-awareness and enforcement. He stated that “Therapists are trained to help clients become self-aware and authentic. For people who grew up in invalidating environments, where they learned to suppress their feelings and needs in order to be accepted, therapy can be life-altering” (2013). According to Gilbert, a high-conflict divorce usually involves a high-conflict personality, a “narcissist,” whose ex-spouse has been traumatized by his/her “crazy-making behavior”. To solve such a high-conflict divorce, an authority
should step in on parenting decision making and mandatorily require the two parties to partake in an interventional program. If one or both parties refuse intervention, a consequence such as losing custody or the right of making decision for their children should follow.

Moreover, an intervention should be individualized in term of culture. Psychology absorbs more of the essence of Western civilizations. It might not fit if a Western style interventional psychotherapy is applied globally without any modification. This individualization can be achieved by shifting the interventional strategies, transforming the assessment approaches, and changing the communication style between interveners and participants. This can be explained by showing a couple of examples. Culture is not just about who we are, it’s about what we see. How people think of psychotherapies can also be a cultural issue that decides if an intervention works. Psychological science was born in the 19th century, 2000 years after Aristotle raised key question about the human mind. Psychology, which embraces Western values, has never been fully accepted by some collectivist cultures. Chinese people consider seeing a psychiatrist or a psychologist as shameful because they think those are the doctors for a person with a “sick mind.” Therefore, a program or an intervener should be named in accordance to cultural preference, like shifting from “therapy” to “class,” and “psychiatrist” to “teacher.”
In addition, Chinese people generally prefer not to share secrets with a person outside their families and close friends, especially something secret that makes them feel embarrassed. Tse et al. (2012) stated, “Chinese people tend to view the world more dichotomously as ‘insiders’ and ‘outsiders’. Unless people are considered ‘insiders’ of the family, they will not have the privilege of access to the internal world and secrets of the family” (p.119). When meeting Chinese clients, an intervener should act like a friend in order to build trust. And a group therapy that includes many “outsiders” is not generally successful. Also, effective communication style varies from culture to culture. When seeking a source of person’s behavior—let’s say an un-cooperative ex-spouse whose behavior is caused by an authoritative elder—encouraging the person to express the explicit reason might not work because that would show disrespect to his/her elders. Instead, it would be better if the intervener avoids this kind of conversation and tries to encourage clients to do what’s best for their children.

Many divorced people anticipated attending interventions so as to be free from troublesome experiences. I was one of them. But I began to doubt the universal application of interventions when I got to know better about how interventions work and how humans develop through the lifespan. A person’s unique actions and attitudes are a complicated mixture of nature and nurture; genes, experiences, and context all contribute. Just as sickness
fosters a high value on health, our needs that haven’t been met influence our desires for the future. The link between the past and the future, the influence on the continuity, and the change—all are the story of culture. Unfortunately, existing studies have hardly shown the effect of cultural differences on interventions. Culture in some ways is abstract and cannot be properly added as an experimental variable without an accurate measurement and an unremitting effort. However, professionals are obliged to consider the power of culture if they want to discover the truth of human science.

References


from the consequences of divorce: A longitudinal study of the effects of parenting on children's coping processes. *Child Development January*, 82(1), 244-257.
doi:10.1111/j.1467-8624.2010.01553.x


doi:10.1080/10508422.2014.891075
My Longboard
Marie Davis

This is a longboard that I have sanded down and painted free hand. I hope to do more boards in the future and continue practicing.
The Organic-GMO Debate
Miguel Garcia

As a student making an effort to save money, I shop at grocery stores to cook meals at home rather than spending more money at restaurants. At the store, I am all too often faced with the daunting dilemma of whether to purchase organic, non-GMO foods or to opt out for cheaper, non-organic alternatives. I strive to cook more balanced meals at home, and to support businesses that respect the environment and animals, so purchasing organic seems like the logical choice. However, sometimes I feel that the organic label is just a marketing gimmick that provides no additional nutritional or environmental benefit than non-organic counterparts. In this paper, I investigate the debate using credible sources with an abundance of reliable scientific data, and reached a conclusion that I did not expect.

