Occasions Online

A collection of prize-winning works by students of the Program for Writing and Rhetoric

Program for Writing & Rhetoric
UNIVERSITY OF COLORADO **BOULDER**

Occasions 2021-22

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I left my interview with renowned Colorado beekeeper Tim Brod pleasantly surprised by his hysterical, yet powerful eloquence. "Keeping bees alive today. . . It's easier to take care of your aging parents who have Alzheimer's and an autoimmune [disease]. . . Much easier. And if you think going by once a week to your parents' house, providing them milk and cookies, and filling up their pills is helpful, then you're at best yourself myopic," remarked the white-haired, honey-scented beekeeper who would later become my good friend. As the owner of Highland Honey, Tim spends most of his Saturdays at the Farmers Market in Boulder, Colorado selling honey and educating the public about pollinators. I was fortunate enough to land a summer job working for him, where his infectious personality was more than enough to wake me up at 7am on Saturdays. In all of my Farmers Market mornings, I shared my own beekeeping knowledge and Tim's wisdom answering more or less the same questions: What in the world is going on with pollinators, and what's the best way to help?

Fall 2021 - Tim Brod harvesting honey in his Longmont, CO shop.

1. The Origin of "Save the Bees"

Beekeepers are experiencing an uncomfortable amount of beehive demise. I know this firsthand because (note: for your sake, I have refrained from using "beecause") of my many sad days as a beekeeper discovering the death of a hive. I've kept bees for nine years, and experience doesn't make it any less emotional. In any average year prior to 2006, beekeepers lost about 10 percent of their hives over the winter. From 2006-2011, annual losses spiked to a stunning 33 percent (Weeks). Since then, annual losses have been consistently at or above 30 percent. In 2006, the unfamiliar cause for hive loss was given the name "Colony Collapse Disorder" (CCD) because of the character for colonies to collapse entirely instead of dying off slowly. With reports of some beekeepers losing up to 90 percent of their hives in a year, scientists and the media buzzed into action (Jones and Sweeney-Lynch 77).

The search for the cause of CCD went everywhere from cell towers to sunspots. The popular explanation that many scientists still investigate has to do with a class of insecticides called neonicotinoids. In a 2017 study, scientists found that neonicotinoids increased worker bee mortality and were also associated with declines in social immunity and queen health. In addition, the researchers found that toxicity of certain neonicotinoids doubles when bees encounter a common fungicide in addition to the insecticide (Tsvetkov et al.). The problem with bees in relation to pesticides is that a worker bee's physiology is built mostly for pollen and nectar intake. In order to reproduce, plants need bees to have easy access to these substances. As an evolutionary result, bees have very few defense mechanisms to keep unwanted chemicals out of their system when foraging (Hanson 192). Some scientists have considered that neonicotinoids have an impact on pollinator health, but others question the legitimacy of studies involving neonicotinoids and bees.

In a 2018 journal article in *Current Biology* written by Chris Bass and Linda Field, the researchers note "the impact of neonicotinoids on bee health in the field has been much more difficult to determine [than expected] as well-controlled field experiments are much more challenging and expensive to perform. Of the field studies performed to date, some have reported adverse effects on bee fitness, while others have found no discernible impact." They explain that it's much harder to control variables in a honeybee experiment than lots of other experiments. There's no easy way to limit where the bees go, as a worker bee can fly six miles or more from the hive to forage. Even then, studies that have somewhat managed to control forage present mixed results that are often contradicting. Most scientists today agree with Bass and Field — bees cannot be controlled well enough to nail down neonicotinoids as a specific cause for anything, and there must be other factors at play.

Oddly enough, in the height of CCD research, hives stopped showing large amounts of CCD. No clear cause was ever revealed, and conservation biologist Thor Hanson explains, "After more than a decade and hundreds of peer-reviewed research papers, the phenomenon is still best described as a disorder—no clear 'smoking gun' has emerged as the driving factor" (187). Today, beekeepers still lose over 30 percent of their hives annually, likely due to a combination of what beekeepers call the "four Ps": parasites, poor nutrition, pesticides, and pathogens. These factors are a result of the extensive research that was done in the height of the CCD scare. Even with the decline in CCD cases, there is still a significant problem with bee decline.

Losing a third of all beehives every year, regardless of why, is a cause for extreme concern. It is often said that we have bees to thank for about one third of our crops. However, this disregards the fact that many plants used to feed animals require pollination to produce seeds. Without seeds to grow food for animals, animal crops will be on the decline as well. Our diet and natural landscape without bees would be bland, colorless, and much lower in nutrition. In order to understand the picture even better, let's briefly take a look at the state of modern beekeeping.

2. Beekeeping: A Family Activity

Summer 2021 - My parents at our hives using a bee brush, a standard beekeeping tool.

Throughout the past millennium, general beekeeping methods have changed very little. The majority of beekeepers keep their bees in wooden boxes, with about ten frames for honeycomb on the inside. Some improvements have been made to beekeeping equipment, but most tools are the same as they were 100 years ago; the only thing that has changed drastically is the difficulty of keeping bees alive. Or, that was the case, until Australian beekeepers Cedar and Stu Anderson launched an Indiegogo crowdfunding campaign in February 2015.

The Flow Hive was the fastest product to reach $2 million on Indiegogo, the most successful Indiegogo campaign ever launched, and the most successful crowdfunding campaign ever launched outside the United States. The Flow Hive is a beehive that costs about $630 (compared to about $150 for a conventional beehive), and it aims to make honey harvesting easier on the bees and the beekeeper. Its frames of honeycomb are designed so that the comb is opened from the inside, allowing the honey to flow out of the cells via gravity. This, in theory, harms fewer bees and is much easier on the beekeeper than the traditional honey harvesting process, which involves taking out each frame, removing all bees, and basically centrifuging the honey out of the cells. Today, there are more than 75,000 of these hives around the world ("About Us").

At first glance, this is a great invention. It reduces harm to bees, makes honey extraction easier, and it's gotten a lot of people excited about beekeeping. The last point is where the beauty of this product stalls — it's inspired a lot of people to dive headfirst into a honey fountain of unforeseeable complexities — it's sticky, and not as sweet as you might think.

The Flow Hive isn't the only thing inspiring a wave of new beekeepers. Beepods, another beehive company, preaches "Beekeeping has been proven to be great for your mental health. Working with bees is calming and the amount of time spent outside is a great way to get some Vitamin D" (Cull). Like many other modern-day agricultural practices, beekeeping has been marketed as a way to improve health. Websites like these fail to mention the hundreds of hours of practice that beekeeping requires before it starts to make sense. Personally, I went to classes, made beekeeping friends, read books, and (honey)combed through countless YouTube videos on my beginner beekeeping journey. It's also worth mentioning that getting stung too many times and becoming afraid of your beehives, which is not uncommon, isn't exactly great for mental health.

There's a sickening feeling that washes over my sweaty, mesh-shadowed face when I look through my beehive and can't find any eggs. This is a sign that there's no queen, which is incredibly detrimental to a hive considering that she lays up to 1,500 eggs each day in the summer (Jones and Sweeney-Lynch 99). The unfortunate reality is that while the queen's health is my main priority in a hive inspection, it's easy to have no idea what's really going on in a beehive. Seeing thousands of bees and plenty of honey is far from an indication of a healthy hive, and it takes many hours of reading and practice to understand that. However, bees aren't doing well, so isn't it a good thing that so many people are interested in keeping them? Aren't products like the Flow Hive a net benefit to the pollinator world, even if a lot of people don't know what they are getting themselves into?

Spring 2020 - Look closely, can you spot the bee eggs?

3. Forget Driver's License; How about a Beekeeping License?

There's one thing that Tim Brod would say in his deep, buzzing voice at least once every Farmers Market weekend that always left me puzzled in thought. Customers would ask him how he recommends they should start beekeeping, and he would reply with something only he would say like "First of all, you need to tell me if a chicken has lips or not. Second of all, I don't think you should get bees. Take a class and read, then ask me." I still don't know whether a chicken has lips (Tim is famous for asking this wacky question way too often), but I certainly know his perspective on the increasing popularity of beekeeping. His point stems from many years of experience teaching beekeeping classes and selling beehives. Of all people to discourage beekeeping, you wouldn't think it would be him.

"There's a constellation of reasons as to why bees are crashing and dying everywhere, and it is not because we don't have enough well-intentioned, naive people who may think that having bees is helpful," remarked Tim, with a hint of resentment, later in our interview. The simple problem that Tim, and many other beekeepers, have with beekeeping is that too many people are killing bees—and not just theirs—rather than keeping them. Whether it's treating for *Varroa destructor*, the particularly destructive (as the name suggests) principal parasite affecting bees, or simply feeding bees in times of low nectar flow, novice beekeepers often underestimate the required attentiveness of beekeeping.

It doesn't stop at novice beekeepers killing their own hives. A journal article by Eleanor Anderson explores the state of "saving the bees" in our current geologic era, and she explains, "many beekeepers are trying to pioneer innovative approaches, experimenting with what is variously called 'treatment-free,' 'apicentric,' or 'natural' beekeeping." Beekeepers who use treatments out of necessity to combat pathogens and parasites argue that this method of beekeeping is essentially letting bees suffer. It's similar to the vaccine situation in human society: taking the more "treatment-free" anti-vaccination approach in raising children puts them at risk for pathogens that could easily be prevented. In turn, the unvaccinated children put others at risk. This parallels the beekeeping world, where hobbyist beekeepers can afford to lose a few hives and move on, maybe even lose interest if they deem bees to be too complex. Commercial beekeepers, however, suffer greatly from disease that is running rampant in hives that are kept by unknowing, "alternative" beekeepers. Anderson sounds just like current COVID-19 vaccine advocates when she writes, "So, at worst, the new beekeepers look well-meaning, but also clueless and even dangerous as they ignore a hard-won scientific consensus about what the main honey bee health problems are."

People can have children, pets, and grow all sorts of dangerous things without a license, so I'm not going to argue that a license should be required to keep bees. However, I will agree with Tim Brod, that I don't think people should get bees. Instead, they should go take a long class, read a book, then read it backwards (okay, not really, but read another one), and then go talk to a beekeeper. Better yet, shadow a beekeeper before getting bees, and see if you can imagine yourself keeping as calm as them while about 5,000 stinging insects create a tornado around your head. If the reasoning behind becoming a beekeeper is to help pollinators, there are at least a hundred other ways to do that that involve less time, less money, and fewer days in a hot cotton suit in 100+ degree weather.

4. Native Bees and Other Pollinators

"Most of the population shouldn't be keeping bees, but they should be doing things to promote native bees and to promote habitat," advised Tim Brod in our interview. $15.99 on Amazon (or a similar sum at your local garden store, which I recommend) will buy a native bee habitat that can house somewhere around 20-30 native bees. If you have a drill, a $2.99 block of wood from Home Depot will do the trick. A native bee habitat is essentially a piece of wood with a bunch of holes in it, where native bees will lay their eggs and nest throughout the season. Native bees are vital to the pollinator economy, because they often pollinate crops that honey bees cannot pollinate due to their size and physiology. Instead of getting a honey bee hive, those interested in helping pollinators should learn about native bees and their fascinating life cycles. "High densities of honey bee colonies increase competition between native pollinators for forage, putting even more pressure on the wild species that are already in decline," writes Allison McAfee for *Scientific American*. McAfee argues that becoming a honey beekeeper can actually impact native bees in a negative way by creating competition for forage.

Fall 2021 - Hunt's bumble bee (a native bee) on a sunflower in Boulder, CO.

$12.99 on Amazon will buy you a red hummingbird feeder, and with a little bit of sugar water, you can have my favorite bird visiting your backyard and providing pollination services daily. They're incredibly fun to watch, and even more fun for the environment. According to the Audubon Society, about 8,000 plants in North and South America are reliant on hummingbirds for pollination ("Hummingbird Pollination Practice"). Their long beak allows them to reach places that some insects cannot. Additionally, if you're into photography like I am, hummingbirds are fantastic subjects. To keep bees, you need to learn how to make sugar water to feed them when flowers are scarce, which accounts for maybe 1% of the learning you need to do. To help hummingbirds, learning how to make sugar water is essentially 100% of the learning you need to do.

Spring 2019 - Black-chinned hummingbird in my backyard, a rare species in Colorado.

$5.99 on Amazon (or free if you walk outside on a fall day in the right area) will buy you milkweed seeds, which is the host plant for the monarch butterfly. With beautiful pink blossoms and very low water requirements, there's no reason not to have this plant in your front lawn. Monarch butterflies will lay their eggs on milkweed, feed on the nectar from the flowers, and their caterpillars will feast on the leafy greens when they hatch. In fact, while you're at it, there are a few other things you should plant to help all pollinators with very low cost and a beautiful benefit.

5. Bee The Change

In addition to native pollinator tips, here's how you can actively help the pollinator problem.

1. Put on your garden pants and fill the world with plants.

If we left all our dandelions to grow and go crazy, wouldn't the sea of yellow be a neon welcome amongst an often-drab landscape? If you want to help bees, hummingbirds, bats, beetles, and even the value of your home, plant some flowers and let flowering "weeds" grow! Visit pollinator.org/guides and enter your zip code to receive a planting guide, complete with colors, water requirements, sun requirements, and more, that is specific to your area.

2. Reduce pesticide use, it's dangerous juice.

Pesticides and herbicides aren't necessary for your backyard. If you must get rid of plants, pull them yourself or help the economy by hiring someone to do it for you. If you're getting rid of pests, try natural methods such as diatomaceous earth. My mom and I used to go out to our kale plants and pluck moth caterpillars off of them one by one and relocate them. It helped, and we avoided using pesticides. It was pretty fun, too. While studies concerning pesticides and herbicides and pollinators are a mixed bag, there is enough evidence to suggest that pesticides and herbicides play some role in pollinator decline, even if it's not the only factor.

3. Whaddaya know, water is rare, yo!

Pollinators need water just like you and I do. We use frisbees — place a frisbee full of water outside on a hot day. Put some rocks in the water so that if insects fall into the water, they can easily get out. Bees, for example, work extremely hard to keep their hive at optimal temperature and humidity for honey production, so they use a lot of water in their cooling and humidifying processes.

4. Use your money, buy some honey (and have a conversation with a local beekeeper).

Visit a beekeeper like Tim Brod at a Farmers Market or craft fair. If you can't tell by the number of times I've quoted Tim, beekeepers have a wealth of information and they're usually really happy to talk about bees. It gets pretty lonely talking to creatures that only buzz back all day, so us beekeepers will jump at the opportunity to chat! In all seriousness, buy some honey while you're there, too. Beekeepers work hard and their products have a great number of benefits more than just a sweet treat. Supporting beekeepers directly supports those who look after pollinators in the best way.

5. Read, then do a good deed!

Read papers like this one that you're just about done with, novels like Thor Hanson's *Buzz*, or even pick up a copy of a beekeeping book. Although I've discouraged beekeeping, I was a beginner once and with enough education and practice, beekeeping can be educational, rewarding, and just plain fun. Don't get me wrong, it's an incredible amount of work and I still haven't figured out how to stop from overheating in my bee suit.

One of my favorite pictures of myself, which I'll put below, shows a somewhat false calm and happy side of beekeeping. The truth to this image is that this was an early-spring hive, and most young hives like this are docile and problem-free. This hive quickly turned into a complicated pandemonium. Don't let companies like Flow Hive or Beepods fool you: beekeeping is not a simple or immediately rewarding task. The amount of knowledge and experience that beekeeping demands is far beyond what most people imagine, something I know because beekeeping has been one of the steepest learning curves I've ever come across. Uneducated beekeeping can be more detrimental than helpful to the pollinator world, and we must rethink the way we go about helping pollinators. In a world buzzing with environmental tragedies, keeping bees and other pollinators alive is something everyone can do without becoming a beekeeper.

Spring 2021 - These bees did not take any interest in my floral shirt.

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KATIE J. FAY

STEM Education Reform: Early Childhood Education Can Decrease Disparities in Education

1st-Year Long-Form 2nd Place

In the last 20 years, policy makers and educational institutions have been increasingly pushing STEM oriented material into classrooms in an attempt to improve America's competitiveness with other countries. Unfortunately, most of these policies have seen only relative success, and predominantly only for rich, white students. Lower income and minority students have faced gaps in their success in STEM (both in school and in work) due to this divide. While the United States educational system has inherent design flaws that can't be overcome by simple reforms, restructuring how the early childhood education system is designed can help disenfranchised students (minorities, low-income) decrease the gap in STEM participation and achievement.

Before examining methods that can be used to improve STEM education for disadvantaged students, it's important to understand the unique challenges facing them. One such challenge that many students living in high poverty or disadvantaged areas face is higher rates of student mobility. High student mobility (defined as students changing schools through a year) can have devastating impacts on student's ability to learn. David Kerbow, a researcher affiliated with the University of Chicago, published a study in the Journal of Education for Students Placed At Risk, in 1996 that explains that for low income students whose parents move jobs often or whose housing may not be stable, the amount of times they change schools can have an exponential impact on the amount of information they miss out on. Kerbow also explained that highly mobile areas, such as urban Chicago, also face the unique challenge of high rates of student mobility affecting the school system itself. Here, schools often become trapped in a "generic" education system that is mostly "review-oriented" because the class "composition is likely to change in the next month" (Kerbow, 1996). This means that because schools can't tell what information each of its students has already learned, schools are forced to cover a broad sphere of information on each subject in an attempt to level the playing field of its students.

Low-income students also face disparities in High school programs designed to help them prepare for STEM college programs. Education researchers Weis et al. (2015) noted that the main reasons that these programs often fail is because the students don't have the foundational STEM knowledge that their richer, white counterparts typically have to participate successfully in the harder math and sciences classes. While richer, whiter students are able to take harder classes and explore the STEM world with greater ease, disadvantaged students are often stuck in (and failing) lower-level science and math classes. These programs in low-income areas, in a misguided effort to continue student advancement within the program, often are required to make the classes easier or remove the course completely, which inhibits students from learning the necessary material to prepare and succeed in college programs. A popular criticism often cited for lower-income and minority students' lack of ability to perform is often credited to newer teachers being disproportionately placed in lower-income neighborhoods. This criticism ignores research that has shown that "low-income students have equal or nearly equal access to effective teachers" that more privileged students also have (Isenberg et al, 2021). This means that while lower-income districts may be receiving newer teachers, they are just as effective as teachers in higher-income districts. Instead, the main reasons for this lack of preparedness is due to additional educational disparities that allow more privileged students to advance at a faster pace than disadvantaged students. Typical examples of this phenomenon is that lower-income students' don't receive additional educational opportunities such as pre-kindergarten classes, effective tutoring, or other educational summer programs. The effects of this disparity can be felt as early as elementary school, and can have lasting impacts far past high school.

While the following sections of this paper attempt to point to some reforms that can ease the burden of education loss for disenfranchised students, it's important to note that no reform offers the complete erasure of the issues facing these students. While these reforms may give students a chance to succeed relative to our current system, it must be understood that school's budget inequalities, inequalities to accessible technologies, updated books, and tutors, as well as less known issues such as food deserts, can not be out-reformed. The only true way the United States educational system can guarantee full equality and reach its true potential to compete with other nations is to initiate a full structural change that addresses the issues above and more.

Compiled research has found that reforming the early childhood education system allows for the burdens of the United States educational system flaws to be relatively relieved. The most important of these reforms is the expansion of Pre-kindergarten classes. Research by Welsh et al. (2010), published in the Journal of Educational Psychology, noted that attendance in pre-kindergarten classes increased students' ability to perform better in math and literacy classes, as well as improved students' working memory and attention control. This is especially important because improved cognitive abilities also "improved the retrieval of information from long-term memory and … focused manipulation of key information for problem solving and learning" (Welsh et al., 2010). This means that pre-kindergarten classes would give students an ability to learn how to learn and how to remember before stepping into the public education system. The inherent benefits of pre-kindergarten classes don't end there. Pre-kindergarten classes are also associated with "growth in literacy skills" and promote "social-emotional learning" (Welsh et al., 2010). Both of which are skills that help decrease disparities between low-income and middle-income students academically. Another study found that there were "modest effects" on students (particularly boys and low-income students) who participated in pre-kindergarten classes as far as middle school (Anderson, Phillips, 2017). Since more privileged students tend to enter kindergarten with a higher literacy rate and better cognitive functions, pre-kindergarten is a necessity to fight the disparities between low-income and more privileged students before they can begin.

Restructuring the elementary school daily calendar to include more breaks is also important to improving student achievement in STEM. According to researchers (Godwin et al., 2016) published in the journal of Learning and Instructing, "student inattentiveness…. [is] the biggest factor in loss of instructional time." Student inattentiveness can account for "10 to 50 percent" of instructional time loss due to off-task distractions (Godwin et al., 2016). In short, instructors are losing precious time because the system isn't designed to accommodate younger children who don't have the attention span of the adults who designed it. One simple method to help reduce this problem is to offer more breaks to elementary students. Students given 10 or 20 minutes breaks throughout the day were shown to have math scores that were "statistically greater than after sedentary conditions," especially for those with "lower IQs" and girls (Howie et al., 2015). This would especially benefit students and teachers alike as attention "declines mid-day" (Godwin et al., 2016). This doesn't just have scientific backing, but real world application as well. According to global educational researchers at organizations such as NCEE, Finland is one of the top-rated countries globally for education. One reason credited for their success is their educational policy of "15 minutes break for every 45 minutes of instruction" (Walker, 2014).

Another fundamental to reforming STEM education is to train teachers on how to incorporate project-based, hands-on lessons into the curriculum. Weld et al. (2015), Researchers in Tennessee who partnered with local policymakers to improve the state's STEM education, found that free local festivals that were held for the general public and students interested in STEM, help improve student participation and excitement to learn the material in about 9 out of 10 students that participated - a significant statistic as the sample size was nearly 16,000 students. Another study, a dissertation for the University of Massachusetts written by researcher Honadrdoost (2001), found similar effects were found when sixth grade students were brought to a local high school and participated in hand-on building and experimenting. These studies prove that if the school curriculum can learn to integrate hands-on STEM activities into their everyday curriculum, active student participation and interest increases. These programs also have the added benefit of encouraging both analytical and creative thinking - learned skills that can be transferred over to other educational disciplines - and are incredibly useful in the STEM field. If this curriculum is to become the national standard, teachers will need their districts or state governors to support them by investing in effective STEM oriented training. Teachers who completed one summer training session said that interdisciplinary and project-based curriculum was an "essential….teaching strategy," and most agreed that "more training" for teachers was essential to success in the classroom (Honadrdoost, 2001). If the United States wants to compete with other nations globally, it's necessary that teachers be able to communicate complex ideas in easy-to-understand ways.

The United States educational system is fundamentally flawed in ways that no simple reform can fix. Fortunately, by changing the early childhood education system specifically, policymakers can hope to reduce burdens of inequalities for disadvantaged students. Reforming the early childhood education system is the most effective way to stop education disparities before they begin. These reforms and restructures should focus around the expansion of pre-kindergarten classes, allowing for breaks for younger students in elementary school, and investing in project-based teacher training to keep students engaged in the classroom. Policymakers interested in genuine education reform should also eventually look into food desert deduction policies, textbook and technology upkeep,, as well as funding, and general curriculum reform - all of which are desperately needed. The United States education system, while lagging at the national level, can utilize these basic reforms outlines to attempt to finally bring the school system into the twenty-first century and compete with other nations.

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RONAN MURPHY

A Disaster for Democracy

1st-Year Long-Form 3rd Place

In 2012, in response to the impending re-election of President Barack Obama, former president Donald Trump tweeted "The Electoral College is a disaster for a democracy." Trump's comments were puzzling given that Obama also received more individual votes than his opponent. Moreover, Trump's comments reek of hypocrisy. Only four years later, Trump himself would fiercely defend his electoral victory in a presidential election wherein his opponent received more individual votes; claiming the "Electoral College is actually genius (Washington Post 2016)." Hypocrisy aside, Trump was unequivocally correct. The electoral college system is a disaster; an outdated institutional relic that produces no clear benefits relative to direct election of the president. Indeed, more amendments have been proposed concerning the electoral college than any other section of the Constitution (Hardaway, et al 2008). The electoral college disproportionately represents the desires of Americans in less populous states while ignoring others entirely. Consequently, I propose the U.S. amend the Constitution to allow for direct election of the president via the popular vote. Simply put, a system wherein the candidate preferred by a minority of the electorate may still prevail against an opposing candidate favored by a greater number of voters is inherently flawed. Furthermore, the electoral college stands in direct opposition to the foundational principle of democratic government: popular consensus.

Before examining its validity, I figure it's necessary to provide an explanation as to how the electoral college operates. The college was originally conceived as a mechanism for electing the Executive almost 240 years ago at what is now popularly known as the "Constitutional Convention" in 1787. Under the electoral college, the citizens of each state do not vote for the President, but instead vote for a slate of electors chosen by their preferred candidate's party. Each state is apportioned a number of electors equivalent to their number of congressional representatives. Despite not being a recognized state, the District of Columbia is afforded three votes for electoral purposes. There are 538 votes total, and a majority of 270 is needed to win the presidency. The candidate who receives the most votes in each state is awarded their number of electoral votes. In all but two states (Maine and Nebraska), the apportionment of electoral votes is absolute, and one candidate receives the entirety of that state's votes. Once the votes have been counted, electors meet in their respective states and cast their votes. After the chosen electors' votes are cast in each state, they're sealed and sent to the Capitol, where they're subsequently certified by the Senate. If a candidate receives the requisite 270 electoral votes, they become president. Otherwise, the election is decided jointly by the House of Representatives and the Senate, who choose the President and Vice President respectively (Archives.Gov).

Ideally, the method of electing our president ought to reflect the democratic ideals that the United States espouses. Fundamentally however, the electoral college is an undemocratic institution. Democracy is defined by Merriam-Webster as "a system of government by the whole population or all the eligible members of a state." Or similarly, "control of an organization or group by the majority of its members." By definition, a democratic system is one wherein leaders are chosen by a majority of the electorate through popular consensus. Indeed, renowned political theorist Robert Dahl argued that in a democracy "every member must have an equal and effective opportunity to vote, and all votes must be counted as equal." However, under the electoral college votes are decidedly unequal; and it's possible for the candidate who wins the "popular vote" to lose the election regardless. Not only is such an outcome theoretically possible, it has happened multiple times throughout American History.

In the 2000 Election between George H.W. Bush and Albert Gore, as well as the 2016 election between Donald Trump and Hillary Clinton, the presidential candidate who received the most individual votes, has differed from the candidate who ultimately occupied the White House. Unsettlingly, that means in two of the previous six presidential elections, the broad consensus of the people was disregarded in the most literal sense. Consequently, the electoral college system as it exists today cannot possibly be considered democratic. If there is any doubt as to the truth of this claim, skeptics ought to consider a single question: if the electoral college is truly a democratic institution, how are we to account for the outcome of the 2016 Election? Hillary Clinton received almost 3 million more votes than Donald Trump. Despite this substantial margin, Clinton ultimately lost said election. How, then, are we to perceive such a significant discrepancy as anything other than the widespread disenfranchisement of a significant portion of the electorate? As a direct result of the college approximately three million individuals had their voice in the process effectively silenced. While their votes had been recorded, in reality they held no influence over the election's outcome. Certainly, the implication that a system that disregards the collective desires of millions of eligible voters can nevertheless be described as democratic is irrational.

This issue of disproportionate representation amongst various states has been a fiercely debated issue for centuries. At the first Federal Convention in 1787, James Wilson, a legal scholar who was a fierce advocate of election via direct popular vote, challenged the assumption that protection of individual state interests ought to be the paramount consideration concerning the election of the Executive: "Can we forget for whom we are forming a government? Is it for men, or for the imaginary beings called States?" Wilson was not the only constitutional framer to question the nature of the electoral college. Former president James Madison declared that "the present rule of voting for President is so great a departure from the Republican principle of numerical equality… that an amendment of the Constitution on this point is justly called for by all its considerate and best friends."

Proponents of the electoral college often justify its undemocratic characteristics on the basis that the system serves a vital role by safeguarding the interests of smaller, less populated states relative to those of their larger counterparts. What they fail to acknowledge, however, is the way in which the contemporary system de-emphasizes the interests of minority groups within individual states. Indeed, nearly every state has enacted legislation that mandates the apportionment of all of their electoral votes to whichever candidate receives the most votes; irrespective of the vote distribution within the state. Otherwise known as 'first-past-the-post voting," this method of apportioning a state's electoral votes treats the desires of the majority, no matter how narrow, as absolute. Simply put, for electoral purposes, a candidate who wins their election by a mere one hundred votes is afforded the same electoral power as a candidate who wins by one million votes. Obviously, the potential for such systems to stifle civic participation is apparent.

To illustrate, consider a hypothetical future election in which Texas is experiencing a tightly contested election between opposing democratic and republican candidates. Ultimately, the republican receives 52% of the votes cast, while the democrat receives 48%. According to the current apportionment laws put in place by the state, the entirety of Texas' 38 electoral votes would be cast in favor of the republican who received 52% of the vote. Allocating electoral votes in such fashion begs the question: what is to be said of the 48% of Texan voters whose preferences were cast aside concerning their state's ultimate expression concerning who ought to be president? Rather than acting as a safeguard for the interests of the minority, the apportionment methods associated with the college instead deprived almost half of Texas' electorate of any representation within their state's chosen slate of electors.

Unfortunately, such situations are not purely hypothetical. In the 2000 election, the outcome of the tightly contested election between Albert Gore and George Bush was dependent on the results in the state of Florida. Ultimately, Bush won Florida, and the entirety of its 25 electoral votes, by a mere 537 votes; less than one percent of the total votes cast in the state. The slim, highly contentious victory propelled Bush to the necessary 270 electoral votes to win the presidency, despite receiving less individual votes nationally than Gore.

Contrary to the claims of its supporters, the electoral college doesn't actually reflect an ideal balancing of various interests. Paradoxically, the college in its current form manages to simultaneously disadvantage minority interests within individual states while also devaluing the majority interest nationally. By abolishing the electoral college in favor of a national popular vote, we can ensure that the political influence of minority groups is neither arbitrarily restricted nor exaggerated.

Certainly, the college undeniably prioritizes the voices of some Americans over others; principally on the basis of geographic location. According to an analysis by the Washington Post following the 2016 election, a vote from a resident of Wyoming, the least populous state, is electorally proportional to the votes of 3.6 Californians, the most populous state. While this is an extreme example, the Post's analysis further demonstrates that "if you average the 10 most populous states and compare the power of their residents' votes to those of the 10 least populous states, you get a ratio of 1 to 2.5." Certainly, even the most ardent defender of states rights would struggle to justify such a significant incongruity between the voting power of citizens in different states. More startling than the discrepancy between states, is the absence of any semblance of electoral representation for the approximately five million Americans living in permanent overseas territories such as Puerto Rico and Guam. While this is hardly surprising since the college was designed prior to the incorporation of said territories, it illustrates clearly why it is severely outdated as a method of choosing the president.

Unfortunately, not only does the College serve to marginalize citizens in larger states, but it also originally served as a practical mechanism to implement the infamous three-fifths compromise that codified the inferior status of slaves in the United States. While some attendees, particularly those hailing from free states, supported the notion of popular election; representatives from slave-owning states did not. While the populations of the northern and southern states were roughly equivalent, a third of the southern population was comprised of slaves (Codrington 2020). Under a popular vote system, slave-owning states would thus be at an inherent disadvantage; an unacceptable outcome in their eyes. A letter by James Madison describes the use of electors as necessary to account for the tens of thousands of perpetually disenfranchised slaves: "There was one difficulty however of a serious nature attending an immediate choice by the people. The right of suffrage was much more diffusive in the Northern than the Southern States; and the latter could have no influence in the election on the score of the Negroes. The substitution of electors obviated this difficulty and seemed on the whole to be liable to fewest objections."

While slavery in the United States has (thankfully) been abolished, the electoral college continues to adversely impact black voters; particularly in the South. Although 87% of black voters identify as democratic (Pew Research), analysis by Wilfred Codrington, a fellow at the Brennan Center, demonstrates that "five of the six states whose populations are 25 percent or more black or more have been reliably red in recent presidential elections. Three of those states haven't voted for a democrat in over four decades." Indefensibly, the electoral college perpetuates the same malicious racial disadvantages engineered explicitly to ensure that black voters' influence in presidential elections would be exercised solely by whites. Until the United States abolishes the electoral college, the desires of minority voters will continue to be overwhelmed and subsequently marginalized by the desires of white voters within their state.

Not only does the structure of the college itself systematically disenfranchise voters, the practice of apportioning electoral votes to states based upon congressional representation presents a dire mathematical conundrum. Throughout its history, the United States has apportioned congressional representation to states based upon the census, taken every ten years. However, since there are presidential elections held every four years, inevitably, the distribution of electoral votes will fail to accurately reflect the true population distribution for at least one, if not multiple elections. George Edwards describes this phenomenon: "When a presidential election falls in the same year as a census, the apportionment of a full decade earlier governs the allocation of electoral votes. Because of this process, the apportionment of electoral votes ALWAYS overrepresents some states and underrepresents others (Edwards 2019)." Regardless of one's opinions regarding the validity of the electoral college, few would argue that we ought to be utilizing perpetually outdated data to determine the relative power of each state.

Beyond its tendency to misrepresent the populations of the various states proportionally, apportionment of electoral votes via the census inevitably fails to recognize substantial numbers of Americans in the apportionment process whatsoever. Consider the most recent census, taken in 2020, that indicates that the U.S. population grew 7.4 percent between 2010 and 2020 (Washington Post 2021). Troublingly, this means that the electoral votes in the 2012, 2016 and particularly the 2020 presidential elections were apportioned using incorrect population data. Put another way, the United States elected three different presidents using data that was at best two years out-of-date. The difference between the 2010 and 2020 censuses is more than 22.7 million individuals. Those are 22.7 million Americans who were not represented in their state's apportioned sum of electoral votes; a gross violation of democratic principles. Furthermore, the increase of 7.4% between 2010 and 2020 is the lowest since 1930-1940. The problems inherent in the current apportionment system further demonstrate that drastic underrepresentation in the electoral college is the standard, not the exception.

Beyond the disproportionate representation afforded to small states through the electoral college, its supporters also claim that the electoral votes guaranteed to each state further protect the interests of small states by precluding candidates from focusing their campaign efforts solely on the most populous states at the expense of the more sparsely populated regions of the nation. By ensuring that all states have some individual influence in the election, supporters argue the college forces candidates to devote attention to all states regardless of their population (Edwards 2019). However, analysis of presidential candidates' campaign visits indicates that the college does little to incentivize candidates to broaden their travel. Regrettably, it appears to do the opposite, allowing candidates to ignore the states they are expected to win while focusing almost entirely on tightly contested battleground states. The college not only fails to ensure nationwide campaigning, the winner-take-all method of apportioning votes to candidates actively discourages it. Consider that in the 2016 election, Donald Trump made campaign visits to only 19 states. Similarly, Hilary Clinton campaigned in a mere 13 states. Trump and Clinton further concentrated their travel in battleground states: 95% of their campaign appearances between July 19th and November 7th took place in fourteen battleground states. Furthermore, neither candidate visited any of the seven smallest states—-those with three electoral votes (Ch. 6 Edwards 2019). Contrary to claims that the electoral college promotes diverse campaign efforts, it actually provides a mathematical justification for candidates to devote their resources to the handful of states whose outcomes are in question.

Unquestionably, the electoral college in its current form utterly fails to accurately reflect the desires of the American people. It is patently undemocratic; and indicates in no uncertain terms to the residents of larger states that the desires of some Americans are less important than others. Indeed, the desires of those in overseas territories don't seem to matter at all. Despite the boldly-asserted claims of its supporters, it does little to safeguard the interests of smaller states. On the contrary, the historical neglect of smaller states by prospective presidential candidates indicates that it may do the opposite. Moreover, the electoral college continues to disenfranchise minority voters, (as it was intended to). Finally, the college misrepresents the true population distribution nationwide by apportioning votes to states using perpetually outdated data.

With this in mind, I maintain that the U.S. ought to amend the constitution to elect the president through a popular vote. By doing so, the United States will ensure that the votes of each citizen are weighted equally regardless of where they live. While the preservation of individual states' interests is surely an important consideration within American politics, there is little evidence that the electoral college succeeds in doing so. However, even if it did, the election of the president ought to encompass the desires of the entire populace, not just those in a handful of "battleground" states. After all, there is only one president. One individual who represents all Americans regardless of the state they're from. Certainly, all Americans ought to have an equal voice in determining who that representative ought to be.

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ISOBEL FEIGES
The Insulin Crisis in America
1st-Year Short-Form 1st Place

(Editors note: this essay contained photos that have been omitted from print)

America is struggling with insulin prices. This is one woman's take on how it has affected her.

I first met Eleanor Chalstrom whe n we were 14 in band class after she moved to my hometown of Sioux City, Iowa. We bonded over skiing and other outdoorsy activities that most people in our town did not do and quickly became best friends. At the time Eleanor was struggling with juvenile rheumatoid arthritis and asthma. Up until junior year of high school her health problems were present and annoying but did not affect her lifestyle greatly.

The summer going into our senior year of high school, Eleanor noticed changes in her wellness. She was tired all of the time, drinking an excessive amount of fluids, and could barely get herself out of bed. Her mother noticed these changes and immediately took her to the doctor. At first the doctor thought it could be mono or possibly leukemia, but after a couple blood tests the doctor noticed her blood sugar was dangerously high. Her blood sugar was over 300 when the normal range should be around 140. Because of this, she was quickly put in a medical helicopter and airlifted to the children's hospital in Omaha, Nebraska.

Eleanor was diagnosed with type 1 diabetes and had to stay in the hospital for 3 days. While there she had to learn all of the different ways that her lifestyle would change. It would no longer be eating whatever whenever, exercising would be difficult, and having to keep her immune system healthy as it would no longer be functioning the same. Not to mention constant finger pricks and injections. From that moment forward, Eleanor knew her life, and her bank account, would never be the same.

Why Do Diabetics Need Insulin?

Insulin is the main treatment option for diabetes. According to Michael Dansinger, a nationally recognized expert in dietary and lifestyle coaching for weight loss and disease prevention, when insulin is injected into the body, it will lower blood sugar levels, letting it enter into cells instead of hanging out in the bloodstream. Diabetics usually have to inject insulin before every meal or snack that they eat. If they do not, their insulin levels will skyrocket which can lead to ketoacidosis—what Eleanor experienced when she first was diagnosed. Ketoacidosis is when the body starts breaking down fats too fast, the liver processes the fats into ketones, and ketones cause blood to become too acidic. If left untreated, ketoacidosis will cause death.

Eleanor has a type of insulin pump called a Novolog. Before every meal, she has to bolus her insulin. She also gets little douses of it throughout the day. During her interview, Eleanor made it a very strong point that she needs insulin to survive. Her welfare is completely dependent upon it. This is true of anyone with type 1 diabetes.

Why Is America in an Insulin Crisis?

Anyone with type 1 diabetes or who knows someone with type 1 knows that insulin in the United States is outrageously expensive. In a study composed by Tara O'Neill Hayes who is the director of human welfare policy at the American Action Forum, she found that diabetes cost the United States $327 billion in 2017. This made diabetes the most expensive chronic illness in the country. According to her study, insulin was 6.3 percent of those costs. Before rebates, insulin added up to 20 percent—or $48 billion—of the total price. In the same study, O'Neill Hayes also states that the driving up of prices is due to new and improved insulins on the market. The most common used insulin's today are rapid-acting and long-acting insulin. Eleanor uses a long-acting insulin. Because these types of insulin are more advanced and better acting, they cost more to make.

In a study led by Jing Luo, an assistant professor of medicine at the University of Pittsburgh and board-certified internist, he states that another cause for the steadily increasing price of insulin is the fact that there are only three major companies that make the drug: Eli Lilly, Sanofi Aventis, and Novo Nordisk. Consider how many painkiller brands there are. Advil, Motrin, Aleve, any convenient store brand, and many more. Now consider how most bottles are under $10 for over 100 pills. This is because there is so much competition for this type of drug, unlike insulin. With only three major companies producing the drug for around 3 million adult Americans, it's no surprise that prices are so high.

Unlike other countries, the United States does not offer generic insulins to patients. A generic drug is an off-brand version of a drug. Going back to the painkiller comparison: one can find a usually cheaper Target brand painkiller versus spending more on name-brand Advil. That is an example of a generic drug. With insulin though, it can only be purchased from the three major brands mentioned earlier. According to DiabetesMine, a team of writers on diabetes under the Healthline website, a reason for this is the U.S. patent system. The big pharmaceutical companies will consistently change little things about their insulin in order to change the patent. This makes it almost impossible for smaller drug companies to produce insulin as they cannot keep up with all of the changing patents.

While generic insulin might seem like the hero that could save the day and make diabetes patients rejoice, it is not just because the big drug companies want to stay in power. Insulin costs a lot to copy. This is because insulin is a biologic. A biologic is a category of medicines that contain complex molecules that are made from material that comes from living things. This causes other drug companies to steer clear as it costs almost as much to produce a new drug as it does to find a way to copy insulin.

How Insulin Prices Have Affected Eleanor's Life

Eleanor has to refill her insulin prescription every 1-2 months. Luckily for her, insurance covers a good chunk of the cost taking it down to $70. Without insurance she would be paying $200 per vial. Eleanor is much luckier than others. A lot of American type 1 diabetics have to pay full price and more for their insulin.

When I asked Eleanor if she had ever had to choose between purchasing something she wants or pay for insulin her answer surprised me. Her answer was not an item, but instead a big life choice. She told me that she had to go to college in-state because if she had not her tuition bills would have been too expensive which would then cause her to not be able to afford her insulin. Ever since I first met Eleanor, she had big dreams of going to an out-of-state college. These dreams had to be put aside so that she can, essentially, survive.

After all is said and done, Eleanor and many other type 1 diabetics around America have had the insulin crisis affect them personally. A person's life should not be put on the line because they cannot afford the medicine that is needed to keep them alive. As of right now, the insulin crisis' end is nowhere near the end, but hopefully in the next couple of years things will start to look up and prices will go down.

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SUMMER GOODMAN

Bad Girls

1st-Year Short-Form 2nd Place

Marcus High School, located in Flower Mound, Texas has received backlash on its local news networks several times. Once over a movement to expel a student over a racist photograph and once because a student brought a gun to school. The only time the school made national news however, was over a controversial video they made regarding their dress code that both offended and outraged the female student body and their parents, along with female high school students across the country.

The video in question was shown to the student body on the second day of classes in the 2018-2019 school year, made with the intention of educating students about the school's policy on dress code but "missed the mark," according to the school's principal, Will Skelton. The video opened with a shot of two female students walking down one of the school's staircases, while the song "Bad Girls" by M.I.A. played in the background. They are quickly joined by six other students, all girls, five of whom, like the first two girls, happened to be wearing shorts. They all come together in a triangle formation with their hands on their hips, while the camera pans across their bare legs. They are then quickly stopped by a teacher and sent to a classroom with a "dress code violators" sign on the door. The next notable, and most controversial shot in the video is of a teacher standing at the front of the classroom in front of a whiteboard with the phrase "I will not wear athletic shorts" written on it several times. The teacher then hits the whiteboard with a yardstick as she leads the classroom full of only girls in a chant repeating that phrase.

By the start of the next school day, there were angry emails from parents directed at the principal, numerous complaints from students, and intense backlash on social media over the video. By the next night, there were news segments and dramatically increased negative social media attention on the school. One student specifically had a lot to do with that social media outrage.

Cat Moring, a senior at Marcus High School, posted the video the school released onto her Twitter account, where to date it has been viewed nearly 300,000 times. The text above the video reads: "Today my school was shown this video. So sad how ONLY girls are shown as the violators. I understand why my school has a dress code, but what about boys who wear shorts, or show their shoulders? It's 2018. . .Why are we still over-sexualizing teen girls?"

She instantly received support from both fellow students and strangers. Nearly all the comments left under her post were praising her for speaking up against the offensive video and the presence of sexism in high school dress codes. Cat said she's had girls retweet her post from not just her own school, but girls from local schools, schools across the state, and even some from schools across the country. The reach of her post wasn't just limited to girls still in school, but women of all ages reached out to her to share their support. She believes the widespread reach of her post was due to "the overall implications that a dress code can have on women and nothing about [her] school in particular," "it's not [my school] that's the problem," she puts it. Moring believes that on a greater scale than just high school, the video sheds light on a double standard in how society treats men and women.

Many people in her local community, like Moring, felt the need to speak out against what they deemed the blatant sexism shown in the video. As the video continued to spread on social media, parents began to voice their own concerns over the video. In a segment by WFAA, one outraged mother in the community likened the video to "a public service announcement from like the 50s saying, you know, "be a good girl."

The negative response to the video Marcus High School released wasn't just because of the offensive nature of the video, but the controversy surrounding the policy itself. A team led by Velma Lapoint, a professor in the Education department at Howard University found that "girls specifically have rules barring them from wearing clothing deemed as immodest in as early elementary school." A growing number of people are beginning to see this as concerning, believing that by forbidding young girls from showing too much skin and requiring them to cover their bodies they are being sexualized. That was the main criticism Moring and other students at the school held for what they felt was over-sexualization of such a basic and seemingly unproblematic article of clothing. Another student vocal about the video's inappropriateness, Nicole Howell, points out the hypocrisy of the video in an interview with WFAA, saying "They were [showing the girls in the video] at the same time saying that shorts were too sexual to be worn at school."

According to Attillah Brookshire of Walden University, "approximately half of the public schools in the United States require uniforms or a formal dress policy." The general goal of these dress codes, as Amy Argetsinger of *The Washington Post* describes it, is "to improve discipline and academic performance by setting basic standards for physical appearance." It has been a widely held belief in the United States amongst school boards and district faculties that having students follow a dress code creates a less distracting learning environment, though there has been growing opposition to that stance. Students and parents across the country have started to raise issues with many dress code policies, namely the disparity of influence it has on girls as opposed to boys.

Leading many other students and parents, Cat Moring stood up for what she believed in, spoke up, and was heard by women across the country. Moring shared her beliefs and objections on her small platform on Twitter and was shocked by the number of responses she received. The support and praise she received for speaking out on the issue made Moring realize "[the] problem with dress code is not my high school. It exists in schools across the nation." Moring was a part of an important conversation that she trusts will bring about change. She believes that soon "the world [will catch] up with the idea that women's bodies aren't something that are just overtly sexual," and that starting a dialog is the first step in accomplishing that.

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REECE BRADFORM

Stop Calling it Pop Punk, Just Call it Punk

1st-Year Short-Form 3rd Place

Prefatory remark: this will be an op-ed article. Through this article I would like to speak to "punk purists" about why pop punk should be considered punk rock.

Recently I had the chance to sit down with Michael Barnett, a practicing rock musician of over 40 years and a professor of rock music at the University of Colorado. We discussed many different concepts about the history of punk rock and its fusion with the pop genre. He explained to me his opinion on the concept of "selling out" a common phrase used to describe pop punk artists. And to end our discussion I asked him, "Is there any way that punk purists could ever accept pop punk music as punk rock?" He responded with an answer that surprised me. He said, "To start, I'd stop labelling the music as 'pop-punk' but instead just call it punk rock."

Ever since its creation the meaning of punk has been heavily debated amongst the punk rock community. Patti Smith, a pioneer in the punk rock scene stated her definition in 2010, "Punk is free space, free from profitability." A user on reddit with the username Parkercannonball labeled punk as, "not caring about people's bad opinions about you. For example, if your songs are super simple, you sing terrible live, your drummer is off beat a lot or your records have an absolutely horrible production-quality and people know it and they call you out for it, but you still play your shows and make your records, that is what punk is all about to me." In my words, punk rock is about rebellion towards the older generation, making loud music that puts the previous generation on edge.

I've always believed pop punk fit the criteria for being punk, the pop sound never took out the punk in the music for me. The first time I was challenged for my views surrounding the pop punk genre was from my dad. My dad grew up in the '70s and '80s and is a big punk rock fan. He told me that pop punk singers all have the same whiney voice as each other and the music is extremely repetitive. In his opinion, the lyrics are too juvenile to be considered punk rock. These are common criticisms that 'punk purists' make towards pop punk which always infuriates me. The reason being is that punk rock has always been repetitive, and the lyrics have always lacked creativity. Take Black Flag's "Rise Above" for example, a staple song that all punk rockers know. The song continuously repeats the words, "Rise above! We're gonna rise above!" and then throws in phrases like, "We are tired of your abuse, try to stop us, it's no use." I'm not saying these lyrics are bad I'm just saying, how are these lyrics any more complicated than a pop punk song? What's the difference between the lyrics in Rise Above versus the lyrics in Green Day's American Idiot? The two opening lines to American Idiot are "Don't wanna be an American Idiot! Don't want a nation under the new media." Both songs have very similar lyrics with similar meanings. They both are representative of the youth being fed up with the American government, a common cliché in punk rock music. The only difference is that one is labeled as pop punk and the other is labeled punk rock.

Pop punkers don't care about the critics who are constantly telling them that their music isn't punk rock enough. You'd need to look no further than the famous pop punk band Good Charlotte for proof of this. In the song, "The Young and The Hopeless" the Madden brothers write, "These critics and these trust fund kids try to tell me what punk is but when I see them on the street, they got nothing to say. It's me against this world and I don't care, I don't care." In a Youtube video by Nate The Mate, a youtuber with 61,000 subscribers who documents alternative rock, he says that punk rockers have the common understanding that it's critical to be as "punk rock" as you can be. Pop punkers, however, could care less about being labeled 'posers' or 'pop stars' and that is one of the most punk rock things that an artist can do.

The irony of punk is that it must be one of the most uptight and judgmental communities for a genre that prides itself on having no rules. The same punk rockers who made punk rock to create a counterculture to traditional rock music that the previous generation loved are now criticizing the younger generation for their music. The 'punk purists' have turned into exactly what they were rebelling against.