Abstract

In the past decade, production of organic and genetically modified foods has started controversies surrounding their potential benefits and harms. Some argue that organic foods are safer and healthier than non-organic foods, and often the same proponents argue that genetically modified foods are more dangerous than non-genetically modified foods. This paper examines the evidence available regarding the advantages and disadvantages of organic, non-organic, genetically modified, and non-genetically modified foods on the public and on the environment. For organic produce, the evidence suggests some benefit for the consumer over non-organic produce, especially in regards to environmental damage. For
genetically modified foods, there is little evidence to show it is harmful to the public; in reality, GMOs have helped create advancement in nutrition and medicine.

Imagine shopping through the meat section of a grocery store. You have two options: the $5/lb “farm fresh USDA-approved” ground beef or the $10/lb “organic USDA-approved” ground beef. The amount of food is the same, but the price is not. What warrants the higher cost for the organic beef? Is it taste, safety, or health, or is it just another marketing gimmick to trick consumers into spending more? Health experts have long debated whether organic and non- genetically modified foods are better than their conventional counterparts, and recent studies have pointed toward some intriguing and unexpected results.

Is Organic Healthier or Safer?

No other research on this matter has been more comprehensive, debated, or cited as “Are Organic Foods Safer or Healthier Than Conventional Alternatives?”, a Stanford University study (Smith-Sprangler et. al., 2012) published in the September 2012 issue of *Annals of Internal Medicine*. Doctors and physician from Stanford University’s Center for
Health Policy and other notable institutions reviewed hundreds of studies comparing organic and non-organic foods to create an extensive and conclusive meta-research on whether organic foods are safer or healthier than their conventional counterparts. In their research, which received no external funding outside of Stanford, the scientists screened thousands of papers and compiled information from the most relevant and reliable, including 17 studies of populations consuming organic and non-organic diets and 223 studies that compared the nutrients, bacteria, and contaminants of various organic and non-organic foods. The researchers did reach some limitations in terms of long-term studies on the health of people consuming organic and non-organic food. The longest available study involving human subjects used in their research lasted just two years, while the shortest study used lasted two days.

The first component the researchers (Smith-Sprangler et. al., 2012) examined was the vitamin levels of organic and non-organic plant and animal products. The three vitamins examined were ascorbic acid, f3-carotene, and a-tocopherol. To their surprise, “Differences were heterogeneous and not significant”, meaning there was no difference in vitamin levels between organic and non-organic foods (p. 353). The second component the scientists examined was eleven nutrient levels between organic and non-organic fruits, vegetables, and grains. Some of these
nutrients included potassium, calcium, magnesium, iron, protein, and fiber, among others. The researchers found that there was no significant difference in nutrient levels for these foods with the exception of phosphorus, which was significantly higher in organic foods but not considered clinically significant due to the low number of people with phosphorus deficiencies (p. 353). For animal products such as meats and eggs, there was an insufficient number of studies comparing the nutrient levels of organic and non-organic animal products to reach a confident conclusion (p.353). It is important to note that even among non-organic produce, nutrients levels can differ greatly for individual fruits and vegetables among the same produce sample (Aubrey, A., & Charles, D., 2012). This is because cultivating conditions such as the genetic makeup of different seed varieties, the ripeness of the vegetable, or even the weather affects the nutrient levels of fruits and vegetables (Aubrey, A., & Charles, D., 2012, para. 12). The third component the researchers (Smith-Sprangler et. al., 2012) examined was the contaminants of the food including pesticide contamination, bacterial contamination, antibiotic resistance, fungal toxicity, and heavy metals contamination. This findings produced some interesting results that helps make a case for organic foods. Detectable pesticide residues were found in 7% of organic produce samples while pesticide residues were found in 38% of conventional produce
samples (p. 354). In other words, organic produce had a 30% lower risk for contamination of pesticide residue than non-organic fruits and vegetables. Despite the higher pesticide residue for non-organic foods, all studies of foods in the United States – whether organic or non-organic – fell within the allowable safety limits of pesticide residue, known as maximum residue limits (MRL) (p. 354). In the United States, MRL are established by the U.S. Environmental Protection Agency (EPA) and enforced by the U.S. Department of Agriculture (USDA) and the U.S. Food and Drug Administration (FDA) (Environmental Protection Agency [EPA], n.d.). In Europe, three studies (as cited in Smith-Sprangler et. al., 2012, p. 354) showed pesticide residue exceeding the MRL, but the research found the pesticide residue difference between organic and non-organic foods too small to be considered a significant influence on the overall results. For meats, poultry, eggs, and milk, there were no studies measuring the pesticide contamination. Furthermore, two studies of children consuming organic and non-organic diets (as cited in Smith-Sprangler et. al., 2012, p. 350) showed lower levels of pesticide residue in fruits and vegetables and reduced exposure to antibiotic-resistance bacteria in organic chicken and pork compared to their non-organic counterparts. Some argue that there is not enough clinic research to determine whether pesticide residues have an adverse impact on health, but most medical experts, and the United
Nations, agree that overexposure to antibiotics is becoming “the greatest and most urgent global risk” (United Nations, 2016, para. 9). For bacterial contamination, the researchers (Smith-Sprangler et. al., 2012) found that, “Bacterial contamination is common among both organic and conventional animal products; however, differences in the prevalence of bacterial contamination between organic and conventional animal products were statistically insignificant” (p. 355). In addition, there was no significance difference in fungal toxicity and heavy metal contamination for organic and non-organic foods, with the exception of deoxynivalenol – a toxic chemical produced by fungi – which had higher levels and higher risk for contamination in conventional grains (p. 355). At the end of the meta-research, the authors concluded with, “The evidence does not suggest marked health benefits from consuming organic versus conventional foods, although organic produce may reduce exposure to pesticide residues and organic chicken and pork may reduce exposure to antibiotic-resistant bacteria” (p. 359).