With the introduction of the Vans Warped Tour in the early 2000's, a pop punk music festival sponsored by the large corporation Vans, many 'punk purists' labeled pop punk bands as sellouts for being backed by corporations. The reason that pop punk band's affiliation with corporations enrage punk purists so much is because the foundations of punk was built on anti-capitalism rhetoric. Punk was popular in the early '70s in Great

Britain because large corporations were hoarding the money and there was a high poverty rate and a lack of jobs in the country. As a result, the youth had a lot of free time and decided to make punk rock to rebel against these corporations.

Times change, however. I asked Barnett, “Do you think pop punk bands aligning with corporations takes the punk out of the music?” He responded with a confident “no.” Barnett said, “It’s almost impossible to live your life nowadays without being corporate. You buy a cup of coffee from Starbucks, you’re corporate, you buy a package from Amazon you’re corporate. It’s simply a part of our lives and it doesn’t make you any less punk.” Being corporate backed can also benefit the fans as well. Good Charlotte defended themselves for having their tour sponsored by a large corporation by saying, “They’re going to get a good show, full sets and with the corporate support we’re able to keep the tickets around $15 cheaper.” In my opinion, overcharging your own fans for a concert is about the least ‘punk’ thing you can do. If keeping the tickets cheaper requires you to sign a deal with a corporation then I say 100 percent sign the deal.

Signing large record deals and being corporate backed isn’t just about making the music more accessible to the greater public either. Making money off music is an extremely difficult feat, especially in the modern streaming era. If a band was to make 20% of the royalties, a generous amount, then they’d still only be making $47.6 dollars per 100,000 streams. This is not nearly enough money to make a living off. Being corporate backed in today’s music industry is practically essential to make a proper living and in no way is making enough money to put food on the table selling out or any less punk rock. Kurt Cobain put it perfectly, “I don’t blame the average seventeen-year-old punk-rock kid for calling me a sellout. I understand that. And maybe when they grow up a little they’ll realize there’s more things to life than living out your rock & roll identity so righteously.” Criticizing a pop punk band for being corporate backed isn’t punk rock of you, it’s simply immature.

Don’t get me wrong, I love the classic punk rock bands. They are the pioneers of the punk scene, without them, all the pop punk bands that we know today would never have existed. The problem however is the fans of great bands like the Sex Pistols or The Clash refuse to accept pop punk into the same community. By refusing to accept new bands into the punk community, these ‘punk purists’ are killing their own genre. Without pop being merged with punk than punk rock would’ve faded into obscurity in the ‘80s. Pop essentially saved punk rock and nowadays hip hop is saving pop punk.

Since the early 2010’s pop punk has declined in popularity. Bands like Green Day, Weezer, Fall Out Boy and My Chemical Romance used to top the charts. Nowadays, the top charts mostly consist of hip-hop artists. Recently however, many rappers have been incorporating elements of pop punk into their recent releases. Many of these releases have topped the charts and it’s the first time we’ve seen pop punk hit the mainstream for a decade.

People need to realize that the fusion of genres is unavoidable. The general public doesn’t want to listen to hardcore punk rock music for the rest of time. Bands need to add new sounds to their music in order to stay relevant in the music industry. The most important skill in being a musician is adapting to the modern trends. This is exactly what pop punk bands did, they adapted to the modern trends and at the same time kept the original essence of punk rock going. To me that’s admirable and ‘punk purists’ should be thanking these pop punk bands for keeping the genre alive. If you’re a punk rock fan and you refuse to listen to pop punk that’s fine with me. Continue listening to the Sex Pistols for the rest of your life, just don’t tell me that pop punk isn’t punk.

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MATIAS CAPLI

The Flip Side: International-Student Bias

Multilingual 1st Place

After spending almost two years outside of the United States due to the Covid pandemic, I had forgotten many things about my experience as a student in a different country. During my senior year, I moved back to the US and into a new house where I met one of my closest friends here in Colorado. This roommate, who is originally from Long Island, is a history major at CU Boulder and has plenty of knowledge about many countries and cultures around the world, so he and I always enjoyed discussing and sharing knowledge about different places and times. On a night out, I mentioned to him how I had always been surprised about the size of food servings in the United States. I had traveled around many countries and never saw such a big amount of food for a single person anywhere else. And I had always assumed, without ever giving it a second thought, that this was just simply because people in the US liked bigger portions. I had always lived with the stereotype that American culture, in general, was about having everything be bigger. Or put more bluntly, I lived with the stereotype that Americans are simply fat. But, when I discussed this with my new friend, he mentioned that the reason behind this was that serving sizes are bigger in the US because it is expected that any leftovers would be taken home. I was completely shocked. Not only because I had never thought of that, but also because I had always considered myself to be quite open-minded and non-judgmental. But there I found myself making assumptions about other people without even questioning them, and thus, the motivation for writing this essay arises.

This paper will focus on implicit bias and the consequences it has on both our mindsets and our approaches to new cultures, particularly the implicit biases of international students towards US culture. The first part of this essay will focus on defining the terms “Implicit,” “Bias,” and “Implicit Bias” and why it is important to discuss it and understand it. The second will show the connection between science and personal examples of implicit bias like the one described above. And to conclude, the final part will describe ways in which awareness of these biases can be developed in order to create better and more understanding relationships with people from different places around the world.

Literature Review

The main area of study on this essay is implicit bias, its psychological background, and how to overcome it. Specifically, addressing the issue of the implicit cultural biases of international students towards US students and US culture in general. Although this paper will be focused on an assessment of my personal experience with the topic, there are articles and studies on which I will base the research in order to support my analysis. The three sources on which I will focus are: “How to think about implicit bias” by Keith Payne, Laura Niemi, John M. Doris, “Six Lessons for a Cogent Science of Implicit Bias and Its Criticism” by Bertram Gawronski, and “Implicit Bias: Scientific Foundations,” published by the *California Law Review*.

The first article focuses mainly on addressing why implicit bias is relevant, especially in our days. According to Payne, Niemi, and Doris, stereotypes that arise due to implicit bias are not inherently a bad thing, but rather a mechanism for the brain to process new information, as well as adapting to new environments. They then proceed to discuss different tests used to measure implicit bias, and how relevant it is to understand the consequences of it in our day and age (Payne, Niemi, and Doris, 2018).

The second source, a research paper by Gawronski, discusses six lessons that psychologists have studied about our perception of implicit bias. According to Gawronski (2019), the lessons are the following:

(a) There is no evidence that people are unaware of the mental contents underlying their implicit biases.

(b) Conceptual correspondence is essential for interpretations of dissociations between implicit and explicit bias.

(c) There is no basis to expect strong unconditional relations between implicit bias and behavior.

(d) Implicit bias is less (not more) stable over time than explicit bias.

(e) Context matters fundamentally for the outcomes obtained with implicit-bias measures.

(f) Implicit measurement scores do not provide process-pure reflections of bias.

The third source, a journal article written by Greenwald and Kiege (2006) describes the scientific background of Implicit Bias, its roots on Freudian theory and the Unconscious, its impacts on discrimination law, and how the notion that all of our biases are conscious is incorrect.

What is meant by "Implicit," "Bias," and "Implicit Bias"?

In order to make a more compelling argument about the impact that implicit bias has on the process of establishing and maintaining relationships with other people (international students and American students, in this case), a few key concepts must be defined first.

The idea of the Unconscious and how it influences human behavior has roots in Freudian theory. Although Freud's theories never had empirical results to support them, during the past few decades, scientists have shifted focus back to the field of non-conscious behavior (Greenwald and Kieger, 2006). The definition of "implicit" could be better understood by first looking at the definition of "explicit." According to Greenwald and Kieger:

> *"A belief is explicit if it is consciously endorsed. An intention to act is conscious if the actor is aware of taking an action for a particular reason"* (Greenwald and Kieger, 2006).

Thus, "implicit" can be defined as: An act, intention to act, or belief that is not consciously endorsed and that the actor is unaware of a specific reason for it. In terms of the definition of "Bias," Greenwald and Kieger define it as follows:

> *"The term 'Bias', sometimes referred to as 'Response Bias', denotes a displacement of people's responses along a continuum of possible judgments"* (Greenwald and Kieger, 2006).

Put in a simpler way, Bias can be understood as an inclination towards a particular response among a variety of possible options. And although bias can have both positive and negative consequences for individuals, groups, studies, etc. The definition of bias that will be used in this essay focuses on the negative, or at the very least limiting, interpretations of bias.

Thus, the definition of Implicit Bias that will be used in this paper can be summarized as follows: A non-conscious belief from an actor (which lacks awareness of a specific reason for that belief) that predetermines a range of limited options for possible responses to a certain situation.

Why is Understanding Implicit Bias Important?

Having a deeper understanding as to what is referred to by implicit bias in this paper, the relevance of understanding and discussing implicit bias must be brought forth. Issues about implicit bias have become more prevalent in the past few decades, as society gives more attention to social injustice, discrimination, and other similar problems that might (or surely do) have roots in implicit bias.

Often, people believe that they are aware of all possible biases they might have. But, as described by Payne, Niemi, and Doris:

> *"One reason why people […] are skeptical of implicit bias might be pretty simple: it isn't nice to think that we aren't very nice. […] many of us are more biased than we realize. And that is an important cause of injustice—whether you know it or not."* (Payne, Niemi, and Doris, 2018)

Something that might be even more troubling than a lack of awareness of personal biases is a lack of knowledge about the true origin of implicit biases. Whenever a stereotype comes to mind regarding a certain individual, group, or culture, this displays a natural process of the brain. A process that involves generalizing, noticing patterns, and make decisions based on these assumptions (Payne, Niemi, and Doris, 2018). This is a process that has helped humans survive and evolve in the wild. Homo Sapiens might not have been able to thrive if they did not assume that other species might be dangerous. Thus, implicit bias is merely a tool that brains developed over time, but that can still (and usually do) have negative consequences in modern societies. Moreover, here lies the importance of being aware and discussing the possible consequences of implicit biases.

My Experience with Implicit Bias

As an international student, it is very natural to adopt the role of the "stranger" when coming to the US for the first time. This could be said about any person moving into a different place with a different culture. As creatures of habit, people make assumptions about their surroundings in order to adapt more easily to their new environment. These assumptions are created based on a variety of different feelings and emotions that the person might be experiencing during this transition. As discussed above, this is exactly how implicit biases are formed. These assumptions are not only exclusive to the person entering a new environment but also are created by the people who currently live in it. This creates tension between people from both sides and severely influences the relationships one might be able to establish, especially if either side fails to become aware of the assumptions they are making before truly understanding the other person.

Personally, I have faced many instances when my implicit biases had taken over my actions without me having any sort of notion about their existence. Even after spending more than three years sharing with Americans and American culture, I still found myself making various assumptions that had narrowed my scope of perception in terms of what types of relationships I perceived I would be able to develop during my time as a student.

There are two different types of assumptions that I would like to highlight that were particularly illuminating in terms of helping me identifying my implicit biases:

1. Assumptions I currently had before coming to the US.

2. Assumptions I developed during my time in the US.

In Paraguay (where I am originally from), and in most of South America, there is a strong influence from US media. The music we listen to, the movies and tv shows we watch, social media apps, etc. Are mostly originally from the US. One of the assumptions that I had made even before coming here, based on media I consumed, is that US culture likes things big. Big meals, big drinks, big cars, big houses, etc. I had always assumed it was just a different culture, and thus, there was no reason to judge it as good or bad, but simply different. But I always kept it on the back of my mind whenever I encountered myself in any situation that could be more easily explained by this assumption (rather than discussing it with a local to see if this was true).

Regarding assumptions I made during my time in the US (and this is true for other friends of mine that are international students), some of the most defining ones include: perceiving Americans as a lot more individualistic and harder to connect with. Party culture not being "as fun" as other places. And even some oversensitivity on political correctness. I had never though about any of these before coming to the United States.

The reason why I differentiate between these two instances of the development of assumptions is to illustrate how implicit biases are constantly evolving and reshaping. Their roots are personal experiences and situations that lead me to develop specific notions about a certain culture that made it easier for my brain to process the different environments in which I found myself. And although these assumptions helped me understand and navigate my time as a student, they also limited my perception in terms of the ways in which I perceived I would be able to connect with people from the US.

One assumption that I always felt limited my willingness to connect with Americans was their party culture being boring. I had always felt like the people my age only seemed to focus on having many drinks and just being drunk. For me, that was something I enjoyed doing when I was 17 years old, not 22. Not only that, but also the fact that there was some heavy drug use in some of the parties I attended. As an international student, I could not take the chance of being associated with drug use or I would risk being deported. This led me to perceive partying in the US was just bad in general, and thus I refrained from going to any other parties after that. This assumption proved to be helpful later on. I had heard stories about international students getting deported for being associated with illegal drug use. Therefore, my bias towards not going to parties, or meeting with people that frequented such parties, ended up being something very helpful in order to keep me safe.

How to Become Aware of Implicit Biases

Lesson 3 from Gawronski's research states that *"There is no basis to expect strong unconditional relations between implicit bias and behavior"* (Gawronski, 2019). After various studies, scientists have failed to find a strong correlation between behavior and implicit bias. And thus, it cannot be stated that implicit biases will inevitably influence our behavior. Although Gawronski's work focuses more heavily on the methods utilized to study implicit bias and their strengths and weaknesses, one important conclusion can be drawn from this third lesson: humans have the power to control their reaction towards a specific situation, person, or culture, regardless of their underlying assumptions and implicit biases. This is crucial because, even though human relationships might be filled with pre-made assumptions about others, people still have the ability to dictate the shape, form, and depth of their connections with others.

As discussed, implicit biases have origins as old as humankind. Humans evolved and thrived due to their ability to live in communities that shared similar characteristics. This is true both for physical as well as psychological characteristics. Making assumptions that helped us survive outside threats was, and still is, an intrinsic aspect of our minds. Moreover, assumptions and biases are neither good nor bad, they are merely a tool that can have either liberating or limiting effects, depending on how they are used, as described by my previous experiences.

I have highlighted many different assumptions and implicit biases I developed during my time as an international student in the US. Regardless of the fact that I first came here with an open mind and trying to understand this different culture, I still found myself making assumptions based solely on my experiences. Talking to Americans, like my roommate, is what truly helped me become aware of the biases I had developed over time. This had a significant impact on the way in which I perceived this different culture. It is the process of gaining insight from something beyond our own experiences that truly helps us become aware of our own implicit biases. And this is, for me, the most important takeaway from my experience. It is not the fact that we develop biases and assumptions that matter, but rather that we have the ability to become aware of them through reflection and sharing with other people. And even more important is that we have the power to change our perspective and see the world through more eyes than just our own.

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ZOE JOHNSEN

The Spontaneous Sublime: Why Getting Lost is Good for Your Existential Health

Upper-Division Arts and Sciences 1st Place

Apparently, they're called "moose-jams"—this stop-and-start line of traffic I found myself in, along a winding backroad of Grand Teton National Park. Unbeknownst to me at the time, I was about to experience what the Park Foundation (GTNPF) calls a "moment that matters:" a sight of majestic wildlife, to remind visitors of America's wild beauty, contained within this park crosscut by paved roads and rumbling cars ("Protecting Wildlife and Natural Resources," sect. "A Call to Action," n.d.). Stuck in a line of these cars, it takes us a few minutes to understand exactly what's happening; then, seeing camera lens pointed out open windows, our dawning realization builds with excitement and anticipation. I crane my neck from the backseat and catch a glimpse of two brown bodies, one smaller than the other. The car ahead of us shifts into gear and, finally, there they are, in full glory: a sweet brown moose and her even sweeter baby calf, peacefully grazing on wildflowers right off the side of the pothole-marred road. We focus our own gazes and lens. They're just as picturesque as they should be, framed by the beautiful Teton mountain range. We each snap a quick photograph of the landscape, take in a breath of awe, then move along so the car behind us, the next group of curious visitors, has their chance.

I'd always had a romantic vision of the west, this great American frontier-snowcapped peaks and crystalline blue lakes, formidable and teeming with possibility. Such images seem engrained in our collective American cultural consciousness, harking back to school narratives of Teddy Roosevelt and the early conservation movement. Indeed, it's during this era at the tum of the 19th century that western landscape photography also rose to prominence and became entangled with environmentalism and the formation of the first national parks, promoting all those romantic notions of the rugged, beautiful American wild. Once an uncharted borderland, known only by the likes of early explorers and fur-trappers, the west came into the sights of popular culture through the dissemination of these landscape photographs in the late nineteenth and early twentieth century. This particular medium, Kevin DeLuca and Anne Demo (2000) argue, aided "in the construction of pristine wilderness as the sublime object of nascent environmentalism" (p. 242). Visions of towering mountains and sprawling valleys, devoid of people yet full of natural abundance, were captured in photograph, inspiring not only conservationists but also the average armchair tourist. However, in this capturing of the west's geological grandeur for aesthetic viewing pleasure, the sublime is tempered, creating what DeLuca and Demo term the "domesticated sublime" (p. 248). Held in the hands of a distant viewer, the "spectacular" western landscape becomes merely "spectacle," leaving a sublime "in which comfort displaces risk as the spectator replaces the participant" (p. 249). Still-life photography provided, then, a pleasurable tourist gaze of the sublime, removed from the immediate senses and raw emotion of actual experience. It was a sublime that was framed, curated, and presented-and thus hollow.

The sublime, as formally detailed by philosopher Edmund Burke in the eighteenth century, is primarily an existential experience of human smallness, a complex emotional mixture of fear and pleasure born from direct confrontation with nature's immense power. It is a power that is much greater than us, living out our ephemeral human lives; it renders us insignificant, to come face-to-face with mountains millions of years old, or lakes that stretch further than our myopic gazes can comprehend. There may be fear, here, but it is not unwelcoming. Rather, when our human frailty is made plain, it can be humbling, nearly a breath of relief, to be reminded that "our lives are not the measure of all things," as Alain De Botton (2002) so eloquently writes in his historical tracing of the sublime (p. 171). It is hard to imagine this vulnerability, such smallness, felt through landscape photographs, in which we are given "a god's eye view" (DeLuca & Demo, 2000, p. 248). Removed from grounded experience, the spectator of the sublime is made large, as he is seemingly able to hold nature within his hands, made for his viewing. This human-centric sublime of early landscape photography is not merely a relic of the past; it has more recently evolved into what Elizabeth Brunner and Veronica Dawson (2017) call the "recreational sublime." The authors contend that early landscape photography indeed formulated a technological sublime, in which nature is captured as "knowable, usable . . . predictable and controllable" (p. 391). They further argue that these origins have allowed for a new conception of sublime nature as "surmountable," visible in modem environmental media such as extreme sport documentaries, in which mountains are triumphantly scaled and harsh landscapes expertly traversed. Though spectator has become participant, the recreational sublime presents humans as limitless and nature as our playground, flipping Burke's original hierarchy and taming any sense of fear and vulnerability (Brunner & Dawson, 2017). Beyond being made secure and aesthetically pleasing, popular conceptions of the sublime have further rendered it conquerable, constructed for human satisfaction-the Grand Canyon as peered into from behind a guardrail, Mount Everest summited among a crowd, or a mighty moose caught in action from the safety of the car.

A day or two after our moose-jam moment, we happen upon a similar scene of a doe and fawn in the woods, just off-trail. The moose's much less iconic counterpart, the deer, yet the encounter seems to hold greater space in my nostalgic reminiscing. It happened out of nowhere, the first of us stopping suddenly with a finger to his lips; I nearly bump into him, as we gather close on the narrow trail and follow his gaze into the trees. We meet eyes with the doe and a hush falls over us, almost reverent, for the span of just a few heartbeats. She flicks her tail and the moment breaks. I exhale the gasp that had been trapped behind my ribcage. I'd grown up with deer my entire childhood, always in our backyard. These few intimate seconds are hardly a time I would expect to linger in my memory, but they have, still, many months later. The moose certainly has too, being emblematic of the west I'd imagined, something we'd all hoped to see during our trip. Despite this, despite the fact that the Park Service markets such iconic wildlife scenes like our moose photos, that simple doe and her fawn seem to have struck some different chord of meaning within me in a way I couldn't have expected. It was a moment borne of chance, fleeting and fragile and tinged with something close to sacred.

Chance, it seems, likes to follow us on this trip, or at least the opportunity to make meaning from it. We get lost on one of the park's most popular trails, again defying the plans constructed for us as visitors. I know I should probably be scared, maybe more worried than I am; we're separated from the rest of our group with no idea of where we're going beyond some vague destination of a waterfall, an unknown distance away, with only a few hours of sunlight left to warm our bare shoulders. Of the GTNPF's "10 Necessities for Your Summer Pack" (n.d.), we have approximately two and a half, though they will have to be shared among the three ofus: one comically large apple for sustenance; half a bottle of water, as most of it had been gulped down before we'd barely begun walking; and a single threadbare wool sweater for layering, should the weather tum. They're not great odds, viewed objectively. Yet, there we were, smiling into each other's smiles and skipping along barefoot over rocks and tree roots. I do voice an anxious thought every now and then, but they become less serious as time goes on, more easily brushed off with a laughing shrug. It seems we are much too busy taking in every shade of green, or the way the lake water ripples and swells in the occasional gust of wind. We are marveling at each different wildflower alongside the trail, as I pluck yet another from the grass to tuck behind my hair; the blossoms keep falling out in our joyous movements that are still tinged with just a bit of haste as the sun continues its inevitable path downwards.

Sometimes I feel I am most myself in this rambunctious, childlike wandering. It's as if there's no other place I could possibly be but lost on this trail, a peaceful lucidity radiating out from some core of my being that ensures all my steps are well-placed, my laughter loud and bright and easy. It's as if l am coming home to myself, amidst this landscape that keeps morphing from open flower-filled fields to forests of aspen to rugged lake bluffs.

Research on the emotional underpinnings of tourist experiences actually provide a nice, succinct term for this feeling: existential authenticity. Jillian Rickly-Boyd (2013) argues that this sort of emotion-focused authenticity is based on a balance between "self-constraint and spontaneity;" when the latter can flourish, such as during the whims of travel, the individual can act more "in line with their true feelings and authentic self' (p. 682). Forging ahead on that endless trail, questioning our decisions at every trail marker and lacking food, water, and cell service, I had relinquished the nagging voice in the back of my mind from her nearly full-time position. I gave myself over to an optimistic inevitable of safe return, and meanwhile made peace with the present moment filled with pines, glacial waters, and distant peaks. It was a collective submission; the carefree joy of the people alongside me only reinforced my openness. I suppose I had also found what Rickly-Boyd terms "intrapersonal authenticity," a genuineness desired from other travelers with whom you can create shared experience and meaning (p. 683). Perhaps it was because I already knew these two people well, knew we all loved each other and loved the world at large, with all its mountains and rivers, or that we all agreed the earth is best experienced in bare feet-but I certainly did feel a shared "authentic Being" between us, from our frequent celebrations of every beautiful sight to the unspoken improvisation of life as experienced on this trail. Lost amongst the trees, untethered to any sort of logical plan, I felt an airborne sense of aliveness and connection, indescribable except that it seemed palpable in the sunlit air, as if I could reach out and touch it in any given moment of these long golden hours; it was a nebulous sense of interconnectivity, to the earth as felt beneath my blackened feet, or the immediate love contained within our shared wide-eyed gazes of wonder out to the mountains and back to each other.

Park management research has tried to pin down these more abstract meanings-what exactly makes a landscape come alive in individuals' subjectivities, or how destinations presented as sublime can actually invoke that feeling. One possible answer comes from Mary Farber and Troy Hall's (2007) study of tourists' "extraordinary experiences" along Alaska's Dalton Highway, which found that scenery, particularly mountains and water, and especially when associated with social cohesion and active recreation, "generated significantly higher levels of positive affect" than other variables (p. 264). Here is where we land squarely within the GTNPF's intentions: providing a beautiful, scenic, often breathtaking natural environment, with plenty of managed trails and recreational activities to share with friends and family. I certainly set out with these motivations in mind, likely the same as most visitors that summer. However, the authors also found that novelty and the unexpected, "serendipitous events or constellations of factors largely outside managerial control" were also significant predictors of "special experiences" (p. 268). So begins the issue of managing a national park-a uniquely spectacular environment, visited by millions of people each with their own complexities of mind, emotion, and meaning-making. Meaning that may emerge from a string of coincidences, even unlucky chances turned into a wonderful performance of spontaneity.

I've come to find out that the very trail we'd gotten lost on had been recently revamped as part of the GTNPF's multi-million dollar "Jenny Lake Renewal Project." The project included efforts to "reduce ambiguity by creating suggested directional trails" and designate resting areas "to take in the stunning views" ("Jenny Lake Renewal Project," n.d.). I can't help but laugh, reading this after the fact. Perhaps we'd been silly and aimless, missing those suggested trails. We had just looked at each other, blank faced, every time we passed one of those wooden markers that seemed to leave much detail to be desired. Lacking direction, we'd forged on in clueless optimism, finding our own resting spots along the way; the first had been discovered by clambering downslope of the trail and onto a concrete embankment, probably part of some drainage system. It was the perfect spot to sit and dangle our feet in the frigid lake water. Another break was had at the dead-end of a short off-shoot trail; we'd sat upon a fallen tree and chatted about what we wanted out of life, arms draped easily around each other's shoulders. Though our experience seems to have flouted the park service's costly, managed expectations, I'm not complaining. That unscripted afternoon still ranks among my top ten days thus far, likely due precisely to its spontaneous creation. As Rickly-Boyd (2013) points out in her research, authentic experience is created through active performance, as it suffuses the physical landscape with personal meanings. The day was not meaningful simply because it occurred against a stunning backdrop, or due to any specific efforts by the GTNPF to enhance visitor experience; its blissful character owed itself to a myriad of personal and interpersonal factors, predicated on serendipity, and perhaps a bit of alarmed adrenaline, allowing me to revel in magnificent landscapes with as equal delight as my company.

The question at hand, then: did this wandering revelry, with all its nebulous but profound meanings, come close to some sort of experience of the sublime? As active participants, sun on our skin and full of giddy trepidation, did we animate the technological sublime of photographs, submitting to nature's indifferent force rather than aiming to conquer it? It is helpful to tum to "awe," a complex emotional state that has become a near psychological correlate to the philosophical sublime, particularly in research on outdoor leisure. Awe, like the sublime, has been difficult to pin down in discrete terms; in-depth empirical research only truly began in 2003 with Dacher Keltner and Jonathan Haidt's seminal paper, in which they define awe based on two key features: "perceived vastness, and a need for accommodation" (p. 297). The latter concept is significant-there is a *need* or desire to understand, but this feat is not necessarily accomplished. Thus, at "the upper reaches of pleasure and on the boundary of fear" lies awe, as does the sublime-the confusing, exhilarating feeling of trying to make sense of something far too big for us to ever comprehend (Keltner & Haidt, 2003, p. 297). Susan Chen and Myriam Mongrain (2020) further this conception of awe by arguing that it is fundamentally self-transcendent, as the immediate sensory recognition of the natural world's immensity engenders a perceptual shift, "from being egocentric to a wider frame" (p. 3). We are thus brought back to Burke's sublime feeling of self-diminishment, as well as Rickly-Boyd's (2013) existential authenticity that overcomes the confines of rational self-concern. Chen and Mongrain assert that the "small self," central to awe, "becomes a conduit to social connection [and] oneness with environments," pointing the individual "to the grand scheme of existence" (2020, p. 3). The sight of mountains, the Milky Way, or vast fields of wildflowers-we pale in mortal comparison, yet still rejoice in all that we are so privileged to encounter, in this inexplicable, unpredictable beauty of existence that is shared among millions. However fearful or threatening it may seem to be rendered insignificant, there is still delight in this experience. There is still laughter even as that last bite of our apple is taken with an unknown number of miles left to walk. There are bigger things than this worry-we are among glorious green grass that will outlast our short lives, in the shadow of rocks that used to be buried miles beneath the earth, some billion or so years before the events of our today. As we wander, a couple passes us on the trail; we all smile to each other in slightly breathless greeting, then return our gazes back to the entrancing world around us.

On the last night of our trip, I find myself in a vast field, under a lightning storm and contemplating the origins of religion. It's dark beneath the blanket of this wide horizon, until lightning strikes, once, brief, cracking open the sky. We scream, almost as if on instinct. Will we be burnt to embers, huddled beneath this metal umbrella? Fat raindrops strike my exposed skin as they begin to increase in speed and frequency. I remain focused on the sky, ignoring my muddy and soaking wet feet, cut up from running through bramble. After an indeterminate amount of time comes the next searing shot—I yell again, and meet the matching grin of a friend so close to me. We don't understand exactly what it is that we're feeling, driven to exclamation with each exhilarating shock, paralyzed with awe, but our shared glance says: *I know. I know you feel this too; it's indescribable, but it's amazing.* Standing here, watching this elemental, unpredictable, raging interplay of electricity, I suddenly feel connected to vast swaths of humanity, unwittingly. As if I am a little dot of a human tethered to all who have stood underneath this same horizon, all who have ever stood in any empty place beneath the night sky, looked up, and perhaps believed there might be something out there bigger than us.

This pure, undiluted experience of reality, running through mud and rain and into beautifully terrifying danger-it's not something the park service could have ever planned for me, nor something I could have expected for myself in this five-day road trip out west. It was not a picture-perfect scene of water and mountains as framed in a constructed overlook. Screaming with friends in a dark field under a summer thunderstorm is not marketed as a "moment that matters." But there I was, feeling so merely and marvelously human. It was a profound sense of *being,* in its totality, born from spontaneous lived circumstance as I surrendered my fate to the hands of nature, to her raindrops and unforgiving earth. I was saved from being too cold, with the other warm bodies under the umbrella-saved from being too lonely, when we are all so equally small.

I think back to that deer and fawn as an equally poignant sublime as the lightning storm, if less intense. It was, too, a startling encounter, unexpected and making my heart beat just a bit louder. That brief locked stare between us two warm-blooded animals forced an understanding onto me: this was their territory. The trail I stood on was but an impermanent manifestation of the human propensity for development. We are the ones caught in the doe's watch, vulnerable, humbled into silence. This landscape was built for me, I was directed here, but it is not mine, in that grand scheme of things. It is the understanding that the world exists not just before us but beyond us, in a way that we cannot comprehend. We are left with tantalizing glimpses into that mystery and, if we are lucky, someone there beside us with whom we can share this wonder, share an easy smile of being tiny together, delighting in every bit of this raw existence however it may show itself.

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WILLIAM ENDRES

Me and the Monoski

Upper-Division Arts and Sciences 2nd Place

[Editor's note: this essay originally contained a photograph of the monoski.]

"Inside every skier there's a monoskier just itching to bust out."

The impracticality of the monoski is certainly an explanation for the lack of monoskiers. Teaching kids is tough because you can't pizza, you can't french-fry, and unless you are already a competent rider, you absolutely can't stop. Why would anyone ride such a thing

The answer lays in the 1970s at the primhe of the monoski. The late Tom Wolfe marked the 70s as America's third great awakening, a time when individuality and an emphasis on the narcissistic "Me" became supreme. Fittingly, skiers put away their outdated two-plank skis and strapped into wider, powder-smashing-single-plank monoskis. While you'd be lucky to see even one monoski on the slopes today, its moment of glory in the mid 1970s is easily explained by the social-to economic elements of the "Me" decade and America's third great awakening.

Section 1: The "Undecade"

The uncanny "Me" decade (hereafter, "undecade") of the 1970s indisputably had a particular weirdness in its form. This peculiar vibe is best exemplified, as described by Texas A&M University -San Antonio Professor Dolph Briscoe IV, Ph.D., by the "long hair and outrageous clothing [that] became the norm for Americans of all political and social backgrounds, while sexuality outside of traditional marriage became widely practiced and accepted, especially amongst the younger generation" (par. 3). Experimentation with style and form during the "Me" decade reached all aspects of American culture including the construction of ski equipment. Being the most eccentric of all ski equipment, the monoski (see fig. I) made its debut in the early 1960s but did not see popular success until the mid 1970s. The monoski's odd design was the brainchild of Mike Doyle who, like everyone in the 70s, took inspiration from Southern California hippie surf culture. Doyle crafted his first monoski by binding two tapered pieces of surfboard foam with biaxial fiberglass and resin and subsequently mounting two ski bindings on top (James par. 3). The janky form of the monoski was appealing to "Me" decade actors who craved weirdness and aimed to differentiate their style from the previous traditionalist culture of skiing

Thanks to its outrageous form, the functionality of the "Me" decade weirdly satisfied a need for expression felt among all American youth. This generation of young people created, as American journalist Erik Davis puts it, "the notion of "the" counterculture [. . .] a useful way to characterize an essentially generational culture of rebellion, nonconformity, and creative experimentation with both individual and social possibility" (par. 9). This attitude was critical in the creation of tangible change and its effects even reached the niche ski world. The monoski was simply one of the vehicles for this change. Before the advent of the snowboard, skiing had become soulless with a real need for new creative exploration. Enter the monoski. Avid skier Rob Story captures, in his article for Ski Magazine, how he "digs the mono tum[. . .] It's not just different, it feels groovy" (par. 14). This weirdly functional sense of funky 70s creativity is what appealed to so many young riders and was critical in the rise in monoski popularity.

Section 2: Do as You Please

In corroboration with its weirdness, the "Me" decade fostered a rejuvenated sense-of-self importance. Reason Magazine editor Nick Gillespie lays out Tom Wolfe's argument that "Americans were done with building Maslow's pyramid of needs for other people, especially their social betters [. . .]. It was our time to shine, baby!" (par. 3). America's youth was ready to stick it to the man and live for themselves. They were even willing to do that if it meant angering the higher ups at the large ski resorts by shredding down the mountain on their monoskis. According to Kirsten Dobroth, when Jonathan Hritz first unveiled his monoski at Vail's Back bowls, he was welcome with anything but hospitality as Vail banned him from riding because they were "worried Hritz would push all the snow to the bottom of the mountain" (par. 3). The functional riding requirements, such as wide sweeping turns, of the monoski enact the sense of self-importance as riders must only take their own turns only into account instead of worrying about the lines of other skiers. The fact that monoskis are a singular plank instead of two distinct skis is almost symbolic of the individuality it characterizes.

Section 3: Discontinuous Innovation

More tangibly than the newfound sense-of-self-importance, the "Me" decade gave birth to necessary innovation. Several new technologies from the 1970s are regularly needed today; notably the Motorola cellphone which, according to the Nasdaq, made it so that "no longer would individuals be confined to their desks or homes in anticipation of an incoming call. Having access to a mobile telephone freed people by allowing them to communicate on-the-go" (par. 4). Americans were free to roam and many of them headed to the slopes. There, powder snow posed a real challenge for the long and thin skis that riders were using at the time. The monoski's wide base and shorter length allow it to seamlessly float over fresh powder and plane higher than any two-plank ski, while also preventing any sort of crossing tips at high speeds: thank God! (Levin par. 3). Any skier, with at least one day of experience on the slopes, will tell you that these are conveniences just too good to be true. Monoskis simply offered a level of necessary deep snow practicality that two-plank skis would not have for several years to come.

As with any amount of practical innovation, there will always be unnecessary innovation that, in the case of the "Me" decade, was truly a defining element. As the perfect exemplification of this, Rose Leadem lays out how the Rubik's Cube, originally intended to help Professor Emo Rubik better teach his class spatial relationship, unintentionally became a staple 70s children's toy (Leadem par. 12). Who knew that Americans would be drawn to such a frustrating invention? In a similar vein, the monoski offered unintended changes to skiing style that, while unnecessary, were radically appealing. Doyle cherished the fact that monoskiing has a natural emphasis on the aesthetic form of turns that gave riders the sense of ultimate creativity and groovy style (Levin par. 4). Cheesy as it may be, there's no better feeling than smashing some pow around the mountain in a neon-colored jumpsuit while rocking a 70s mullet. The notion that skiers in the future began to call the monoski unnecessarily fun is baffling, yet there it is.

Fig 1: Monoski Esthetic Style Source: "Throwback Thursday."

Pinterest, www.pinterest.com/pin/2921 00725803583215!

Section 4: Commercialization of Fun

Allowing for innovation, necessity aside, the mass commercialization of seemingly everything during the "Me" decade was distinctly astonishing. In the fashion sector, Vidhi Rao recounts a major Vogue article in which they made apparent how "There are no rules in the fashion game now due to [. . .] new technologies which brought advances in production through mass production, higher efficiency, generating higher standards and uniformity" (par. 4). Thanks to 1970s boom in innovation, companies could pump out products live never before. The monoski is no exception to this shift. Monoski historian Lee James describes how after Rossignol Skis got wind of the monoski, they jumped into action and "introduced a new style of monoski to the market that had easier skiing characteristics that even novices could ski on easily [. . .] and increased orders for their products [. . .] and now made sales in the realm of 120,000 units" (par. 25). With the help of established ski brands, and their seemingly endless resources, the monoski was on its way to stardom. But, commercial success for the monoski was brief as the invention of the snowboard stole the show just about a decade later.

Section 5: All Good Things Come to an End

Thanks to "that" invention by Mr. Jake Burton himself, the monoskis' moment of glory was short lived. Nonetheless, the monoski should hold a special place in the heart of every skier. Could one even be considered a snow-sports enthusiast if they've never strapped into one? Perhaps the ski community needs another moment of "Me" decade charisma and bliss. There is some light at the end of the tunnel. Every year the 60 to 70 total American monoskiers congregate for Monopalooza where they all shred their single-plank blades together and reminisce in the nostalgia of the monoski. Onboard, learning might be difficult and falling might be common, but remember, if you're not falling, you're not learning.

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MARGARET PAULSON

Touring the Homeland: A Journey in Search of Identity and Place in China

Upper-Division Arts and Sciences 3rd Place

"Over the years I have begun to understand how those adopted daughters long to understand their birth mothers, and to tell them how much they love them. I decided that, no matter how painful it was, I would write down the stories I had stored up for so long[. . .] to be an honest record of mother's lives, a gift of mother-daughter love that I, a daughter, could share with other daughters, a message from an unknown Chinese mother to her daughter, wherever she may be."

-Message From an Unknown Chinese Mother, Xue Xinran, p. XVI

When reading the stories of Chinese adoptees, their longing for answers about their origins and the family that gave them up strikes a familiar chord. I often find myself wondering if I would recognize the faces of people I knew for so little time, or whether I could somehow remember the smell of their clothing and the feeling of their embrace from the months before I was abandoned. These are thoughts potentially shared by tens of thousands of other Chinese girls who were adopted by families overseas, a majority of whom reside in the United States. I cannot speak for all of the girls who have faced the loss of family and a reordering of their future self, but I feel surer of myself knowing that I am not alone in my uncertainty about my identity or in imagining how my life could have been, all of the possible paths forking off of the day that I was disclaimed. Like others who were adopted from Chinese orphanages, I long to know if my biological family thinks about me or regrets the decision to give me up. Like many other Chinese adoptees, the unknown elements of my birth and early life exert a strong pull to go back to the place where I was born, in the hope that a return to my origins will help me arrive at an understanding of my past, and a fuller sense of identity.

Linda Lappin discusses pilgrimage in the context of the archetypal story arc of "desire conflict-breakthrough" in conjunction with the concept of sacred and profane spaces. Lappin's definition of sacred spaces applies to my journey towards the formation of a more complete sense of identity, as she believes we can "interpret sacred space as largely as possible, in terms of personally meaningful spaces" (Lappin, p. 58). Such sacred spaces are a feature of heritage tourism, which constitutes a journey or "pilgrimage" allowing Chinese adoptees to return to their place of origin. China can be broadly referred to as this place of origin, but origins also take the shape of alleyways, train stations, orphanages, and police stations; places like these are the starting point for many adoptees' stories. These places form a type of sacred space in which the process of pilgrimage can unfold, both physically and spiritually. The places where daughters were abandoned hold a special power and may be the fuel that sparks the desire for return, as they may symbolize a critical moment of divergence in the lives of adoptees, and their adoptive and biological families. Furthermore, these sacred spaces may evoke inner conflict regarding a lost daughter's feelings about her origins and offer a reference point for reflection. The directness of revisiting these places can provide a sense of closure and an opportunity for introspection by allowing adoptees to reflect on a formative moment contributing to their current, established identity.

Adoption agencies that partner children with families recognize the importance of origins and place in understanding oneself. Post adoption services provided by agencies such as Chinese Children Adoption International include heritage tours which offer guided trips through tourist destinations as well as traditional villages, and optional visits to an adoptee's hometown and orphanage. In some cases, heritage tours allow adoptees to return to the location where they were abandoned or found. Heritage tourism deviates from leisure tourism in that heritage tourism functions as a cultural bridge for adoptees. The emotional weight of undertaking a heritage tour is much greater than traveling to a place for pleasure or leisure and requires a system of support that is founded on the cooperation and mutual effort of adoptive families, adoption agencies, and the Chinese government. A heritage tour involves a lot of emotional risk. For example, even if adoptees can meet their biological families, the reunion might not be a positive one. Additionally, adoptees may simply be unsuccessful in locating important sites and resolving questions about their past. In this case a large financial investment and a willingness to be vulnerable can result in dead ends, with no answers. Despite these conflicts, adoptees undertake heritage tours because of the potential for resolution to important questions of identity. Therefore, the experience of undertaking a heritage tour constitutes an expression of an archetypal pilgrimage.

Jenna Cook explores the complicated mosaic of interest groups, public perception, and political implications that surround the experience of returning to China. In doing so, she navigates the complex ways in which "children are stakes in historical and contemporary contestations over definitions of cultural identity, nation, and transnationality" (Chen, p. 633). Cook was adopted from China's Hubei province and as a junior undergraduate student at Yale, she traveled to China to undertake the intricate process of tracing her roots to China. Though she was unable to locate her family, Cook's search revealed the efforts of some parents to share part of themselves with daughters they would not, or could not, keep. She writes about a Chinese family that "named their child after the parents' two hometowns in the hope she would grow up knowing where to find them" (Cook, section: To date, I haven't found my birth parents, so I don't know what drove, par. 2). Stories such as this one may prompt adoptees to return to China in search of their biological families. It demonstrates the desire of some families for their children to return and reveals the shared longing between the daughters and their biological families. Furthermore, the act of naming a daughter after the parents' hometowns demonstrates how the identity of Chinese adoptees can be tangibly tied to a sense of place.

In a sense, geography plays a larger role than a connection to the biological family. A child's name may change multiple times over the course of the adoption process, and as their name changes, so does their location in physical space. Orphanages often rename infants and young children, giving them monikers with translations that appeal to adoptive parents. Children will then adopt a new name when they are welcomed into an adoptive family and transported overseas. The replacement of names over the course of the adoption process demonstrates the transformation of identity that is beyond the control of the adoptee. Though "place" can be central to the formation of identity, adoptees face the added challenge of reconciling how their sense of identity is constrained and shaped by the geography of their past. Identity is difficult to define, and for adoptees, geography does not serve as a reliable source of identity. In an essay by Gayle Tan, she discusses the experiences of adoptees who, "feeling rejected by their biological families and yet still an outsider in their adoptive families [. . .] find it difficult to identify a place and community where they truly belong" (Tan, par. 9). Heritage tourism represents, in part, an attempt to ground identity in geography, and if this attempt is unsuccessful, it can prompt the adoptee to tum towards more stable sources of identity. For example, the adoptive family serves as a source of identity that does not depend so heavily on place. New reference points are created within the family where familial bonds generate a meaningful space within which adoptees can establish a sense of cultural and familial identity.

What is the resolution of a pilgrimage to China? According to Jillian Powers, the process of pilgrimage to China helps adoptees "to understand the contemporary discourses of transnational adoption and the intimate space where belonging, race, culture, and subjectivity are actively shaped" (Powers, p. 73). Through investigative journalism, Powers examines the question of identity in a quagmire of political controversy. She considers the competing nationalist narratives of China and the West and how these play into the complicated dynamic between desire to connect with one's heritage, and the hurt at having been abandoned. She arrives at the idea that homeland tourism to China can help affirm new adoptive family constructs, as well as adoptees' sense of identity and belonging in their adoptive societies. She states that "homeland tourism to China cannot reconcile traditional understandings of family based upon blood and genetics or affirm the economic realities that brought the Chinese child to America in the first place. It does, however, validate these new family constructs and help shape a new identity that is American," but more broadly one which adoptees can share with one another, and through which they can arrive at a new sense of belonging.

The importance of family for identity formation was something that I learned first-hand when visiting China on a heritage tour. The tour was offered by the adoption agency through which my adoptive parents connected with my sister and me. My sister and I were abandoned in cities over 500 miles apart but found ourselves embarking on the same journey to return to our respective hometowns, and to see the places that we could have called home. Despite the distance between the cities where we originated, both felt as foreign to us as any other city in China. The local nuances were lost on us. Like many heritage tour participants (Waldmier, par. 4), we felt that locals expected us to speak perfect Mandarin, even though for us it was a foreign tongue. As we traveled through the streets of our hometowns, it felt less like a return and more like seeing China for the first time. As the trip progressed, we felt more and more like Americans. China had become a place of murky origins where my native heritage competed with the heritage of my adoptive family. Through transplantation into a new country, I had built my identity on a different cultural foundation. As I stood in the alley where I had been found, I could feel the cultural divide that stretched further than the distance between China and my home in the US. Growing up, I had always thought that I could never be fully American, but I realized that I am foreign to China as well. At the end of the day, I am left to reflect on the idea that I am part of a subculture, a unique community of fellow adoptees. My identity is wrapped up in my belonging to this subculture rather than my nationality.

This pilgrimage, a heritage tour to China, had the transformative effect described by Lappin by allowing me to follow the arc of a journey which ultimately led me to arrive at a profound personal change. I realized that I am not fully Chinese or American. My heritage is of Chinese origin, but my entire life since my adoption has been spent in the US. The experience of living in the US forms the core of my formative years and has played a major role in shaping my identity. I cannot ignore the importance of my inclusion in the community of foreign adoptees who have roots in China, but I can also not deny that China no longer feels like a place that I feel a strong urge to return to in the sense of going home. Home is the family and country that raised me. I am relieved to have been able to return to China and finally realize that though it is an important part of my identity, I do not need to know everything about my past to feel whole.

Heritage tours to China work as pilgrimages, closely following the narrative arc described by Linda Lappin. As Jenna Cook demonstrates, participation in a heritage tour involves a step into a complicated mosaic of political narratives and discourses surrounding the identity of Chinese adoptees in the US. While many adoptees travel to China in the hopes of forming a stronger sense of identity with the place where they were born, as well as a Chinese national identity, forming an identity around a place is difficult. Adoptees often deal with personal histories that involve multiple locations including hometowns, locations of abandonment, and orphanages, as well as international adoptions by families in the United States and elsewhere. For these reasons, the result of a pilgrimage to China in the search of an adoptee's origins is often a reinforcement of a new identity, built around their adopted family and the unique identity adoptees share with one another.

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JACKSON DAY

Journey to PFC-Free

Upper-Division Business 1st Place

Introduction

Imagine if I told you that a packaging company was using a chemical that pollutes the Earth and was found in penguins and seal cubs in Antarctica and polar bears in the Arctic Circle. Likely, it wouldn't come as that much of a shock and is almost expected. These brands don't often preach about protecting the environment and sustainability. However, when the same scenario is applied to outdoor companies it immediately seems less likely.

Greenwashing is considered a claim to deceive consumers into believing that a company's products are environmentally friendly. One of the industries where green washing is most apparent is the outdoor industry. Often outdoor brands boast about how sustainable and eco-friendly they are, but far too often these claims are unsubstantiated. Outdoor brands use the idea of pristine nature to sell their products but often times they are contributing to the problem of destroying it while still giving the appearance of being green.

When it comes to greenwashing, one of the biggest things the outdoor industry attempts to ignore are PFCs. According to the CDC, "perfluorochemicals (PFCs) are a group of chemicals used to make fluoropolymer coatings that resist heat, oil, stains, grease, and water."[1]

Outdoor brands use PFCs because of their durability and resistance to oil and water. PFCs are a concern because they don't break down in the environment, can travel vast distances and can be found in rivers and lakes and animals. In 2015, Greenpeace found traces of PFCs in snow and water samples in some of the most remote locations, from the High Tatras in Slovakia, the Apennines in Italy, and the Swiss Alps[2]. In addition, from studies done on laboratory animals, it is believed that PFCs may affect growth and development, reproduction, and injure the liver of both animals and humans.

Many brands have promised to get rid of PFCs like clothing manufacturers Adidas and H&M. However, outdoor companies are slow to do the same and are hesitant to say it's possible and Patagonia claims that the PFC-free alternatives are not near as effective at resisting water and oil. Knowing the impact that PFCs had on the environment, it didn't sit right with the decision makers at Fjällräven that their products contained PFCs.

Fjällräven's Journey to PFC Free

Nathan Dopp is the current CEO of Fjallraven for the Americas. He has been at Fjällräven since October of 2012 working as Vice President of Sales and Marketing for North America until a promotion in March of 2016 to his current role. In addition, Nathan serves as a board member for "Leave No Trace Center for Outdoor Ethics." Growing up, I've seen his passion for his work and the outdoors first-hand. Nathan Dopp believes, "PFCs served a purpose, in that they're highly effective at repelling water, etc. but it's pretty apparent that they're not sustainable and they're bad for the environment. We are a brand that are always looking for ways to be more sustainable and be better."

Obviously, Fjällräven's goal to remove PFCs was a daunting task. PFC's were the best tool to impregnate textiles to make them water and oil repellent and there aren't many effective alternatives that meet Fjällräven's environmental standards. They were tasked with something many other brands said was impossible. "With all change there's the easy solution and then there's the right thing to do, so we're kind of on the camp of it's the right thing to do," said Nathan Dopp.

Christiane Dolva is Head of Sustainability at Fjällräven, and this means that she is involved in a lot of business decisions to ensure the brand considers and prioritizes sustainable solutions, materials and processes.