Following the results of these studies, critics of the research expressed their disappointment in the researchers’ conclusion. One example is food journalist Mark Bittman (2012, para. 16), who in the opinion pages of the New York Times argued that the research’s parameters and wording of the conclusion was misleading the public. He identifies that the researchers’
definition of “nutritious” consisted of three specific vitamins and eleven specific nutrients, whereas the general public views “nutritious” as something that promotes health and good condition overall. He continues to explain that because the researchers concluded that organic food reduces exposure to pesticides and antibiotics, then organic should therefore be considered more “nutritious” than non-organic foods for reasons other than vitamin and nutrient levels (Bittman, M., 2012, para. 8). As Bittman (2012) points out, a serving of Frosted Flakes cereal contains more nutrient levels than an apple, so are Frosted Flakes healthier (para. 8)? Of course not, and that’s the flaw in their conclusion, he writes. If a person defines nutritious as more than just vitamins and nutrients, then organic foods are healthier than non-organic foods.

For those consuming organic food for environmental reasons, there is science to back up organic as well. According to the Food and Agriculture Organization ([FAO], n.d.), organic farming – compared to conventional – is most beneficial in three areas: soil, water, and biodiversity. For soil, organic farming methods such as crop rotations, organic fertilizers and minimum tillage helps increase soil fauna and flora, improve soil structure, and create more stable systems (FAO, n.d., para. 2). For water, harmful synthetic fertilizers and pesticides used in conventional farming that often contaminate groundwater are replaced with organic fertilizers such as

Is non-GM Healthier or Safer?

Another hotly debated topic that relates directly to organic food is genetically modified (GM) foods, or genetically modified organisms (GMOs) as it is better known to the public.

Although this topic deserves its own paper, there is enough overlap with organic food that it deserves to be addressed in conjunction with the organic debate. The World Health Organization ([WHO], 2014) defines GMOs as that “in which the genetic material (DNA) has been altered in a way that does not occur naturally by mating or natural recombination,” (para. 2). To illustrate the overlap, consider the absence of genetic engineering in organic food. One of the requirement for a food to be considered organic under USDA guidelines is for it to be free of genetically
modified inputs (see fig. 1). For instance, a grass-fed cow that eats from genetically-modified pasture cannot be considered organic. Thus, by choosing organic over non-organic, one is also choosing non-GM over GM. Companies such as Whole Foods Market and Chipotle Mexican Grill have made recent headlines for their limited use of genetically modified ingredients in their products. As it states on its website, “Chipotle is on a never-ending journey to source the highest quality ingredients we can find. Over the years, as we have learned more about GMOs, we’ve decided that using them in our food doesn’t align with that vision,” (Chipotle Mexican Grill, 2015, para. 1).

Figure 1: The official USDA certified organic seal. Once certified, USDA organic products can be exported to countries engaged in organic trade agreements with the U.S., including Canada and the European Union without additional certification. (credit: USDA).