Christiane Dolva said, “in a way it was easier for us than for other brands to start looking for alternatives, as we didn’t already have a large collection of shell garments at the time. We were able to get it right from the beginning.”[3]

Despite having the advantage of essentially starting at the beginning it was not easy. The options were few and far between and they still had to assess the potential side effects of other chemicals that they may use in their new impregnation process. They examined a range of durable water repellants but when it came to the final decision for the product, they had to makes some compromises. They had found a solution that had an acceptable water repellency; however, it was less durable and oil resistant than other durable water repellants. Dolva said, “We asked ourselves, ‘Does a jacket really need to be oil repellent if it is better for the environment?”[4].

However, the challenge of finding their alternative PFC-free durable water repellant (DWR) wasn’t over. Fjällräven still had to ensure the DWR supplier could work with the materials supplier and that the material of choice works with the DWR. According to Fjällräven chemical specialist Felix Aejmelaues-Linström, “There are so many people involved and so many confidential details… It’s like playing chess, because it’s a slow process of moving forwards and backwards all the time.”[5]

In addition to having to deal with the chess match of supplier relations, Fjällräven was forced to make another compromise. As of right now, there are currently no water-repellant PFC-free zips for Fjällräven to use. After testing the zips, the fact that they were PFC free didn’t matter anymore. None of them were water-resistant. Fjällräven had to compromise and use PFC impregnated zips or zippers on their products, as Dolva explains, “we want to convince other big suppliers to change their minds about zips, but we’re not quite there yet.”[6]

After lots of hard work developing a new DWR and pivoting away from PFC impregnation Fjällräven reached their goal in 2015. Fjällräven had successfully removed PFC impregnation amongst its product line.

Journey To Public Acceptance

Clearly, Fjällräven has done a good thing by moving away from PFC-free impregnation. However, they are still facing their biggest obstacle yet: public acceptance. Fjällräven has received numerous rewards for their sustainability efforts and the general public recognizes and commends Fjällräven’s efforts of being more sustainable and eco-friendlier. Despite this, many consumers don’t believe the new DWR is as effective, don’t understand the philosophy of care for the products, and can’t rationalize the price point.

When it pertains to water repellency Fjällräven’s final product works just as well as PFCs water repellant, however, it does not have the same water-beading effect of PFC products and is missing the long-lasting durability of PFCs. Due to the product not having the typical beading effect, it has led to slow public acceptance of the new product. Nathan Dopp said, “The PFC stuff works great you know what you get out there, and you get a droplet and the droplet forms and runs off your coat. That’s awesome right? But with our product, it’s not quite as apparent.” This leads to the consumer thinking that the product isn’t working when in fact it is doing its job. However, over time you’ll notice that the water may begin to soak into the product this is because the DWR is not as durable and will slowly wear off with use and washing.

PFCs are very durable, and unfortunately Fjällräven’s PFC-free DWR isn’t quite as durable. This is both a positive and a negative: Fjällräven’s PFC-free DWR will break down naturally in the environment and is eco-friendly and sustainable, but they can wash away over time and will slowly become less effective. Meanwhile, PFCs don’t break down in nature, however, this means that PFCs make very durable water repellants and they remain on your jacket forever. To combat the lack of durability Fjällräven wants the consumer to know how to take care of their products effectively. They provide products such as wax to provide an external layer of coating on their products that help their products remain durable. However, the idea of needing to take care of the product hasn’t fully been accepted by the general audience.

In addition, Fjällräven products are at a high price point and many consumers can't rationalize the price point. Fjallraven's products are more expensive because they are eco-friendly, sustainable, and made from quality fabrics. Their process is more expensive as they are doing everything as ethically as they can. As Nathan Dopp states it, "Our consumers should believe in what we do and are already kind of in that camp, so they don't mind spending a little extra money for things that are on the right side of these issues."

What Other Outdoor Brands Can Learn From Fjällräven

Fjällräven accomplished something massive. Something that many major outdoor brands said was impossible by removing PFCs across their products. Nathan Dopp explained, "We don't like to throw stones at anybody else but it's one of those things where if we can do it, and we're a sizable company then everyone else can't really say it's not possible." Nathan continues on by saying, "You get a lot of big brands, just saying 'oh it's not possible' or 'it's just not economically viable'. It isn't really that you can't do it, you just have to make the choice"

When brands examine Fjällräven's journey of PFC free impregnation across their products, it should serve as inspiration for brands in corporate social responsibility. It is proof that when something is the wrong, and it seems impossible to fix, all it takes is some hard work and people who believe in what they are doing. In 2012 PFC free impregnation seemed like a pipe dream however by 2015 Fjallraven had done it across their entire product line. They believed that damage PFCs caused to the environment far outweighed its capabilities as a durable water repellant. Fjallraven knew it would be tough, but they were relentless in their efforts until they found a suitable product.

Other brands have followed suit, for example, Jack Wolfskin has been 100% PFC free since the spring of 2019. They have developed a similar DWR to Fjällräven and face many of the same obstacles as they do such as not having oil-repellency. Even, Patagonia has released some PFC free products and has plans to go 100% PFC free by 2022. Fjallraven's corporate team in Sweden had this to say, "We believe that ongoing government regulations around PFC's and public sentiment will lead to the creation of better alternatives and desire to switch will lead to PFCs being used less and less, but because PFCs are effective an inexpensive this may take a long time."

Links to Quotations

1-https://www.cdc.gov/biomonitoring/pdf/pfcs_factsheet.pdf

2-https://search-proquest-com.colorado.idm.oclc.org/docview/2272756713?pq-origsite=summon

3- https://foxtrail.fjallraven.com/articles/the-on-going-quest-for-100-pfc-free-eco-shell/

4-https://foxtrail.fjallraven.com/articles/the-on-going-quest-for-100-pfc-free-eco-shell/

5-https://foxtrail.fjallraven.com/articles/the-on-going-quest-for-100-pfc-free-eco-shell/

6- https://foxtrail.fjallraven.com/articles/the-on-going-quest-for-100-pfc-free-eco-shell/

EVELYN MEYER

Drying Up: Water Rights in the West

Upper-Division Business 2nd Place

Abstract

Water is the most precious resource on Earth and it's slowly drying up. Hundreds of articles and government dollars have gone into research about water and how to preserve it. There are two schools of thought about water rights; one is leaving it alone and letting the precedent of first come, first use led the way, while the other mindset is changing it so one unifying system governs all water and water rights. As climate change and population growth continue to explode, water rights have become a bigger and bigger issue for the West as a whole. Colorado is the leader in the water rights fight with the toughest water laws and a special court only for water rights, but we need to change how this system works and create a unified federal government run water system in order to ensure that the West still has water as it continues to grow.

Introduction

Water—is the most precious resource on Earth, it's what lets our Earth be a habitat for millions of organisms. But water is a drying up resource, especially out in the western United States. Climate change and human growth have started to limit the amount of available water in the West. Snowpack has steadily decreased over the years, leading to faster melting offs, and less water in streams and rivers. Water rights are one of the most fought about subjects in the U.S. today. While water gets less viability in the news and most people have no idea about complicated water laws, it's something that is constantly on lawmakers, farmers, and city planners' minds. The water debate has split up into two camps. Newer water right users, like cities and urban communities, believe that the U.S. government should create a governing body for water rights, making it so each state is ruled by the same laws, making it easier to settle claims and fight for each state's water rights. While ranchers and farmers, who have used these water rights for centuries, feel like water rights should be left as they are with only small state-wide changes to ensure that no current groups lose access to their water rights. These perspectives are vastly different between rural workers and their agricultural rights fighting against the cities and their urban rights. Both groups need water to survive, and each have their own reasons for needing the water more than others. Water rights need to change in order to ensure that we are protecting the water for the future and making sure that people have access to water to live and grow as a group.

Background

Western water rights are different from the water rights that rule the Eastern side of the U.S. A lot of these changes come from the amount of water available. The Eastern states are governed by the Riparian Doctrine, where property rights are connected with water rights. As droughts happen, the water rights are reduced and are proportionately distributed between equal groups. It's a system that is regulated by permits and built on ideas of reasonable use and mutual sharing (Kressley, 2019). Because of the increased water on this side of the country, more water intensive crops are grown like tobacco, cotton, and fruit. This system was imported from the Old World when the Pilgrims arrived and started colonizing. It was based on the English law of mutual ownership of land and water. This system only works in areas of heavy rainfall, where use of the water by upstream users doesn't have a great effect on downstream users (Danver, 2011). This is old law system isn't perfect, there have been several instances where the water has dried up in these wetter communities as well, leaving millions scrambling for water. The Western U.S. is governed by the prior appropriation doctrine; this system separates water rights and land rights (Kressley, 2019). Landowners own the land, but most of the time they do not own the water that comes with that land. Even if there is a river or stream running through the property the landowner wouldn't have access to it without the accompanying water rights. Water rights are governed by the idea of first in time, first in right. Those who have access to the water first, get to use the water first and have the most right to that water. That means the oldest water right must be satisfied or used in full before others in the system have rights to that water (Danver, 2011). Even if there's not enough rainfall that year, the first water right user gets to use all the water they have rights to before anyone else has access to their own water rights. This system was set up by the 1882 *Coffin* decision where it abolished water rights based on common law, or a combined land and water ownership, and instead set up the current system of first to claim the water right, own the water rights (Holmes, 2015). This system, set up individually per state, favors the ranchers and farmers of the west because they were usually there first. Farmers use over 70% of a region's water, and in some of the more sparsely populated areas in Wyoming and Montana they use upwards of 97% of an area's water (Kaufman, 2018). Water usage is heavily contested between people and states.

Western Water Rights

Not only are farmers fighting with cities over water, but so are states. "Texas…had sued New Mexico and Colorado in a battle over water drawn from the Rio Grande River, while Arizona and California have squared off over water rights to the Colorado River" (Kaufman, 2018). Downstream states feel cheated by the upper states for their water use, and they argue about who needs the water more. States like Arizona and California are arguing about who deserves more water using population metrics and forecasted growths. While California has had the larger population, Arizona's population is steadily growing and that is increasing their water usage overall. As more water is needed it has increased arguments about where the water is going; especially since water is used for more than just basic human needs or crop growth. In California 475 billion gallons of water are used each year to fill swimming pools and to water lawns, an average sized pool in Los Angeles takes around 18,000 gallons of water. While California golf courses use 110 billion gallons of water annually (Kaufman, 2018). Each state has their own water policies and laws. Colorado has the most complicated water laws of the country, and they are the only state with a specific water court. The separate water courts makes it hard for different states to challenge each other on water laws, because each state has a different system of laws and rules governing their specific water areas. Water rights are made even more complicated by states owning the water that is running through other states, this means that they must work in tandem to ensure that each area is getting their allocated amount of water.

Most groups would like to keep using the same system for water rights because they already know the system and are guaranteed water. Farmers are worried if the rules change that they would have to start fighting with cities over water rights, and that would mean they would lose more often. This complicated fight has reached the United States Congress. Colorado State Senator, Cory Gardner, voted to protect Colorado water rights from the Army Corps of Engineers. In a statement after the vote, he talked about why he was voting to protect Colorado water rights instead of letting the Federal Government take over.

> "[It's] A glaring example of the federal government's overreach, the WOTUS [Waters of the United States] rule is an unconstitutional takeover of our local waters, which traditionally have been and should continue to be managed by states, local governments, and water districts," said Gardner. "The WOTUS rule unfairly burdens Colorado farmers and ranchers with endless red tape and unnecessary costs, and that's why I stand with them in firmly opposing it. Today's vote blocks the implementation of WOTUS, and I'll continue to work to protect the agriculture community in Colorado and throughout the country from the Obama Administration's massive overreach" (Gardner, 2016).

Gardner was fighting for the first in time, first in right precedence that protects farmers and ranchers water rights. The new law would have impacted around 170,000 streams and one million acres of Colorado land. The bill was to redefine and expand waters in the Clean Water Act. Gardner and farmers felt like this was the Federal Government swooping in to take over management of the water, taking it away from the people. The people felt like they should have greater input on local waters and on the distribution of it.

Federal Government and their Role in Water Rights

A Federal Government run water system would help ease this burden of water rights. "The planet has enough water for everyone, according to the U.S. Agency for International Development. The reach challenge, it said, is ensuring that water is clean and available to all" (Kaufman, 2018). While this seems like good news, it complicates things for the West, because while the water is there, it's spread out and harder to reach than other wetter areas of the country. To make it even more complicated, the West is continuously suffering from some of the worst droughts in history, making it even harder for them to find the water they need. One of the ways states have started combating water insecurity is by diversifying their water sources, this gives them multiple options from which to draw water and to ensure they have enough water for their people. One of the most important water resources in the West is the Colorado River Basin. It gives water to 40 million people in over seven states and into Northern Mexico. It also irrigates around 4 million acres of crop land. It was labeled as one of the most stressed water systems in the world, because states are drawing more water than the water system can supply (Kaufman, 2018). Even though the water system is international, the federal government doesn't mediate this water source, instead leaving it up to the states to fight for their own water rights. Limited water sources had led to new state laws like the 2016 Colorado Water Right Protection Act signed by Governor Hickenlooper. The Act is designed to protect Colorado water rights and forces the Federal Government to follow Colorado water laws.

> "[The Act] Confirms U.S. Supreme Court, Colorado Supreme Court and federal statutory precedent, which provides that water rights in Colorado are adjudicated and administered according to Colorado laws, not pursuant to administrative policies of the U.S. Forest Service or Bureau of Land Management. When it comes to securing water, the federal government must defer to Colorado water law and water courts" (Hickenlooper, 2016).

This act prevents the federal government from taking these water rights from Colorado citizens, and it gives Coloradoan's ways to fight these agencies in court over their water rights as well. One of the biggest groups affected by this law was Colorado Ski resorts. The Forest Service was requiring the resorts to give up their water rights to the state in order for their national forest land leases to be renewed. This issue was brought to court and in the end the ski resorts won. But this didn't completely settle the debate; Loveland Ski area had to bring a separate court case in order to be able to create artificial snow then recapture the water used in creating the snow for next season's snow creation. While the artificial snow did increase their water usage at first, Loveland Ski wanted to be able to capture this extra water they used and use it again next year, meaning they would take less water overall (Immel, 2004). They eventually won their court case, but it was an uphill battle for them to gain these increased water rights.

Water rights and the amount of water owned is spread across many different states and through state lines. Upper river states have lower river states waters running through them; these upper states often end up taking too much water, leaving nothing for these downstream states.

> "If the upper basin states Colorado, Utah, Wyoming, and New Mexico don't deliver the required 75 million acre-feet of water over 10 years as specified in the Colorado River Compact to the lower basin states California, Nevada and Arizona it could lead to a compact call. This scenario, which looms larger each year with the increasing effects of drought and climate change on an over-allocated river, could trigger involuntary cutbacks for Colorado water users" (Coyote Gulch, 2021).

Lower states often struggle to ensure that they are getting their agreed upon amount of water, especially when droughts are occurring. There is no unifying governing body to ensure that proper water rights are being met, instead it falls on states to defend their water rights against each other. A lot of states fight with each other and with the Federal Government over rulings on water rights. There are several different federal agencies that have roles in water rights from the Forest Service, Bureau of Land Management, and the Bureau of Reclamation. While several different groups are interested in these water rights, there isn't one unifying governing body that is helping to govern the waters. Instead, the U.S. Government is coming in afterwards to try and capture the water rights for themselves.

The Federal Government does have a role in the water rights of states. According to the Bureau of Reclamation, they have built over 600 dams and reservoirs in the West. They are considered the largest water supplier in the West, serving 31 million people and 140,000 farmers with enough water to irrigate 10 million acres (Kaufman, 2018). They also have agencies that cover flood control, drought management, water quality, hydropower, and forest and wildfire management (2018). States fear the government control would mean that upper basin states, Colorado, New Mexico, Wyoming, and Utah, would have to stop using water until the lower basin states, California, Nevada, and Arizona, get their allowed water first (Kressley, 2019). This can make it even harder for people to get the water they need to survive and grow crops. Water rights in the West are claimed in court, and they are comprised of three components; 1. claiming of the water, 2. Diverting the water from the source to a property, and 3. Putting it into beneficial use. Beneficial use ranges from domestic, municipal, agriculture, pescatarian, and aesthetic purposes (2019). While this system has its flaws, it's a system that the states and the people know and one they can work well within.

Changes in Water Rights

Water rights need to change in order for the west to keep up with their growing population and the changing environment. According to Balaji Rajagopalan, at the University of Colorado in Boulder, "by 3057, climate change could cause a tenfold increase in the annual risk of water shortages in the southwestern United States" ("Colorado be dammed," 2009). He and his research team model different water usages and different climate conditions to estimate the potential demands on two lakes created by dams called Lake Powell and Lake Mead. This research shows that river flow could fall by 6% to 20% and a 10% drop in water means a 25% change in the reservoirs being completely depleted. If it goes up to 20% drop in water the risk rises to 50% (2009). As the west grows, they can quickly run into the chance of running out of water due to changes in the climate and population growth. Colorado has been working on new systems of water research. A bill was introduced to the state legislature that would create a real time water market research and conservation group. The research would be funded by the state, the University of Colorado, and Colorado State University; together they would start studying the water ways using remote sensors, aerial observation, cellular and satellite telemetry, water resource forecasting and blockchain documentation (Spina, 2020). This experiment would help them get a better understanding of the waterways and hopefully help them find more ways to conserve it. A major plus side of this move is it would lead to informed conversations about the waterways and the different options on preserving it. The research can be implemented into law by requiring that the waterways be monitored by these new methods, leading to a system where people can use the water, but the water systems are being carefully looked over and preserved. The researchers are hoping to get rid of the current system of ditch riders, where people are paid to drive along the ditches and check how much water is being used based on meters for each farmer's land. The ditch riders are in control of the system, and they open the waterways for the farmer when it's those farmers turn to receive water. This is an expensive system with meters that aren't that good, and most farmers do not trust that they are getting all of their water. The distrust causes farmers to use as much water as they can when they have access to it because they know they won't have access to the water later on in the year. The overuse of water can lead to too much water being used on fields where the soil is saturated, and no new water is being absorbed (2020). Dan Lisco, a hay farmer in Boulder County, uses remote soil moisture monitors to monitor his fields. He could see when his soil was high and the soil wouldn't absorb any more moisture; this let him turn off his center pivot irrigation system for several days, saving him water, eliminating runoff, and cutting down his electricity costs (2020). If Colorado could encourage more farmers to try this system, it could help to conserve more water and ensure that the water is being put to good use.

Solution

The solution to this complicated problem is not going to be easy. Several different things will need to change in order for Colorado and the West to have a productive and working water system. The system was set up by private investments early on in the west's history. According to the Department of Commerce in 1922, "By 1920, $823,236,000,000 (2015 $) had been invested in 109,174 canals and ditches spanning (159,864 miles)" (Leonard, 2019). The West set up its own water system in a time of limited population growth and unlimited possibilities. But now something has to change. We need a strong federal government-run system that is run by one agency. The agency should rule over both Western and Eastern water rights to help ensure that all water rights are being protected. Getting rid of the Riparian Doctrine and the prior appropriation doctrine and setting up different management systems for the different eastern and western water systems ensure fairness and preservation of all waterways. This agency would need to have two congressional members of each state in its oversight board to ensure fairness for all states involved. This group would have the power to fight for each state and to complete international talks. The first in time, first precedence system should stay but with talks between farmers and cities. They can work out an exchange where the cities get the water when the farmers don't need it, and the farmers have access to the water year-round. Instead of the farmers getting the water for a limited time and only a certain amount of water can be used, they can use the water to start their growth, then check to see what moisture level their fields are at. During the times when the fields don't need water, the cities can increase their usage of water and can store the extra water for days when they have limited access to the water. This agreement would need to be monitored by states and the governing agency to ensure that all farmers and cities are having fair talks. Farmers with the most precedence would still have first water rights, but they would split them up through the growing season, ensuring that the farmers with lower precedence still get water and them knowing that they can have the water back then they need it to continue field growth. This system could extend the growing season and eliminate runoff, saving more water in the long run. While this system wouldn't be easy to set up and it will take a while before farmers and cities trust that no one is trying to steal each other's water rights, it can help in the long run on ensuring that each state gets the water they need while each group feels like they still have rights to the water and have a chance to continue growing the West.

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ALEXA HUGENBERG AND KATIE DENG

Resuming Operations Proposal

Collaborative 1st Place

March 16, 2021

1212 W Cedar Ave.

Denver, CO. 80223

Dear Ms. Aubertot:

Bus to Show is committed to serving the community in an enjoyable environment. Like many other organizations, the COVID-19 pandemic has taken a toll on your mission of reducing carbon emissions and event-based DUIs. As the development and distribution of vaccines continues, the time has come to draw up a detailed plan on how to resume Bus to Show's operations.

We believe that our proposed twelve month plan will be able to jumpstart your organization's activities. Being in the same age group as your target audience, we provide valuable insight on how a company like yours will be able to garner the trust of consumers. As college students, we are able to understand certain conditions that would make young adults partake in a public event-based transportation service. Additionally, our team members have first hand experience with restarting operations according to COVID-19 protocols as their families own current running businesses. With this in mind, the following are the short term objectives we propose in order to further Bus to Show's strategic plan:

1. Restarting services to provide riders with a satisfactory transportation experience and to ultimately reduce carbon emissions and event-based DUIs.
2. Hiring a part-time mechanic to help maintain a certain baseline level of activities.
3. Stocking up on frequently used bus parts to maintain a consistent inventory of operational buses.
4. Creating an efficient equipment storage and repairment system by building an auto parts shed on the bus lot.

To accomplish these goals, we have also devised three initiatives that use social media and online branding as practical methods of resuming operations. Our year-long plan for continuing Bus to Show's activities will not only allow for your organization to initiate a comeback but for it to grow in the future as well. We look forward to hearing your thoughts.

Sincerely,

Alexa Hugenberg Katie Deng

Alexa Hugenberg

Katie Deng

Summary

This proposal lays out the guidelines on how Bus to Show will be able to restart operations as the COVID-19 pandemic gets under control. To do so, your organization will meet the following goals within a twelve month period: resuming transportation services, hiring a mechanic, stocking up on frequently used bus parts, and building a mechanics shed on the bus lot. These four objectives will ultimately further Bus to Show's overarching mission of reducing carbon emissions and event-based DUIs. We also detail steps on how to accomplish the four listed checkpoints: increasing Bus to Show's presence online, providing both customers and employees skills and resources on how to safely partake in the recommencement of public events, and to recruit staff members to help maintain the functioning of the organization. Various KPIs will be used to measure the progress being made towards these benchmarks goals. As activities pick up, the number of riders will increase from month to month. The financial cost of the following plan falls under the budget of $10,000.

Introduction

The purpose of our operational proposal is to provide an outline of steps and procedures to restart your organization's activities amidst the slowing of the COVID-19 pandemic and to utilize existing resources to create a solid operational base for the growth of your company and mission. Our plan is broken down into four subset goals and corresponding initiatives that will be carried out within a twelve month period in order to reach your five year long-term goals outlined in the strategic plan. The first and most important goal for your company is to support the community by adequately servicing the needs of your riders and employees. In order to ease back into operations and meet the demand of resuming operations as early as May, the second goal is to hire a part-time mechanic. The third goal is to make enough profit in order to build a shed on your bus lot. The final goal is to have a stock of the most frequently used parts for your busses available and conveniently placed in the newly built shed. These last two goals are to be achieved near the end of the yearly plan as the organization and the community transitions back into an open and social state.

We propose 3 initiatives that will lead to the fulfillment and achievement of all four of the goals presented. The first initiative is to create and implement a marketing/advertising plan. This plan will be geared towards reaching the community as well as potential employees providing them with updated information about the organization's current status and plan for reopening this coming season. The second initiative is to construct COVID-19 operational procedures and guidelines for both riders and employees to follow and implement. This will be crucial for your company to get certified to operate and it will create organization within your workforce. You will also gain trust with potential and returning community riders by informing them that you have taken every precaution to ensure their safety and wellbeing. The final initiative is to hire and train new and existing employees. Your business can not run smoothly without professionally trained and experienced employees. Our initiative will outline the best ways to start searching and recruiting workers as well as the specific rules and regulations to follow regarding hiring during the pandemic.

Evaluation / Metrics

In order to measure the progress and success of your organization towards our twelve month proposition, we present a series of possible key performance indicators (KPIs) to help quantify your company's performance. The goal to enhance Bus to Show's current marketing/advertising — primarily through social media platforms — can be measured through online audience engagement. A minimum of weekly posts will keep your organization relevant on numerous social media feeds and the number of likes and comments on each post can be recorded for progress. Engagement can be compared on a quarterly basis and adjustments to your presence on social media can be made accordingly. In addition, the number of followers provides a good indication of growth to the organization. To maintain consumer satisfaction, a follow up email to consumers will be sent out after each event. A simple rating system on the event can be used to quantify the customer's experience. The feedback can be reviewed quarterly as well and changes to Bus to Show's operations can be made.

To measure the success of COVID-19 protocols implemented throughout your organization, the number of contracted cases within the company can be measured. To ensure the best quality of service, COVID-19 cases in relation to Bus to Show should stay below a 5% threshold of total personnel (employees and customers) involved in the organization's activities. Employee health checks will be mandatory but in order to track customer cases, a voluntary feedback form can be used to follow up with customers. This can be sent out with the consumer feedback form. Customers should respond within a week after their event with Bus to Show as that is the average timeframe in which COVID-19 symptoms develop. The 5% benchmark is the typical statistics significance level (alpha, □) used to measure whether results have any meaningful impact. The statistic is used to evaluate the probability of rejecting the null hypothesis: a statement of no significant difference. Smaller significant values are possible, but require more sample evidence in order to reject the null hypothesis (Frost). One possible null hypothesis that can be used to assess Bus to Show's efforts in maintaining an environment free of the virus is: Bus to Show's COVID-19 protocols and number of contracted cases *are not* related. An alternative hypothesis can be Bus to Show's COVID-19 protocols and number of contracted cases *are* related. The data gathered will be used to compute a p-value, the probability that the sample will have an extreme effect *if* the null hypothesis is true (Frost), that will be then compared to the □-value, and ultimately determine whether the null or alternative hypothesis is rejected.

Lastly, to gauge the effectiveness of recruiting and training employees, Bus to Show will aim to have 50% of its staff consistently working year long. It is projected that by July 2021, the general public population in the U.S. will be vaccinated and by March 2022, your organization will be close to full operation as concerts and events will have increased. Although events will pick up within the next year, Bus to Show's most active months are August and September, with March to May being the time period in which most of the recruitment will occur. Given that there will be ongoing activities five out of the twelve months of the year, having half of the staff actively on call will help Bus to Show maintain its operations. To evaluate employees, quarterly training reviews will be conducted with increasing numbers of individuals passing.

Goals and Objectives

The year-long goals of resuming transportation services, hiring a part-time mechanic, building an auto parts shed and stocking up on frequently used bus parts can be achieved with our three proposed initiatives. The first initiative is to create and implement a marketing/advertising plan. Since we have now transitioned into a society that is heavily reliant on technology for day to day news and information, building a strong online presence is pivotal for your organization to reach community and non-community members about your mission and plan moving forward. This initiative will help your organization reach the first goal of supporting the community.

Rebrand Website

With that said, we believe the first substep of the marketing plan is to update and rebrand your website. Building a captivating and user friendly website that is well organized and easy to navigate gives a great first impression to potential customers. The current website does have good flow and aesthetic on a mobile device, but it does not work well on a computer or laptop. Your website should be versatile in order to service all types of people with varying access to technology. As for the desktop interface, the current main page has great graphics and visual aspects of your brand. However, the background image is cut off at the bottom of the page which could potentially distract and lose consumer interest. The *Ride with Us* button should be the call to action but it is small and hidden near the bottom of the page. As for the Informational Events page, the layout is confusing and there is no guidance for how a customer would linearly navigate through steps to purchase tickets for an event. Additionally, some of the text is small and hard to read. To resolve these details, we suggest using free and easy to use brand building website companies such as Wix or WordPress to work towards a more cohesive website.

Social Media Strategy

The next substep is to create a social media strategy. Having strong photography, graphics and videos help engage potential customers and grab the attention of scrolling users on digital platforms such as Instagram, Twitter, and Facebook. Within the time from now until concerts start back up again in May, you will need to increase your activity on all of your current social media platforms. Posts must detail the new protocols and safety measures in place to protect riders as well as information about new and exciting upcoming events. You also need to use all social media platforms to advertise job postings and employee benefits. Other useful media tools such as Facebook polling would help your organization receive recommendations from different audiences about returning this season. Learning about what would make your customers feel confident when riding your buses and taking their input into consideration is key to overall success.

COVID-19 Operational Procedure

The second initiative is to construct COVID-19 operational procedures and guidelines to ensure a smooth transition back into the service market and to provide riders with a feeling that they are safe and well protected. If riders do indeed feel safe, they are more likely to continue using your buses in the future and recommend other people to do the same. This funnels more money into the organization to be able to eventually reach the goals of building a shed and having frequently used mechanical parts for the busses available. Creating an outline with specific steps to follow will also help you build a sense of structure and organization amidst the hectic world around us today.

According to the Center for Disease Control and Prevention (CDC), the COVID-19 virus is most commonly contracted through person-to-person contact. Specifically, the virus travels through respiratory droplets which coughing, sneezing, talking, or breathing can produce ("How COVID-19 Spreads"). Based on these findings, regulations such as maintaining six feet distance, wearing masks, regularly washing your hands, and avoiding crowds ("Guidance for Wearing Masks") has been implemented throughout the country and will continue to be enforced as Bus to Show resumes operations. With these conditions in mind, although a big characteristic of Bus to Show is the upbeat atmosphere through music, eating and drinking, these activities will have to be prohibited to prevent the spread of respiratory droplets until COVID-19 has been successfully contained on a national scale. To compensate, you may look to other resources to preserve the positive mood by handing out party accessories such as glow sticks that riders can use to dance to the music with.

Within the COVID-19 procedures and guidelines, there must be a detailed instruction manual for how employees clean and disinfect buses after each service. The CDC states that at a minimum, commonly touched surfaces must be cleaned and disinfected inside the vehicle at the beginning of each shift and between transporting passengers ("Cleaning and Disinfection"). Non-porous surfaces within the interior of the vehicle such as arm rests, door handles, seat belt buckles, light and air controls, doors and windows, and grab handles, should be cleaned with detergent or soap and water if the surfaces are visibly dirty before applying the disinfectant. Soft or porous surfaces such as fabric seats should be cleaned with the appropriate fabric cleaner indicated and disinfected with an EPA-approved disinfectant that is suitable for porous surfaces. Furthermore, when disinfecting the vehicle, doors and windows should be open to provide adequate ventilation. Employees should wear disposable gloves if needed as well as any other PPE required according to the manufacturer's instructions ("Cleaning and Disinfection").

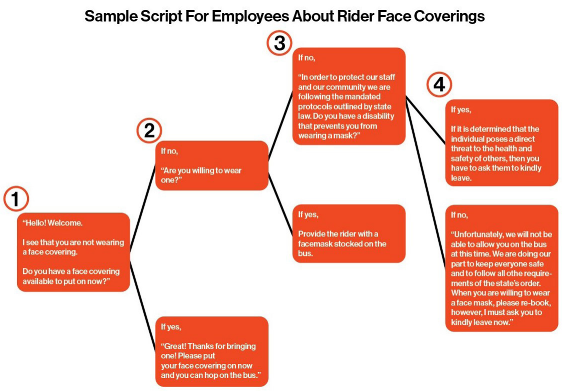
Cleaning and Social Distancing Practices

To protect your employees, the importance of good cleaning and social distancing practices should be posted and executed throughout the bus lot and on the individual buses. Employees will be required to wear masks at all times on duty. If they are showing any symptoms, signs of sickness, or have been in contact with known positive cases, it should be mandatory for them to stay home ("Guidance for Businesses"). Hand sanitizer, wipes, and disposable masks should be readily available and stocked on buses for employees to use. Customers should also be provided hand sanitizer upon entering the bus ("Guidance for Businesses"). Printed out signage detailing social distancing and mask laws should be posted on multiple windows on the bus and should be sent to each rider prior to arriving at the pick up location. According to the recently amended Executive Order, all people in Colorado over the age of 10 are required to wear a mask when entering and within any public indoor space as well as when waiting to use public transportation services ("Public Health Requirements"). Extra masks should be stocked on each bus in the case that a customer does not have one. If the customer does not have a mask and refuses to use one provided by your organization then by the Executive Order, the bus driver must refuse service to the customer. Provided in the graphic below is a sample script for employees to follow when encountering a customer not wearing a facemask.

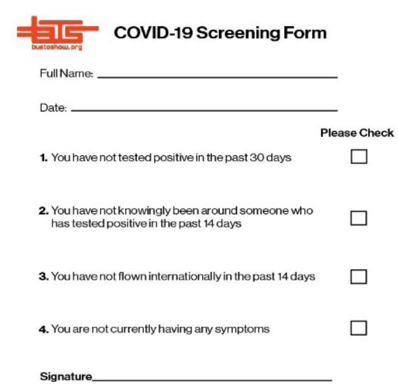
COVID-19 Prescreening Form

Another way to ensure the safety of riders and employees is to implement a COVID-19 prescreen form that you send out via email to riders along with the receipt for their tickets prior to their scheduled event date. You can create a free online Google questionnaire that automatically updates responses and submissions to a Google spreadsheet. You can then embed the document URL to a QR code for riders to quickly and efficiently scan on their mobile devices. You must inform the rider that they have to completely fill out the form before arriving at the pick up location. If they have not filled out the form, you can provide a printed out QR code for them to scan before entering the bus. The graphic below is a sample form that you can use, build off of, and edit based on the needs and guidelines of the current COVID-19 laws.

Since your organization is based on traveling to and from multiple different counties in the state of Colorado, frequently checking the updated COVID-19 dial dashboard is important in making sure that you are following and performing all of the required guidelines and procedures throughout each area. Currently, both Denver and Boulder are Level Yellow status whereas Jefferson County is Blue Level status. Therefore, when traveling to and from these three counties, guidelines and capacity restrictions that are outlined under the Level Yellow status must be followed.



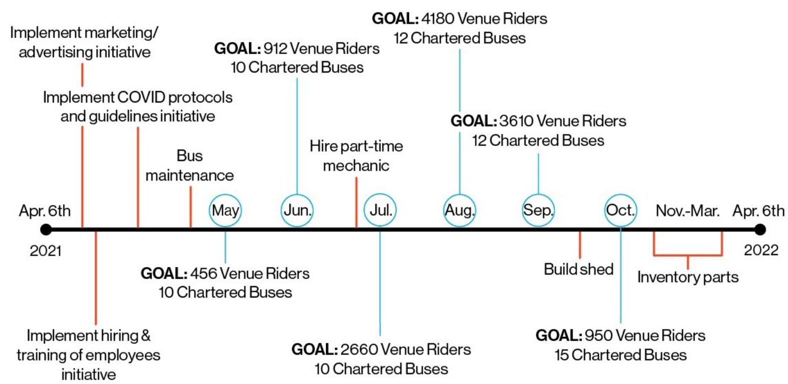
The final initiative is to create a plan for hiring and training employees. Having a substantial number of drivers that are available will increase the number of bus trips and events your organization can service and thus increase your funds and reduce carbon emissions. Both goals of building a shed and stocking important replacement parts contributes towards this goal. To achieve this, one of the best ways to advertise a job opening is to take advantage of online job sites such as Indeed and ZipRecruiter. Another effective way to reach out to potential employees is to post job application information on social media networks. The driver hiring infographic created during the first client project would be especially effective on social media and on your website, or they can be on printed posters and banners. As far as hiring during the pandemic, the few principles you are allowed to implement are outlined in a document called "Pandemic Preparedness in the Workplace and the Americans with Disabilities Act" provided by the U.S. Equal Employment Opportunity Commission. It states that an employer can delay the start date of an applicant who has COVID-19 or corresponding symptoms ("Pandemic Preparedness"). It also states that an employer can take an applicant's temperature as part of a pre-employment exam. You may also require ADA-covered employees to provide a doctor's note certifying fitness to return to work who have been away from the workplace for an extended period of time ("Pandemic Preparedness"). These are the main principles that you can take as you begin recruiting and hiring new employees.



Timeline

Our proposal is strategically planned over a twelve month period. Within these twelve months, each of the four goals proposed will be met. Statistics directly sourced from IBISWorld point towards an approximate 42.6% increase in online event ticket sales revenue from 2020 sales (O'Connor). According to Rolling Stone Magazine, 83% of fans have held on to their tickets for rescheduled shows (Millman). Our timeline, as seen in the graphic below, is strictly structured on this information which signifies the fact that people are eager to get outside and attend events again.

Budget



In order to meet our four proposed goals by the end of the year, we believe the organization should focus all efforts on servicing riders to Red Rocks as well as providing chartered bus runs**.** To create the budget, we first looked at the current Red Rocks schedule for the next 6 months and determined how many busses per month your organization would need to service with a goal of 80% capacity or 38 people on each bus. We then approximated the number of charted bus events each month. Below is a table displaying this information.

Month	# of scheduled concerts	# of chartered events	# of busses in use
April	6	10	2
June	8	10	3
July	20	12	4
August	22	12	5
September	19	12	5
October	5	15	5

All overhead costs are fixed except for core administration salaries. We budgeted $6,000 for core administration in May and June and increased the budget to $9,000 in July. As a step towards having a full time mechanic, the budget allows for a part-time mechanic at $3,000 a month starting in July. Costs for materials and supplies for COVID-19 protocols and safety measures were then determined per round trip, at $3.

As each bus is introduced into use, the following COVID supplies would be stocked on board: one 50 pack of face masks, one small 16 oz hand sanitizer of which would be mounted on the railing at the bus entrance, and a canister of wipes containing 160 individual wipes. The amount of time each of these items would approximately last is detailed below in the table. The large 1 gallon hand sanitizer would be used periodically to refill the 16oz bottles as they run out.

Nature of Expenditure/Item	Quantity	Cost	Timeframe
Materials & Supplies			
Masks (Boca Terry)	50 pack	$14.50	2 per trip + extras: 20 round trips
Hand Sanitiser SM (Amazon)	8 pack, 16 oz	$35	3 weeks
Hand Sanitiser LG (Amazon)	1 gallon	$20	1.5 months

Rejuvenate/Disinfectant Wipes (Universal Companies)	12 canisters	$109	16 wipes per cleaning, 120 cleanings, ~ $1 per cleaning

The following is our balance sheet for the months of May through October 2021 detailing the overhead, operating costs and income.

Overhead			
	Admin Costs	Financial Services	$1000
		Core Admin	$1200
		Payroll Expense	$1000
		Payroll Taxes	35/person
		Business Phone	80
	Bus Insurance	General Liability	$1100
		Workers Comp	$1850
		Health	$4000
	Rent	Bus Parking	$1500
	Utilities		$1200
Total Overhead			**$17,730**

Operating			May	June	July	Aug	Sept	Oct
	Driver Payroll	200/concert run	$2,400	$4,800	$14,000	$22,000	$19,000	$4,000
		20/hr min $100	$1,200	$1,200	$1,440	$1,440	$1,440	$1,800
	Fuel	10 miles gallon/ $3 per gallon	$330	$510	$1,230	$1,830	$1,605	$525
	Auto Insurance	1500/per bus	$3,000	$4,500	$6,000	$7,500	$7,500	$6,000
	Emissions	500/per bus/ per year	$83	$125	$167	$208	$208	$208
	Vehicle Inspection	100/per bus/ per year	$17	$25	$33	$42	$42	$42
	Mechanic Payroll		$ -	$ -	$3,000	$3,000	$3,000	2,500
	Vehicle Maintenance	6000/per bus/per year	$1,000	$1,500	$2,000	$2,500	$2,500	$2,500
	Covid Support	6000/per bus/per year	$33	$66	$193	$303	$261	$55

Total Operating	**$8,063**	**$12,726**	**$28,063**	**$38,823**	**$35,556**	**$18,130**
Total Expenses	**$25,793**	**$30,456**	**$48,793**	**$59,553**	**$56,286**	**$38,860**

Income			May	June	July	Aug	Sept	Oct
	Red Rocks	Assuming busses are 80% full	$11,400	$22,800	$66,50	$104,500	$90,250	$19,000
	Chartered	Avg $1100 per charter	$11,000	$11,000	$13,200	$13,200	$13,200	$16,500
Total Income			**$22,400**	**$33,800**	**$79,700**	**$117,700**	**$103,450**	**$35,500**
Profit/ Loss			**-$3,393**	**$3,344**	**$30,907**	**$58,147**	**$47,163**	**-$3,360**

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KATE PENDAVINJI, JUSTIN HALL, and CARSN KOHLBRENNER

Bus to Show: Concert Transportation Specialists

Collaborative 2nd Place

To AARP Livable Communities,

On behalf of Bus to Show, we are happy to apply to your RFP for a non-profit organization to improve local communities.

Bus to Show is a non-profit transportation service providing rides to thousands annually. We are delighted to get the opportunity to continue community improvement through the support of local businesses as well as safe practices.

Bus to Show has already contributed exceptionally positively to the Boulder and Denver communities. Through partnering with local businesses, our bus stops generate plenty of foot traffic and revenue to restaurants and shops in the area. Our main mission overall, however, is to make the community safer. Our low prices have allowed us to maintain a large and diverse clientele. The more people we can reach, the more people we can keep off the roads and travel safely from concert venue to home. With Boulder being a college town it comes with the large issue of drunk driving. Our services increasingly cut down the risks of this problem.

The AARP 2021 Community Challenge is especially well suited to Bus to Show's endeavors as we intend to cover many of the achievable outcomes in the following ways:

> **Supporting local Coronavirus recovery.** Bus to Show will be working with restaurants and facilities that have not had nearly the concentration of business that they had prior to the pandemic. We intend to uphold our local beloved businesses that give our community the character we appreciate and miss. We also will directly be employing a great deal of bus drivers and maintenance people.
>
> **Delivering transportation to increase mobility and connectivity.** Having a system of transportation to get large quantities of potentially intoxicated people to and from large events is crucial to the safety of their surrounding peers. Keeping concertgoers off the roads is imperative to making the Denver area a safer place for people of all demographics.
>
> **Creating vibrant public spaces.** Our buses are pieces of art. We hire local artists to display their artwork so it can be seen from Denver to Boulder. Our buses stand out and add to the eclectic aesthetic of our beautiful community. Our buses are also more environmentally conscious than rideshare and other similar services. Lowering emissions is imperative to maintaining our precious Colorado landscape—something that the Front Range values primarily.

We have an extensive team including executive director Amandine Aubertot as well as our beloved bus drivers. Everyone at Bus to Show is hands on and contributes to all operations, especially the drivers. Due to COVID, operations have been shut down for over a year now, and we will have to consider the expenses that will incur to train drivers who previously obtained a CDL class B license.

We look forward to hearing from you regarding this opportunity. Bus to Show is eager to resume operations after being halted for this duration. Our team is dedicated to serving AARP's livable community needs!

Table of Contents

Summary

Bus to Show is a 501(c)(3) fiscal sponsorship non-profit organization with a mission to improve the lives of everyone in the Front Range community by reducing fatal accidents due to intoxication. We offer transportation to and from popular concerts at venues such as Red Rocks Amphitheatre and 1stBank Center. By offering transportation for, on average, $25 a person as opposed to upwards of $50 a person prices offered by for-profit commercial entertainment transportation services, we can reduce the amount of people getting behind the wheel after possibly consuming alcohol or other substances. Not only is it cheap and saves lives to ride with us, it is also fun and helps the environment by saving on fuel consumption per person. Our buses are fully equipped with PA Speakers, a DJ table, and premium leather seats. During the summer of 2018, Bus to Show made **1,347** trips and carried a total of **34,318** passengers.

In order to get our buses back on the road, we will allocate any grant funds towards hiring drivers, training drivers, and any maintenance costs that might be incurred to keep our buses up to regulation standards. We estimate that a minimum of 10 drivers will be needed as our services are re-established, but a maximum of 20 drivers could be recruited by the end of the year depending on how often our services are reserved.

Seeing as we will be resuming operations after a year of inactivity, we will have to be looking for entirely brand-new drivers. This means that we will have expenses to do checks on credentials and possibly entirely fully train the drivers. Not only will our drivers be needing a lot of our training, but since we have been completely inoperable since last March we will also be needing to do a lot of maintenance on the buses. Drivers also must be trained on bus maintenance in order to ensure driver and customer safety.

In order for Bus to Show to uplift the community as we normally do, we are going to need rehabilitation of our exposure as well. We intend to hire a few people to help us with web design as well as media coverage. Our online presence has been muted this past year and it is imperative to our functionality that we inform people that along with concerts reopening that we will be operating.

All funding will aid in negating the time we have lost. It is imperative for the survival of our mission that all of the above is accomplished. To maximize safety we have to follow these maintenance steps to move further. Bus to Show cannot continue to help the Front Range community how it has without such precautions.

Introduction

Intoxicated driving is a major problem in the US and Colorado. Between 2011 to 2017, the number of deaths by motor vehicles has increased by 14% nationwide. In Boulder, the amount has stayed relatively constant but still high. Bus to Show was founded to reduce the number of accidents and deaths due to intoxication in Boulder and other Colorado cities/towns we service.

Since Bus to Show was founded in 2009, the number of arrests made for DUI's has consistently dropped. When large gatherings are once again allowed in Colorado, it is unknown if this trend will hold up or increase. Although the majority of DUI arrests are on individuals in the age range of 19-27, all ages are affected by impaired driving. Accidents involving senior citizens aged 65+ have higher mortality rates and more severe injuries than those that occur to younger drivers. Not only is it more severe, but there has been a 60% increase in the number of accidents involving senior citizens in the US since 2000. Our goal is to make the roads a safer place for everyone; senior citizens should not feel as at risk when being on the road, regardless if they are driving or not.

Not only was Bus to Show created to reduce traffic accidents due to intoxication, it was also created to help the environment by reducing emissions. One of our buses can hold 48 passengers per trip and consumes about 14.5 gallons of gas per trip to Red Rocks Amphitheatre. A standard car making the same trip with only one passenger uses about 1.8 gallons per trip. That means that our buses cost about 0.3 gallons per person per trip while a standard car is still 1.8 gallons per person per trip. If 48 people chose to ride with us instead of taking a car to a venue, a grand total of 1868.3 gallons of fuel would be saved. That is enough fuel for one of our buses to bring the same amount of people to Red Rocks Amphitheatre **128** times!

Over the past 4 years, our non-profit organization has grown immensely in response to positive local reception and growing need to make a change in the community. We originally started out with 50 total riders in 2009 and had expanded to 30,937 riders in 2018. That is **46 thousand** gallons of gas saved in the year 2018 alone!

Bus to Show is intent on being the safest, cheapest way to get to Red Rocks Amphitheatre as well as other venues in the Front Range. Operations have halted one hundred percent since the pandemic hit and we are trying to get back out and make people feel even safer. With vaccination requirements at venues we have always and will always ensure that people feel comfortable riding with us. We are looking forward to a new and hopefully bright beginning where we can all let loose a little again while protecting the communities we love so dearly.

Statement of Need

Due to the Covid-19 pandemic, our operations have been temporarily halted with the absence of large concerts and limited seating due to social distancing. With the vaccines starting to roll out, Red Rocks Amphitheatre and other venues have already begun scheduling future concerts for the year of 2021. As a result of this temporary pause of operations, we have exhausted our capital and can not get our buses on the roads. It is important to the well-being of the Boulder community that our services become available around the same time that high density concerts are happening.

We currently have around **30** buses that can be fully operational after a maintenance check, however our goal is to get **10** in a fully operational status by July 2021. Other than the buses themselves, we need to hire new drivers along with potentially recruiting past drivers at a reduced cost. We estimate, through research into reliable sources on the subject such as The Schneider Guy, that it could cost around $3360 to train a new driver that does not already have a CDL class B license and around $570 to give a training course customized to Bus to Show's needs for drivers that have already obtained a CDL class B license. Since training a driver without a CDL class B license is costly and has little to no advantage over training someone who already has a CDL class B license, we will solely be focusing on recruiting drivers who already have a CDL class B license. To administer such a course, we would need the funds to bring back a driver who worked with us in the past who is well trained and authorized to train others.

Another aspect that needs to be addressed for our services to flawlessly integrate back into the community is our online presence. Currently, our website is not complete and cannot be used to reserve a bus. As a non-profit organization, we will ask for the help of volunteers to help with the design and functionality of our website, but it will still cost an estimated $500 - $1,000 to maintain. As well as having a website, we want local residents of Boulder and other neighboring cities to become aware when our buses are back in operation. To do this, we will mainly rely on social media posts to popular platforms such as Instagram, Facebook, and Twitter to spread word. We will need to commission a local designer willing to create an artistic and informative social media post at an estimated cost of $100 - $200 per post. With enough awareness, Bus to Show can start saving lives again by July 2021.

Goals and Objectives

Bus To Show stands out from other transportation companies because of our nonprofit status and company-wide attention to the wellbeing of our patrons and others living in their area. Since beginning our ride service back in 2009, it has been our goal to place an emphasis on improving our community. This has included facilitating harm reduction through reducing the potential for DUI related accidents, aiding the effort to reduce carbon emissions, and promoting a positive atmosphere for all members of the community. Whether members of the Front Range community choose to ride with us or not, we strive to benefit them by keeping them safe and contributing to the preservation of the environment around them. We feel that our mission to reduce the negative effects of impaired driving and fuel consumption while fostering a positive relationship with our community aligns perfectly with the AARP Community Challenge's request for projects that deliver inclusive solutions in the areas of transportation to increase connectivity and mobility, creating vibrant public spaces, and supporting local Coronavirus recovery. In order to achieve these goals, we have outlined the following objectives.

Training Bus Drivers: An important aspect of supporting local Coronavirus recovery is reintroducing jobs to the workforce. Bus to Show will aid in this effort by providing skilled positions and training for its drivers.