All this caution around GMOs makes it sound like it is harmful, so what does science tell us? Consider a study published in the *Journal of Food*
and Science Technology that outlined specific cases in which GMOs created advancements in science. In this study, authors A.S. Bawa and K.R. Anilakumar (2012) identified genetically modified sweet potato resistant to a virus that would otherwise wiped out the African harvest, rice with increased nutrients and vitamins that helps alleviate malnutrition in Asia, plants designed to withstand more harsh environments, banana that produce human vaccines against diseases like hepatitis B, salmon that can mature more quickly, and plants that produce new plastics with unique properties (p. 1035). The potential for global adoption of GM foods is tremendous, and in combination with better farming techniques and infrastructure, it may also be the solution to end global hunger. This can be seen with the Bill and Melinda Gates Foundation, which funded drought-resistant and disease-resistant GM-crops in Africa that has alleviate malnutrition and poverty in communities (Lopatto, E., 2015). These are just but a few of the countless benefits of genetically modified foods, and the young technology has the potential to do even greater for the world.

Proponents of genetically modified food, similar to proponents of non-organic food, use common argument to make a case against GMOs. First, proponents argue that we do not know the long-term effects of genetic engineering. This is just plain false. GMOs undergo extensive safety inspection and testing prior to reaching the consumer. In the United States,
GM crops are regulated by a number of government bodies. The Food and Drug Agency (FDA), the Environmental Protection Agency (EPA) and the U.S. Department of Agriculture (USDA) are all involved in the regulatory undertaking for GM seed approval (United States Department of Agriculture [USDA], 2016, para. 13). As published in the *Journal of the Royal Society of Medicine* (Key, S., Ma, J. K., & Drake, P. M., 2016), “Foods derived from GM crops have been consumed by hundreds of millions of people across the world for more than 15 years, with no reported ill effects (or legal cases related to human health), despite many of the consumers coming from that most litigious of countries, the USA” (p. 292). If GM crops were harmful, we would have detected the consequences of it by now. Second, proponents argue that pest-resistant and herbicide-resistant crops can trigger the evolution of superbugs and superweeds resistant to the latest pesticides and herbicides. This is a valid concern and deserves recognition. In fact, this has occurred not long ago in Brazil with genetically modified corn that is no longer resistant to tropical bugs, and cases like these are only expected to increase (Stauffer, C., 2014). However, with all technology and biology, it takes innovation and evolution to keep up with change. After all, it is a natural part of evolution for life to develop new resistance to harm. Chemical companies and agriculture companies are continually working together to create better crops to fight against
resistance. Third, proponents of GMOs argue that the cultivation of GM crops degrades the environment more than non-GM crops. One common example often used to support this claim is a study published by Washington State University researcher Chuck Benbrook (2012), who discovered that the use of herbicides in the production of GM cotton, soybeans, and corn has actually increased compared to non-GM crops. This is a valid point against GMOs, but often left out in their arguments are overwhelming more examples of GM crops benefiting the environment. For example, a new strain of GM corn has been designed to be drought-tolerant and thus use less water, a valuable and scarce commodity in many places in the world (Biello, D., 2012). A fourth argument against GM food is whether agriculture companies are able to patent the DNA of crops engineered in their laboratories. This is another debate that deserves careful review, but the U.S. Supreme Court has ruled (Association for Molecular Pathology et al. v. Myriad Genetics et al., 2013) that synthetic DNA, or cDNA, can be patented because it does not occur in a natural manner. Patents incentivizes innovation among competing companies to develop even better GMOs for the world, and like all patents, intellectual property of GM crops expire within a few decades before becoming available to the public. If GM crops were not patent eligible, companies would have few
incentives to spend their revenue on research and development of newer crops.

So, is that organic beef healthier or safer? There are no added vitamins or nutrients in organic food, but the smaller environmental impact and reduced exposure to antibiotics should be enough reason to support organic. If one were to choose genetically modified food, there is also no evidence pointing toward it being harmful to humans, and proven cases have shown GMOs are helping create advancements in nutrition and medicine. If the USDA removed the non-GM restriction from its organic certification guidelines, it would be possible to have genetically modified organic food with reduced contaminants and enhanced nutrition. Until then, almost all medical experts can agree on one thing—Americans need to eat more balanced and healthier meals, whether organic, non-organic, genetically modified, or not genetically modified.