Improving our Online Presence: Generating a larger audience will allow us to offer our inclusive transportation strategies to a larger amount of the community, and thus have a greater impact on Coronavirus recovery, whether it it be for our riders, our local business sponsors, or even the non-riding members of our community that benefit from our safety and eco-friendly ideals. Given the opportunity, we plan to make improvements to our website and increase our emphasis on social media marketing.

We believe that after implementing these changes, backed by funding from the AARP Community Challenge, Bus To Show will be able to have an even greater impact on the Front Range community than before the pandemic. By reintroducing our buses into circulation we will not only offer new skilled jobs into the workforce, thus stimulating the economy, but will also once again offer a safe and fuel efficient alternative to individual, potentially reckless, driving to our community. With an expansion of our presence online through our website and on social media, we will be able to promote a safe, affordable, and wholesome environment for returning to social activities to a larger audience. This will be mutually beneficial for expanding our nonprofit and providing safe and reliable transportation to our community.

Demographics

Every year, during normal operations, popular concert locations in the Front Range area including Red Rocks Amphitheatre, 1st Bank Center, and Dick's Sporting Goods Park see hundreds of thousands of visitors. This introduces a larger logistical problem regarding how these concert goers will get to and from their destinations. Since its inception, Bus To Show has transported an increasing and significant portion of this crowd, and in 2018, saw a ridership of over **30,000** people. With the increasing number of community members relying on Bus To Show's services, we have a responsibility to maintain this level of support as concerts begin to happen again. All members of our community have something to gain from Bus To Show increasing its outreach over the next few months and in the years to follow. This is especially evident with respect to our measurable and positive impact on the safety of drivers during at risk times and on the environment through reduction of fuel consumption.

Regarding improving the safety of our community on the roads, there are a few important statistics to take into consideration. The first, and most evident is the fact that since 2006, the Front Range has seen a **45** percent decrease in DUI's. Bus To Show's increasing ridership during at risk times has definitely made an impact on this excellent statistic. The second is even more prevalent for the betterment of the AARP community. Unfortunately, according to the Center for Disease Control and Prevention, in 2018 almost **7,700** adults aged 65 years and above were killed in car crashes and more than **250,000** were treated in emergency departments for crash related injuries. This means that, each day, more than **20** older adults are killed and almost **700** are injured in crashes daily. Combine this with the fact that driving conditions are often much more dangerous at night after concerts, when many drivers may be intoxicated, it becomes evident that removing these dangerous conditions is highly beneficial to others on the roads, especially for groups such as the elderly that are already at risk.

In addition to improving driving conditions for everyone involved, we must also consider the positive impact that Bus To Show has on the environment through reducing fuel consumption due to decreasing the number of cars on the road. Assuming that without our ride service people would carpool to concerts in groups of three on average and that all 30 buses were running at the time, on any given round trip ride from boulder, we would collectively save almost **300** gallons of fuel. Combine this with the fact that according to statistics taken from 2009 to 2018, Bus To show saw a **40** percent annual ridership increase before the pandemic. It is evident that Bus To Show is making a significant contribution to the reduction of carbon emissions. Clearly, all the positive effects of Bus To Show's business can be enjoyed by every member of our community, especially those already at the most risk, such elderly adults.

Timeline

The following is a timeline of completion for each of the various endeavors that will occur to bring Bus to Show back on the road. The assigned completion date is November 10th, 2021, but our peak operation time is the summer months between July and August because of the popularity of Red Rocks Amphitheater during this time. For this reason, we have set a premature completion date to July 28nd to compensate for any and all unforeseeable delays that may take place and to make the most out of our impact to the community.

We are only giving ourselves ten days for recruiting a former driver because we already are in contact with potential instructors. For this reason, bringing them up to speed on their duties will not take long. We expect recruiting a web designer and social media designer may take more time because we will start this application process from scratch. However, due to our excellent networking web we have with local residents in Boulder and Denver, we are confident that we will receive a sufficient number of promising applicants that believe in our message at Bus To Show. Additionally, we will not make the applications a difficult process.

Social media advertisements will be posted a little under two weeks before operations begin generating hype and anticipation around our services, and the website will be up and running shortly after so local residents can start making their reservations. After some preliminary research into the topic, we are confident that giving a web designer about two months to work is enough time to complete the expected website modifications.

Outcomes

Ideally the outcomes would be to resume to normalcy as soon as possible. Most of our post COVID recovery will be taking place in the summer after general population vaccines are distributed and concert venues open again. As you can see from the timeline we will begin by getting word out and then starting all of our maintenance upkeep. We should also be moving into a functional lot as our buses are in a smaller, non-operational lot currently.

Our desired outcome in resuming operations is to contribute to these pre-COVID statistics as well as having these qualities:

Have a group of drivers ready to go— Within our timeline we hope to get a trustworthy group of drivers that can help us get us back on track. We need a dependable and consistent crew that will help us make it all possible. These people will be making sure the buses are running okay

Minimizing the number of vehicles on the road during a show— Bus to Show requires around 26 buses to transport close to 1200 people. Using carpooling or rideshare would require over 300 vehicles to transport that many people along with no guarantee of these drivers being safe. Having the certainty of Bus to Show ensures a safer community.

Minimizing fuel consumption— Bus to Show consumes a little over 300 gallons to transport 1200 people. Carpooling with three other people requires 500 gallons to transport 1200 people, and everyone driving alone requires over 2,000 gallons of fuel. A happy environment makes a happy community, so choosing a transportation method such as us is the most eco-conscious option.

Minimizing DUI rates— Since Bus to Show was founded, DUI rates have halved according to the Center for Disease Control. Providing a safe environment for people to consume alcohol in is a preventative measure that should be implemented everywhere. We would like to continue to lessen the DUI rates and therefore minimize deaths and potentially save lives as we have done in the past.

Promote diversity— It is imperative that we are still able to keep ticket prices cheap. Rideshares to Red Rocks go for over $50 as well as other bussing services. There are no public buses that go to these venues and for the safety of the community this has to be accessible. Customer financial backgrounds hold a lot less gravity than saving lives and stopping DUI's.

The grant will strictly be used for bus maintenance, driver pay, and overall recovery, but the outcomes are *far* greater than that. As listed above, possibilities for what Bus to Show can do with regular operation standards are extensive. Historically we have been an integral part of our community and would like a chance to resume. There are many people that Bus to Show impacts on a daily basis. Concerts occur every day of the week and therefore we operate the same. Every day Bus to Show is able to produce promising outcomes, and promote both local artists' and our business. As operation becomes possible again, these positive outcomes will be continued.

Budget

In order to get our buses back on the streets, the following actions will need to be completed

Action	Quantity	Estimated cost to complete
Train bus drivers	**10**	**$5,700**
Instructor wage	**2**	**$1,600**
Bus maintenance	**10**	**$2,000**

Website construction and maintenance 1 $1,000

Social media marketing

5 - 10 posts $2,000

Fuel Cost per bus (per 6 months) 10 $18,000

Total cost $30,300

How these costs were calculated:

1. We offer a wage of $15 per hour for newly hired drivers. For a full time week long course, the cost per driver is around $570. For ten drivers, this comes down to around $5,700.

2. The wage for an instructor will be about $25 per hour. To teach a full time week long course, the cost per instructor will be around $800. For two instructors this cost will be about $1,600.

3. We estimate that it should cost no more than $2,000 total to bring our buses up to regulatory standards. Buses underwent a maintenance check prior to being stored and are estimated to still be in good condition.

4. Our services will be rendered useless without a website for people to reserve a bus. As a non-profit, we will get the help of volunteers to help design our website, but it is estimated that $1,000 in costs will be incurred to keep the website online.

5. We will hire student designers to help create social media posts letting the Boulder community know we are back in business. We expect to spend around $200 per post until November 2021, with an estimated 5 - 10 posts made for a total of $2,000.

6. It costs around $45 per 100 mile round trip in fuel. Assuming we make 400 trips by the end of the year, it will cost $18,000 in fuel.

Evaluation

In order to ensure long term success in Bus to Show, the following will be done:

Measurement of success rates through calculated data

* *Traffic accident rates* are directly correlated to what we do at Bus to Show— recording these rates on Bus to Show pick up days compared to nights Bus to Show is not serving a venue could give sound numerical quantities of the effectiveness of the program within the community through local accidents and inhibited driving statistics.

* *Local business growth*— using the data we receive from the community on how our local businesses are performing on Bus to Show pick up days where we log significant amounts of people we can tell just how beneficial it is to have a populated bus in these areas. Similarly to seeing accident rates, we can compare community revenue rates on days that Bus to Show is working in the area and days when we are not. This would be a rough estimate, but still worth observing.

* *Rider frequency growth*— keeping track of how many riders ride our busses receive over a period of time can provide a basis of understanding on how well the community is attracted to our services.

Community promotion

* *Local artists*— most of our buses are decorated with artwork from local artists. With the redesign of our web page, we can include a page of the talented folks who help keep our brand beautiful, as well as showing off their excellent designs.

* *Couponing and promotion*— partnering with our local businesses leaves room for opportunities to increase business and therefore maximize safety even more through couponing. We have also previously had some of our favorite restaurants painted on the sides of our buses which is great exposure for the both of us.

Maintaining client satisfaction

Liz M.: "Used Bus to Show from Fort Collins to Red Rocks, our driver Michael Thomas was above and beyond!!! Such an amazing driver and so kind to us. He offered to stop on the way for us to take a [bathroom] break and get snacks!!! He also did this on the way back! Super amazing time, the bus was more fun than the show! He helped me connect to the AUX and we danced on!!! Thanks Michael!"

Maintaining this attitude of respectable drivers and happy times makes riders more likely to promote our success. The search for drivers this summer will take this into consideration.

Dawn W.: "Took bus to show for the One Republic concert. Toni was an awesome driver letting my daughter play her music playlist and we were able to have a few beverages on the way to the concert. Made new friends on the bus from other states and arrived in plenty of time for the show. This was a great deal and safe way to go to and from the Red Rock."

Dawn's quote emphasizes the importance of our drivers again as well as the safety involved in participating in Bus to Show. Punctuality, safety, and driver relations will help maximize our future.

Much of what we do to ensure the continued success of Bus To Show is maintenance of the organization within. By revitalizing our image, hiring the most experienced drivers, and continuing to offer an entertaining experience both for those who choose to ride with us and those who don't, we are confident that Bus To Show will thrive upon resuming operations. In conclusion, it is imperative that we return from our hiatus during the pandemic in order to continue offering support to the senior community in our area through promoting environmental conservation and keeping them safe on the roads. With funding from the AARP Community Challenge, Bus To Show will be in an excellent position to make a larger positive impact than before the pandemic.

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ELENA MILLER

The Futility of It All

1st-Year CNF 1st Place

“Your father doesn’t want me around.”

It’s that sinking feeling that really drags me bodily into my childhood home. *Ah,* I think to myself, *I’m back.* It sticks to me, as I quietly close the door to her bedroom. It used to just be her office, but over the years she added a bed and a suitcase. I wish, not for the first time this break, that I could go back to school.

When she moved out of the house in September of 2020, I was under the impression that this was it. The marriage that she fought so hard for, the relationship they had failed to save for years, was over. She started renting a small house from her work. Downtown, near the Children’s Hospital. The first time I went to visit her, I brought her basil plant from home. When I turned onto her new street, it tipped over, and for months the damp soil lived in the backseat of my car. I cried as I drove home that night. Highway headlights smeared across the darkening horizon.

But, despite it all, the summer before I left for college, she moved back in. I don’t pretend to understand her, but I think she was lonely, in an unfamiliar house that her children didn’t want to navigate. I couldn’t begin to guess his emotions. I mostly lived in willful ignorance, 1,000 miles away from them, but during break the cracks in our home were obvious.

This house is too big for two people.

I trudge down the carpeted stairs and run my fingers down the scuff in the wall, from where we had banged my old loft bed frame against the blue paint. There are stains on the carpet, in front of the little cubby door that opens into the attic. The skylight above the hallway is covered in decomposing fall leaves. We have lived in this house for almost 11 years now, more than half my life. You can see the wear on the edges, scratch marks from people growing too jagged for each other. As I reach the bottom of the stairs I paste a smile on my face. Everything is ok. I will tell him that she is asleep, or that she is not hungry, or that she just isn’t going to join us for dinner. He will know what I mean.

To say I hate family dinners would be deceiving. I hate dinners with my family, I hate the expectations of perfection that come with the idea of family dinners. Growing up, from birth to when I was seven, she stayed home. She took care of me and Olivia. She made dinner for the family, she kissed him goodbye, she raised two girls, for better or for worse. When I was in middle school, and they were trying to get Olivia through high school, I would set the plates with purpose. Maybe if they sat parallel to each other they would have to look one another in the eyes. When I was in high school, and they were going to marriage counselors, they had assigned days that they cooked. But, inevitably, he would forget, or he would plan wrong, or he would make something that she didn’t like. And it would fall apart. In my senior year, when she lived somewhere else, I would eat guiltily, uncomfortable in her absence. Nowadays, when he makes anything she snorts, bitterly. No one speaks and no one wins.

One time, years ago, she brought me and Oliva up to what was her office at the time.

“We might be getting a divorce.”

Olivia cried. I'm not sure why, at the time I didn't want to ask and now, as an adult, I probably still wont. Chances are she doesn't remember anyway. I don't remember a lot of middle school, but I remember being numb. For me, at least, this was a good thing. Maybe if they divorced they would be happy again, like they were in the old pictures in our photo books.

Late that night, as I stare at the canary yellow walls of my bedroom, I regret my own cowardice. She is willing to react when she is hurt or stifled, she is willing to disrupt the tenuous waters of our stagnant home. This is one trait I did not get from her. Through the vent at the head of my bed I can hear the tv from the living room. It's almost 2 am now, but he always did struggle to fall asleep, a trait I got from him. He is watching a true crime documentary and in the quiet of the red room a woman cries at the camera. Real life tragedy superimposed over prime time television. I told him once that when I die no one better write any goddamn stories about me, that my life will be my own. He laughed a little, but I wasn't joking.

My life will be my own.

JUSSTIN HEIN

Light, Liberty, and the Pursuit of Happiness

1st-Year CNF 2nd Place

Note: If you are reading this on paper, visit the link tiny.cc/heinshutterspeed *to interact with each set of paragraphs. If you are reading it digitally, click the hyperlink at the top of each set.*

1/200

1/200 of a second is 20 times faster than the blink of an eye. It's a fast enough shutter speed to hand-hold a camera without motion blur on most subjects, but too slow to freeze a droplet of water flying off a windshield covered in crystalline morning dew. It's a good starting point for photography during the day with an average lens and an average skill set, and an even better starting point for an adventure.

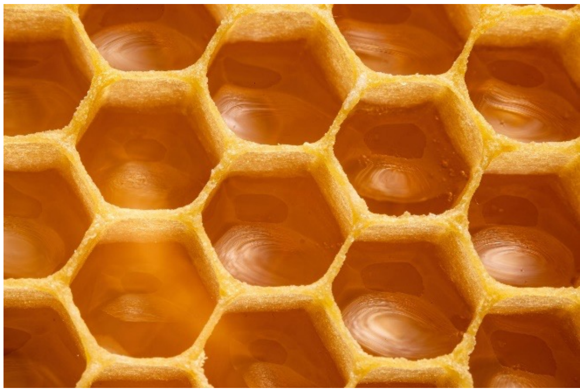
Cañon City, CO, 8/16/21, ***1/200,****" f/5.0, ISO 160*

200/1

200 days is the duration that the 20th President of the United States was in office before he was killed by a gunshot ("Sunday Morning: James A. Garfield"). There is a famous portrait of James Garfield that is part of the Brady-Handy collection, an archive of Matthew Brady and Levin C. Handy's negative photographs. Brady was Handy's uncle, and the two photographers documented the Civil War to an extent that no previous war had been documented ("Brady-Handy Collection - About the Collection"). Their works are still regarded today as some of the most influential wartime imagery.

1/4

A shutter speed of 1/4 is a wild card. It is rarely implemented without a tripod, unless the camera is in "Auto" mode. In that case, the camera doesn't know how incredibly shaky human hands are (very few people can hold a camera perfectly still for a quarter of a second). A quarter of a second is still a small amount of time in the eyes of a human. For an organism that has a shorter lifespan, it means that much more. Time is relative enough to be at the dinner table on Thanksgiving—the only difference is that Time will most likely outlive Grandma Mary (and you).



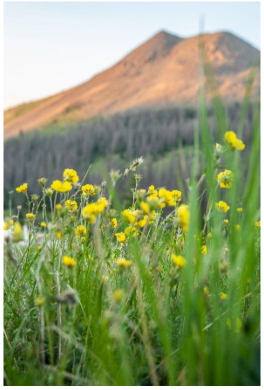
Boulder, CO, 17 days before Thanksgiving 2019, ***1/4,****" f/22, ISO 100*

4/1

A president's single term is four years. In the eyes of the president, their four years go by faster than a shooting star across a cold sky. However, presidents prompt plenty more prayers than a shooting star could fathom. People wish for better roads, equality, more military force, less military force, and at least a hundred million more things that will never reach the president's ears in four years. Time has a funny relationship with us. It can feel short, long, like too much, or too little. We count it, we count on it, it counts us, and it can mean the difference between life and death. Some adults measure time via presidential units: they know an event happened when *insert president's name* was president. Four years can feel like a lot of time and a little time at the same time. All these instances of the word "time" are as confusing as time itself. Time to move on.

1/60

1/60 of a second is often regarded as the slowest shutter speed one may use without a tripod. Any slower, and the image will be blurry from shaky hands. For those who can't bear to slow down and treat an image like a biathlon shot in the freezing cold that needs to be accurate, it should be faster, like 1/100. For those who hold their breath and fire the shutter upon a controlled exhale, knowing every shot is as precious as the very breath that they command, they may venture into the realm of 1/50 or 1/40 of a second. A shutter actuation is only as precise as the conscious eye that prompts a photograph.



Creede, CO, 7/10/21, ***1/60,****" f/8.0, ISO 800*

60/1

President John F. Kennedy served his presidential term in the early 60s, and was shot to death on Friday, November 22, 1963. Acoustic analysis suggests that there was a potential second gunman who missed. There were video cameras rolling, and in particular, Abraham Zapruder's camera documented the event well enough for it to become one of the most reviewed pieces of film in history ("John F. Kennedy"). For many of America's school children, that video may be the first, and possibly last, visual experience they have with President Kennedy. Does it make someone more of a stranger if you know what they look like without knowing who they are?

1/100

100 is usually an important number, but it has little significance in photography. Other than the lowest film and sensor sensitivity setting being 100 on many cameras, a shutter speed of 1/100 is a relatively unbubbly beginning to a photograph. This would be a good time to use exactly 100 words to describe what shutter speed is: the amount of time, in seconds, that the shutter is open and showing light to the camera's sensor. The longer it is open, the greater amount of light hits the sensor, but more motion is captured during the exposure. Thus, a "slow" shutter speed allows for better shooting in the dark (more light), but motion will not be frozen (including motion of hands holding the camera). A "fast" shutter speed reduces the amount of light allowed in, but will freeze motion very well. Shutter speed is one of three components of the exposure triangle, which dictates an overall image's exposure.

Boulder, CO, 8/27/21, ***1/100,****" f/8.0, ISO 500*

100/1

100 has great significance in temperature, unlike photography. 100 degrees celsius is the temperature of boiling water. 100 degrees fahrenheit is a very hot day. 100 Kelvin is very cold. Richard Nixon was the 37th president of the United States (100 degrees fahrenheit is 37.7 degrees celsius) and got into some very hot water with the Watergate Scandal. Nixon's team was convicted of burglary and wiretapping of the headquarters of the Democratic Party. Nixon resigned ("Richard Nixon"). By the way, 100% of the photographs in this essay were made by the author.

1/8000

The fastest shutter speed that most high-end DSLR cameras will allow in 2021 is 1/8000. A .22 caliber rifle fires a bullet at a muzzle velocity of approximately 1,500 feet per second, so a bullet will travel 2.25 inches across an image at this shutter speed (".22 Long Rifle High/Hyper Velocity Ballistics"). Instead of shutter speed, photographers use extremely high-speed strobe lights to freeze the motion of a bullet. Light is faster than a mechanical shutter. I don't know who would want to photograph a bullet, because focusing on shooting one apparatus is demanding enough. Puns intended.

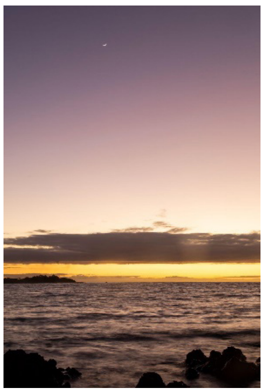
Boulder, CO, 5/8/21, ***1/8000,****" f/4.0, ISO 1250*

8000/1

8000 seconds is about 133 minutes. In 1967, the 13th General Conference on Weights and Measures restandardized the unit known as a "second" to be "the duration of 9,192,631,770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the cesium-133 atom" ("Atomic Clock"). There have only been ten presidents who did not serve an official second term. A photograph can tell a second's story for millennia. Oh, and if you need to read this paragraph a second time to understand how we got here, be my guest.

1/1

One of the more uncommon shutter speeds is one second (read the paragraph above for a third time if you want to know where the second comes from). It is much too slow to freeze motion, and a tripod is almost certainly required. One probably can't use this during the day without a special filter that acts as "sunglasses" for the camera. One may use this, in combination with a filter, to produce a silky-smooth effect with moving water.



Kona, Hawaii, 1/3/20, ***1,*** *" f/14, ISO 100*

1/1

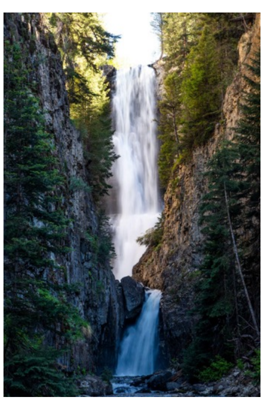
The reciprocal of 1 is 1, and it is comically absurd that there are two paragraphs dedicated to the number one. Let's take this one step further!

1/1

One is the loneliest number that you'll ever do. . .

Paul Begala quotes these Harry Nilsson lyrics in his book, *You're Fired: The Perfect Guide To Beating Donald Trump* (63).

1/10



Panning is a photographic technique in which a moving subject is followed with a camera during a longer exposure, something like 1/10 of a second. The result is that the subject is, ideally, in focus, whereas the background has "moved," demonstrating motion. The opposite effect can also be achieved, allowing a moving subject to travel within the 1/10 of a second while surroundings remain still.

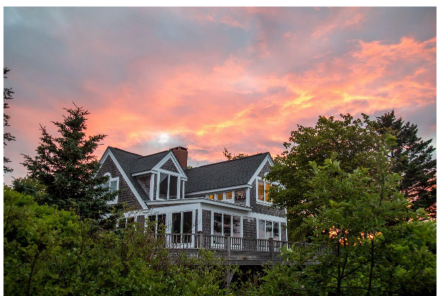
Telluride, CO, 6/14/21, ***1/10,*** *" f/18, ISO 320*

10/1

10 years from now, unless something goes horribly wrong, there will certainly be a different flavor of government. There will be a different state of the economy, social life, and set of mannerisms that defines our society. If life is a blur, why don't we just grab our cameras and practice panning? After all, the blur would gain some purpose and we could at least keep something in focus.

1/30

The estimated amount of time, in seconds, that one needs to determine that former White House Photographer Pete Souza is more than just a photographer (source: check out his website and you'll believe me). He tells stories of two very different presidents, Ronald Reagan and Barack Obama, and calls for change in the world using his images. For most people, the only way they know what their country's leader looks like is through photographs. Without photography, the face that is so powerfully known as the President of the United States would have very little meaning. Heck, a lot of things that most people can never see in person would have no meaning at all. A photograph enlightens our senses quickly, which is perfect for a world that seemingly has no spare time.

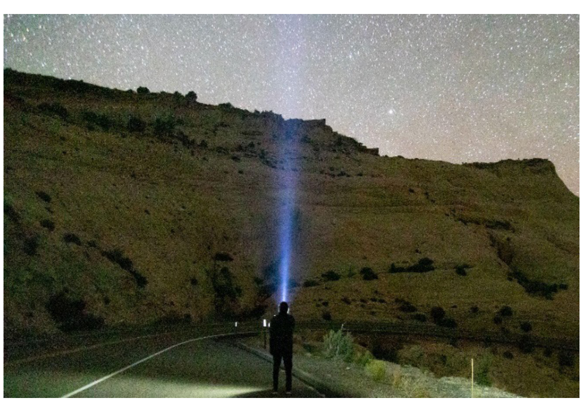


Georgetown, Maine, 6/27/21, ***1/30,*** *" f/5.0, ISO 400*

30/1

The slowest shutter speed that most high-end DSLR cameras will allow in 2021 is 30 seconds. It takes patience to wait for the end of a 30-second shutter speed when it is below freezing and your subject is a stunning sky full of stars. This isn't the kind of patience that is painful, it's the kind of patience that is necessary to count every star in the sky and get lost in a camp chair, your head in the sky and neck begging for you to look down. Stars awaken in plentiful numbers when there are fewer lights around.