References


http://www.who.int/foodsafety/areas_work/food-technology/faq_ genetically-modified-food/en/
I Am a Lake Washington Lion
Quin Vette

“Gaily Bedight, a gallant knight, in sunshine and in shadow. Had journeyed long, singing a song in search of Eldorado. But he grew old, this knight so bold, and o’er his heart a shadow. Fell as he found, no spot of ground, that looked like Eldorado. [When] his strength, failed him at great length, he met a pilgrim shadow. ‘Shadow,’ said he, ‘where can it be? This land of Eldorado?’ ‘Over the mountains of the moon, down the valley of the shadow, ride boldly ride,’ the shade replied, ‘If you seek for Eldorado’.”

-‘Eldorado’ written by Edgar Allen Poe.
It would be better to live your life only one day as a lion than live one-hundred as a lamb. My name is Thomas Quinlan Vette and I am a Lake Washington lion. I was asked by my instructor to write this article because of my academic achievements, prowess of leadership, and stewardship. Specifically, in regards to teaming up with the Fitness and Veterans programs. I have had the privilege to help encourage, edify, and offer continuity within our Lake Washington family.

If I had to sum up portions of my life, I would say that I have laid my head in many venues, and each day started with a drag from the previous night's cigarette still smoldering in its tray. I've been molded by showing up and by growing up. I've drawn tales from many lives and at times worn masks of many colors that my face grew to fit. All I've ever wanted to be is everything I’ve become because excellence does not require perfection, only persistence.

I've always wanted to live a virtuous balance between the active and the contemplative facets of life. I want to be able to practice leadership so I can stand ready to serve in whatever capacity I'm called to. I like spending time cultivating my mind to become a pillar of good principles. I want to achieve the ability to calculate and navigate life's rivers and oceans like a fearless mariner. I strive to continuously divorce myself from becoming a product of my environment by living my life in excellence, so I can make
my environment a product of me. Never living on virtue alone, but living bravely and proving that faith without action is dead.

While carving my own place in the world, time had passed me by. I began to collect dust, even though I've spent my time trying not to be careless. Time had become my enemy, and its strongest weapon against me was my own complacency. This caused me to evaluate myself and I concluded: stagnation should not eclipse greatness.

At 24, in January of 2013, I found myself building racecar parts and operating a horizontal mill. I had fallen captive to my love of precision machining and the sciences that it encompassed. I knew this rabbit hole had to go deeper than the limited fashion I was involved. I followed the white rabbit, much like Alice did when she was searching through Wonderland. At 26, in March of 2015, I quit my full-time job and became a full-time student at Lake Washington Institute of Technology, working to earn an Associate of Applied Sciences in Machining Technology.

The Machining staff encourages students. They lead by example and have a strong desire to cultivate successful futures for students. They are authorities in their respective fields, who are equipped with a unique combination of experience and knowledge. Two concepts come to mind: (1) The treasure you seek is often held in the cave you fear and, (2) the master has failed more times than the beginner has ever tried. That being
said, instructors use their failures and successes as a torch to help students navigate through this cave. Teachers and staff possess qualities like thinking bigger, working harder, giving generously, laughing louder, and living with purpose and integrity.

The execution of this type of engagement builds the bridges that close the gaps of benightedness. Their embodiment of teamwork bolsters the strength of the students as a whole. Concepts like these being lived out, create an open, inviting, and positive atmosphere for learning. These attitudes kept me at LWTECH because I practice these same qualities in my own life.

I've learned and applied a wide range of machining concepts including print reading, GD&T, speeds and feeds of cutting, the machinability of materials and their characteristics, formulas, techniques for CAD/CAM systems, machine set up, mechanical engineering, and tool geometry. Each of these concepts has become an arrow in my quiver because I've elected to apply myself.

I feel privileged to be recruited for the following special projects: The first project, The LWTech Olympic styled medallions, made for the fitness program, and the second project, the challenge coins, made for the LWTech Center of Excellence for Veteran Student Success.
According to Greek mythology, Heracles (the gate keeper of Olympus, and god of heroes, sports, and athletes) introduced an olive branch to be a prize for the winner at the running of the race to honor Zeus. This branch would be intertwined to form a horse shoe or a circle shape, and was picked from a wild-olive tree at Olympus. By 1896, the International Olympics Committee retroactively assigned gold, silver, and bronze medals to the top three placed athletes in each event of the Olympic games.

The LW Tech machining and fitness program continued the IOC’s example. Olympic-style medals for the Wellness challenge were commissioned. Staff and faculty were charged with various health-awareness challenges, and upon their completion, these medallions were awarded to the top three placed athletes and teams. These medals were made out of aluminum and engraved on either side. One side, the face of a roaring lion’s head between Heracles’s olive-branch-laurel. On the second side, a decorative place number and inscription of the associated program.

In a similar tradition, the challenge coins were made for student veterans. A challenge coin is a significant symbol in militaries of many cultures and is traced to early civilizations. Even though its exact origins are unknown, it is widely accepted that a soldier would be rewarded with a challenge coin because of his exceptional acts of valor. This coin would be
minted with a mark of the legion from which he came. With its various uses, from identification to drinking games amongst comrades, a challenge coin is mostly associated with an individual's achievements in battle.

In keeping with that same tradition, the LWTech Center of Excellence for Veteran Student Success had challenge coins commissioned for its student veterans. Its purpose is to be awarded to students upon graduation from their respective programs. These coins were made out of brass. Engraved on one side, the mask of a lion sits inside a pentagon and surrounded by stripes. On the second side, the current year, and I chose the phrase, "We lead in order to serve, not in order to rule" translated in Latin. It is a principal that can be used as a plug-and-play formula for many of life's circumstances, should we choose to engage it.

Regarding these special projects, I was the spearhead from their inception to their completion. My duties included the design of the engraving and its work holding, troubleshooting, programming, and its production. I also served as a liaison between administrators of each of the three programs.

My prize for all this hard work? Is my future. My place in my future? Earned and celebrated by my Lake Washington family. Completing this program has made me fearsome to any competition. I can now apply
the combination of computer and manufacturing knowledge in an ever growing industry.

I have never wanted to go through life mentally checked out like a zombie. Zombies will never learn the majestic facets of anything or anyone. I do not want to live timidly, never understanding that the only place fear can exist is in the mind. Those who live like zombies, will find that there is no prosthetic for an amputated spirit. Many will realize that their opportunities have eclipsed them because they allowed themselves to become a tapestry sewn with regret, fear, or carelessness.

It would be better to live your life only one day as a lion than live one-hundred as a lamb. Today, I choose to live like a Lake Washington Lion.

I would like to give thanks to the friends and family who have helped support me not only through these special projects, but with my time at school. Thank you to Brad Vette, Brett Totten, Joel Gustafson and family, Kevin and Andrea Bates, Paul and Diane Miller and family, Mike Autrey and family, Gordon Gillihan and family, the William Birdlebough family, the staff under the authority of Mike Clifton, my fellow classmates, to all the students, teachers, and administrators that I have come to know and grow with, and to all my friends who’ve supported my goals and accomplishments. Thank you.
Lustmord
Gunther Akers

Hi, I'm Gunther. I draw. I go to school here and I love it. I go home and I eat oatmeal and prunes. I'm 17.
Dream Job
Niloufar Mirhashemi

I am a 25-year-old Iranian woman from Tehran, the capital of Iran. This is the first time that I have studied in another country. In Iran, I earned a Bachelor’s degree in Computer Engineering. I decided to study in the United States because of its high educational level. Before I start my academic classes at LWTech, I need to study more English, so I am currently in the IEP program. I wrote this paragraph for a writing class assignment. I look forward to taking classes in LWTech’s computer game design program.

For having an interesting job with work-time fun, I would like to be a computer game designer, and for being good at this job, you should have three characteristics. First, you should be a fan and player of computer games. When you are a gamer, it helps. If you understand a lot of games, by playing them, you learn a lot of things about a good or bad game. Second, you must be fluent in using computers and programming, because you need to write correct codes for your game. In addition, you need knowledge about Photoshop for making interesting and exciting scenes. Finally, you should be inventive and have a creative mind to be able to make new games with novel scenes. Also, you can figure out what is better for your game, for example, how many levels it should have, and how you can use the interests of youth for improving the game until all young people like it, and what is the best ending that can surprise players. In brief, for being a good computer game designer, you need to have three
skills: be a fan of computer games, be fluent in using computers, and have a creative mind.