Turn off your lamp and sink into the slower side of your life, you'll see stars and hear them and smell them and taste them floating in the cold air like Cheerios in milk and you will feel their warmth like a growth of fresh pine needles against your dry skin and you will smile and you will cry but your tears will freeze and you will wish that you had put on another warm-as-your-heart layer before attempting to photograph space, the *freezer* of time.



Escalante, Utah, 4/15/21, ***30,*** *" f/4, ISO 32000*

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SARAH CARLEO

We'll be a Fine Line

1st-Year CNF 3rd Place

Two Ghosts

It's the two-sink set up in my ~~parent's~~ mom's bathroom that gets me. Old products and lasting imprints remain scattered around the newly bare sink, ones my mom has tried so hard to scrub clean. The dusted lamp on the bedside table is remnant of a separate life I so badly want back, yet it also casts a new light shadowed with lies and false perspectives only now coming into view. These realizations that have come with age and unkept secrets are only slightly deterrent of this longing I feel for my former family, and selfishly so, as if the word "former" that now precedes what I knew to be "family" isn't telling enough.

Sometimes I go into my ~~parent's~~ mom's room and I'm suddenly sick to my stomach, the newfound emptiness of the room suffocating. The fact that everything in the room comes in sets of two is a constant, cruel reminder causing the sickness in my stomach to swirl deeper the longer I tend to think about it: two sinks, two towel racks, two nightstands, two dressers, a king- sized bed made for two happily married people to sleep at a comfortable distance (and perhaps sometimes with two scared children in between) now all take on a different meaning, a different feeling. The thing is, that *comfortable* distance left between a couple while they sleep on their king-sized bed can grow until it is infinite, something people don't necessarily think about when buying their king-sized bed to share with the person they love in which their kids will eventually squeeze into the space between them. It's one of those realizations that is revealed following the unveiling of those now unkept secrets.

To be completely honest, I've always hated the number two. Maybe it's because I've always been told that "good things come in pairs" and have experienced quite the opposite. Or it's because comparison takes two, and when people compare, they soon realize that what they already have isn't nearly enough. Either way, my family is now closer to that number than it ever was before, and awfully enough, sometimes I just wish the secrets were kept.

Promises Are Broken Like Stitches

Like so many couples whose marriages are struggling, my parents tried to patch it all up with a vacation. I'm not sure if they hopelessly thought sun and sand paired with bottomless drinks would be the answer, or if at that point they already knew what was coming and thought this would soften the blow. Well, surprisingly enough it accomplished none of the above, and I now hate Puerto Vallarta.

Tell Me Something New

It was a really beautiful day, one of those transitional ones between summer and autumn where you could taste the fall festivities beginning to brew but the salt air of summer still lingered. My feet were on the dashboard as my mom drove us towards Michaels so I could get supplies for a school project. I was blasting music (probably some classic rock song as all of junior year I had Bon Jovi radio on repeat) and singing along as my mom suppressed a secret that was likely tearing at her insides. I wish I had looked over to her because I'm sure if I had I could have seen tears threatening to escape, and maybe then could have been able to begin to prepare myself for the news that was coming that afternoon. Barely into my project I was called to the dining table. Little did I know that was one of the last times the seats would be filled.

My Hand's at Risk, I Fold

"I didn't say anything. . . earlier because it just didn't feel right to say it there… but I wanted you to know my parents told Jacob and I today that they are getting separated. It is just important to me that you know.

Send. Copy, paste, send. Copy, paste, send. Copy, paste, send.

Staring at the Ceiling

It was a really sudden change. I can't even remember the last dinner we all had together as a family, and I hate myself for it. I wish I could remember all of our lasts, like the last movie we went to, the last day we spent at home, the last sleep. It felt like one night we were watching our weekly TV show as a family and the next my mom was referring to my dad as "your father." My home became a house for a little while and my room felt like a bomb shelter after the bomb had already gone off. The worst part was I had no answers to any of the hundreds of questions whirring through my head as I urged myself to sleep each night. All I had were nightly texts from my dad, pictures of the new room he was renting each night. It felt as though I was getting the ending to a story that I hadn't even reached the "acknowledgments" page in yet.

From the Dining Table

"I love a big table. Don't you love them? Twelve people. That table over there, it's just so inviting." This quote is written in the note's app on my cell phone and was said by my aunt a few weeks ago while I was at dinner with her and my mom. I immediately looked over to the table she was referring to, a dozen seats at a large wooden table set with silverware and white, porcelain plates. My immediate instinct was to agree with her, nod my head and move on with the conversation. But the second I looked over to the table, a feeling of disconnect and sadness caused me to pause and rethink everything she had just said. The *big* dining table sitting readily left a bad taste in my mouth, one not even my strawberry lemonade seemed to be capable of washing away. The *big*, *open* dining table that reflected youth and love ridden memories onto the faces of those around me, and may have once done the same for me, now brought a sour look to mine. The *big*, *open*, and *empty* dining table bound to be filled again before the night's end caused my heart to sink. No matter how hard I willed myself not to, all I could see were empty seats.

ISAAC RADIN

To Be Like the Sun

Upper-Division CNF 1st Place

There are times in life when it can feel as though there is a sort of invisible blanket between the world and one's consciousness; it is almost as if everything feels a bit foggy, clouded, muted. Grief, trauma, loss, change, and transition can all be factors in causing this feeling of internal disconnect. For me, grief represents my blanket, the thing that is preventing me from being fully present in my own life. Back in August, I broke up with my girlfriend for college. We had dated for three years. It was always her decision, and we were and are very much so in love. We have hope for a future together, yet everything feels quite nebulous. It is an incredibly complex situation, making it both more beautiful as well as more painful; painfully wonderful, if you will. This blanket of confusion, hurt, grief, and uncertainty that now covers my life has felt smothering for the past 6 months. In this writing, I hope to explore methods of pulling this blanket away, or at least lifting the corners to allow some light in.

One of the primary self-care methods that I utilize is weekly visits to Chautauqua Park to watch the sunset. Thus, I found it fitting to take my photos up at Chautauqua for this piece.

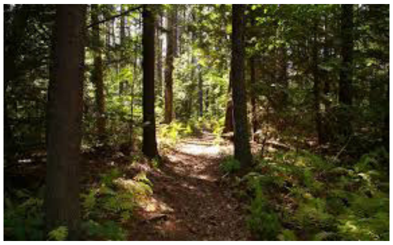


Chautauqua is always a very peaceful place, and thus the experience of being in that place for me is calming. Chautauqua smells like nature. That is the best way to describe it. It smells like dirt, and grass, and mountains, and it smells like the sunset. I could hear ambient noise, people talking in the parking lot, cars passing on the street; I could also hear my own thoughts becoming quieter, my anxieties becoming smothered, my fears becoming hushed. I had taken my shoes off to take some pictures of my feet in this special place, and my bare feet felt shockingly cold on the pavement in contrast to the rest of my bundled-up self. I focused on this feeling of contrast until my feet started to get numb and I had to put my socks and Crocs back on. My body always feels some sense of release when visiting this special place; almost as though all the hard feelings and stressful emotions that I had been feeling before were a little less hard, a little less stressful. There are some days where the sunset is more spectacular than others, and on the gloomier days I sometimes find myself feeling disappointed and even let down by nature. These gloomy days have become very symbolic for me; a reminder that not every sunset is spectacular, just as not every day is a happy one.

Chautauqua has become a place of meaning for me over the past couple of months. When I watch the sunset, I feel a sense of release; almost as if the orange and pink and red-tinted clouds are saying to me "It is okay." I become hyper aware of sensation; the wind on the back of my neck, the smell of snow and dirt and the unblemished clarity of Flagstaff Mountain. I often find myself observing the grass swaying in the breeze, bending but never breaking, and wish that I could be more like the grass. I find myself looking at the enormity of the mountain and being struck by the timelessness of something so ancient and persistent. That mountain has weathered countless storms, yet still it stands. I hope to be more like the mountain. I find myself looking to the sun as it sinks down behind the mountain and feeling thankful that the sun will rise yet again, and that I will rise with it. In a time of such uncertainty in my life, the unwavering certainty of the grass, the mountains, and the sun provide a feeling of hope.

Ever since I started visiting Chautauqua, I have started to pay more attention to the impact of the outdoors in general on my emotional state. I have begun to realize that very often, the worst days are also the days that I do not have as much time to spend outside. Even just stepping out onto the front deck on a hard night and looking at the sky and the trees can be such a transformative experience. There is something about breathing fresh air that is so relieving and comforting. Experiencing this depth of emotion during my weekly nature outings and during general outdoor sessions has made me start to wonder about the science behind nature's impact on physical and emotional well-being.

One of the most common methods of connecting with nature is called "shinrin-yoku," or forest bathing. It is just about as simple as it sounds; one needs only to walk into a forest and remain there for some amount of time. Researchers have found that forest bathing can significantly improve both physical and psychological health factors (Wen *et. al.,* 2019). This can include everything from immune health to cardiovascular health to emotional well-being to feelings of depression. As a result, forest bathing is even becoming part of medicinal considerations. The idea that walking in a forest for half an hour could replace some sort of antidepressant medication or even simply alleviate feelings of misery is such a fascinating one. I believe this is important knowledge not only for people like myself who are going through a difficult period, but also for everyone who is even remotely interested in integrating nature into their everyday lives.

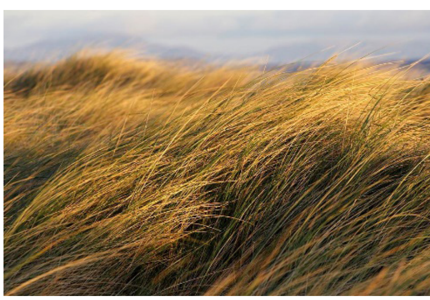


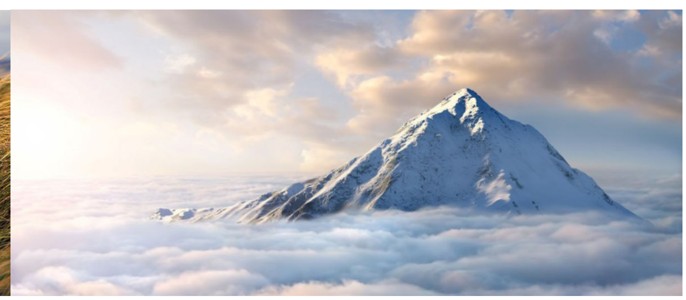
While forest bathing has been shown to be a highly effective method of improving both physical and mental health, not everyone always has access to a forest; for me, I am even more interested in the impacts of simply being outside on physical and mental health. Renowned health researcher Ming Kuo conducted a fascinating comparative analysis of many different studies examining the impacts of the outdoors on overall health. Kuo found that even views of nature can have significant impacts on health (Gladwell *et. al.,* 2012). In other words, simply being near a window with a view of the outdoors can have noticeable impacts on things like overall emotional state. In terms of the being in the greater outdoors, plants have been found to give off antimicrobial compounds that can do everything from lower blood pressure to benefitting overall immune health (Li *et.al.,* 2006). For me, the most fascinating and applicable part of this comparative analysis is the research surrounding the parasympathetic nervous system. The parasympathetic nervous system plays a crucial role in calming the body down during a stress respond or any kind of difficult respond to a hard stimulus. Brown *et. al.* (2013) found that simply showing someone pictures of nature can trigger an increased level of parasympathetic activity. This aspect of nature's impact on the physical body is highly applicable to my situation; in fact, after reading this research I would even go so far as to say that the feelings of release and calming that I feel when outside are a result of my parasympathetic nervous system being activated.

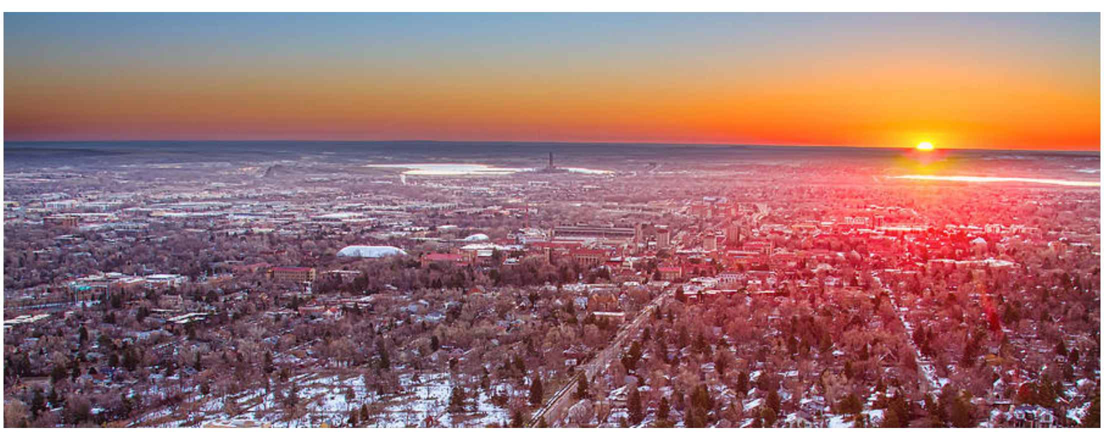
Finding evidence that nature truly does have real impacts on physical and mental health is incredibly validating to my experience. For months, I was never able to identify exactly what about watching the sunset was so powerful. After all, it is not like watching the sunset magically solved all my problems or made my hard emotions go away. Learning about the role that nature plays in physical and mental health, and specifically in the activation of the parasympathetic nervous system, makes me realize just how crucial my weekly sunset excursions are to my well-being.

After watching the sunset, I often find myself with an increased ability to confront hard emotion in an effective and self-respecting way. It is empowering to learn the extent to which being “one with nature” can influence my sense of self and my emotional state. I often find myself subconsciously running from emotion, even months into this process. Being embodied through nature can help me with all sorts of aspects in terms of my emotions; my anxiety and fear about the future, my feelings of despair, my feelings of hope and uncertainty and loss and grief. As I continue my journey, I want to use this new knowledge as an opportunity to cultivate my understanding of self, respect for self, and love for self. Creating intentional moments of serenity is certainly something I will pursue. I want to take a more active role in my inner peace; I do not want to simply allow moments of peace to happen, but also be intentional about the ways that I create them.

So many of us are struggling with something right now. I think my perspective and my search for inner peace and self-love through the lens of nature could be something that my readers are not only inspired by, but also are partaking in at the same time as me. I hope that my writing will open an exploration of what it means to love oneself, and what it means to find inner peace. Stepping into nature allows us to not only take a brief step away from hard mental loops, but also to take a step towards self-love and inner peace. For a long time, I have thought that inner peace is simply a lack of hard emotions, but I am starting to wonder if it is also the presence of something. Maybe what we are all searching for is not a lack of hard emotions, but rather learning how to approach these hard emotions. Learning how to be more like the grass, to bend and flex and adapt as emotion evolves. Learning how to stand firm like the mountain and not run from any storms. Most of all, I think we are all learning how to be more like the sun, rising again and again as the world spins on, even when it feels like our own world stops.







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JACLYN GARY

Patient Forests

Upper-Division CNF 2nd Place

[Editor's note: this essay originally contained four photographs.]

Princeton, New Jersey isn't known for its hikes or mountains. In fact, depending on one's definition of these words, I'd argue that the town doesn't have either of these. Filled with lawyers, doctors, artists, and Ivy League students, Princeton doesn't necessarily come to mind when we think about outdoor recreation. These overachieving, competitive types create a bustling ecosystem where there is one unspoken but strongly heeded rule: you move fast. The quality of a day is measured in number of tasks accomplished or goals achieved, and it will be measured. Nature is viewed through the writings of Thoreau and the windows of family cabins in Aspen. Weekends are spent reading and at the theatre. The social currency of adventurous vacations is defined by flashy names and exotic destinations. Said a different way, the value of interactions with the environment is determined by how enviable that encounter is to how many people.

In the quiet corners of this frenzied network of socialites lies humble beauty. A striking contradiction to a community wherein experiences are constantly compared, evaluated, and judged, the preserves and parks of Princeton are exquisitely understated. They lack photo-worthy attractions like peaks or waterfalls but instead feature trees tall like big brothers, wise and calm in their stillness, packed so densely that I trust they'd catch me if I ran at full speed into them (which I often feel like doing). Murky streams slither through the trees like trailblazing serpents, providing a path along an otherwise dizzying maze of leaves and twigs. They will sing to you, if you let them. Go slow, be quiet, and you'll hear symphonies. This is my favorite thing about the nature in Princeton: it doesn't force itself upon anyone. It will not point and wave and shout to prove its worth or its beauty. It incentivizes patience and stillness, two things that are hard to come by in town. As an adolescent, this was a great comfort to me. I always felt like the people around me were interacting with the world from a completely different place than I was. I didn't want to have to fulfill certain criteria or meet certain expectations in order to be seen, understood, and valued. My peers may not have understood this, but the forest did. And it still does. Modest and expansive, Princeton's woods trust that those with enough patience will see and appreciate their beauty, and that those without will not find what they're looking for in the forests, and that's OK. This is one of the first lessons the trees taught me.

But it took me a long time to realize this. At age 18 I left Princeton without looking back. My eyes were fixed on college in Colorado. I was in pursuit of mountains and wilderness, or maybe more so the culture and community associated with these. Whatever it was, it brought me 1,700 miles west (and, ironically, to a few cabins in Aspen). The West is a great reprieve from the rigidity of Princeton, and I leaned into this. In my blanket rejection of my hometown, I lumped together the forests and the people into a neat and tidy box labeled 'To Be Forgotten." It was easier that way. But as I return to Princeton once or twice a year, the trees are still there, waiting, in their stoic way, with open arms. These arms keep me dry in the rain and fragment the sunset into stained glass windows. Fallen ones lift me up off the ground like a tightrope, toward my one-who-got-away, who teases me for my fear of heights that had become apparent. I tell him I'm clinging onto a neighboring branch for dear life. He plucks my hand from the branch, kisses me, and places it back onto the tree. A bolt of adrenaline announces itself in my chest and squeezes my hip flexors before it pours through my Achilles, rooting my heels into the mossy log. The intensity of this grounding sensation is matched only by the weightlessness that accompanies it, as if I'm attached to both an anchor and a hot air balloon. Held, but not coddled; encouraged, but not forced. It is in this moment that the virtue of the trees quietly reveals itself to me once again. Princeton forests lack the judgment that runs in the community's blood, gifting me the space to explore, stumble, get up, and do it all over again. I struggle to find this quality in people, but I have learned to wait for it. And the forests will be there. Dense, breathing, and watching, they will be there. And I love them for it.

BRODIE WOODALL

The Earth Holds on to Memories the Body Cannot

Upper-Division CNF 3rd Place

I spread my feet across the grass. The roughness beneath me is magnified. The blazing sun shines down on my pale skin as the warmth surrounds me. The sun looks over me, a brisk rush of air sails across my body, calming me from my scalp to my toes. A strong, smoky smell creeps up my nose. It's the familiar smell of a nearby neighbor grilling up dinner. Birds chirp in all directions, landing on my ears in the perfect harmony. The occasional Sunday evening stroller passes, but I am unbothered.

I sink my toes deeper into the grass and embrace the soft sharpness that begins to consume them. I feel my body warm from the rays of the sun; my skin tingling from the sizzling heat. The wind flushes down my body, covering me like a powerful wave embraces an inexperienced surfer. I follow my breath along to each puff of air that flows over me, mimicking the pattern of the wind itself. I feel the overgrown grass hug each part of my body. I shift my focus to the dirt below me, and deeper ground myself to the earth. With the ground pressed against my bare skin, I allow the earth to nourish my body. The earth's natural energy flows through me, balancing my mind and body. This balancing energy silences the mental chatter in my mind and I focus clearly on the sensations surrounding me. The firmness of the ground beneath me is no stranger to my soul. The roughness pries open the essence of my being, allowing me to enter a familiar space. A space that I do not often access, a space nearly forgotten:

Memories of my childhood spent at my grandparents' cabin.

I lay my body out to expand the connection between the earth and my skin. I embed my body deeper into the dirt as I allow these memories to flow through me. The distance between my present self and the years spent at my grandparent's cabin is over a decade long and hundreds of miles away. Yet, as the Earth holds me on a few square feet of her vastness, I am transported back to this time of simple pleasures and closeness to my family.

Thoughts of the future flee my mind as I allow the present to carry me away into the past. The doors that these memories are stored behind are not hard to open, and the recollections that greet me are comforting. I approach them as an old friend, one that embraces me with a childlike joy. It's been years since I've experienced anything similar, as the happiness a child feels before the world makes its mark on them is hard to come by. It's a freeing feeling.

My brain downloads and processes the sensations surrounding me. A whiff of the smoke from the neighbor's dinner allows my mind to delve deeper into the other sights around me. The brain has a beautiful way of recalling memories in a cascade style, with one sensation triggering the next. These memories are dispersed within the folds and grooves of my cerebrum, but the domino effect of memory recollection summons them to the core of my mind. Here in the hippocampus, the sensations surrounding me compose themselves into a coherent movie, giving me the ability to relive these moments. I am filled with the freeing sense of exiting reality; I press into these memories.

For a few moments, I am free. I pursue this feeling of childhood joy:

> The sun beating down on me today is the sun that burnt my cousins and I to crisps during a long day playing games down at the creek.
>
> The winds that rush over me are as refreshing as they were when they blew through my hair as we took turns riding the four-wheeler.
>
> The smell of my neighbor grilling reminds me of the smoke that would fill the air as my grandpa helped us cook hotdogs and smores over the fire he built.

The itch of the grass against my feet transports me back to the days of playing in the dirt with my cousins, before our grandma realized we were outside without bug spray on.

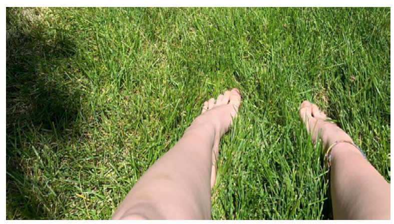
The songs of the birds around me take me back to the time we spent fishing at the lake, rarely ever catching anything.

It's all different now, but it feels the same.

These memories seem far, but they're closer than I think. The ground pressing against my body is a continuation of the grounds we played on as children, no matter how far the distance. My body is a mountain compared to the hill I was at the time, but it's the same body I would bruise up after my cousin pushed me on the swing set so hard I would fly out of the seat. My soul is older now and has taken a few hits along the way. I don't giggle like I used to when my grandma brings me pancakes with candy cooked inside them. Nor do I cheer as loud as I did when my grandpa would run outside to kill the snake that was hanging around our playground. Somewhere along the way, this joy slipped through my fingers. But for a few moments on this Sunday evening, I felt it all again as I lie out in the overgrown grass.

And in this moment I realized:

The Earth holds on to memories the body cannot.



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KATIE NIYAA HIRASAKI

American Enough

Diversity Writing 1st Place

"Phuut Thai dai mai?" my mom's friend exclaims as we meet for the first time in the bright Bangkok coffee shop. I shift in the cheap pink sandals I bought the night before from the market and give a small apologetic smile. "Phuut mai dai," I respond, feeling the weight of the words as they fall off my tongue. Her face shifts, and she looks to my mom, "Thami mai phuut?" My mom laughs it off, and they fall into rapid Thai and I lose the conversation.

Hearing my mom fall into the rhythm of her native language fills me with a feeling that is difficult to explain. It is a feeling of displacement, of not being able to meet her with her own words. Of not being able to communicate with the people I'm connected to. Of being unsure of what connects me to them. It is almost a fog, a wall that comes down between me and some part of myself. Until I was four I spoke Thai with my mom, and our little Texas house was filled with "neigh na kun," and "chang" and "kanom." My head was full of English and Thai, my dad's gumbo and my mom's kha man gai.

Eighteen years later, I asked my mom why I don't speak Thai anymore. She looked down slightly and sighed, "I didn't want you to be different." She recounted the feelings she had as she decided to stop speaking Thai at home. Worries that speaking two languages would affect my English. A desire for me to have my best chance of fitting in. Fear that I would be perceived differently in this country.

So we stopped. Today, shifting around in my speech are fragments of Thai, pieces left over from my childhood. It is "saw wat di ka," (hello), "kap kun ka," (thank you), and "phuut Thai dai mai," (do you speak Thai?). Then of course my response: "Phuut mai dai," (No I can't). Other pieces of Thailand we've held onto, the food, the spices, the little Buddha figurines hidden around our house, but the language itself is a sea of words I can float atop, but never fully sink into.

This fear my mom had, of her children being different for speaking another language, is a fear I've heard echoed so often by other Americans who speak multiple languages. It is a feeling that has weighed on my family, reinforced by phrases like "welcome to America," and "go back to your country." The fear of not being perceived as an American has been a sticking point in my identity, as teachers commented on my English, or classmates asked where I "was really from." I felt a two-fold homesickness of not being accepted into the place I knew as my home, and not speaking the language of the place I was told was my home. Even as I mourned the inability to speak my mom's own language, the culture around me emphasized the importance of speaking English and shifting myself closer to the idea of an American in my head.

Outside of the United States, I have still found my identity as an American questioned. Studying Arabic in Cairo, Egypt, my friends and I would often be asked where we were from. "Inti minein?" curious people in coffee shops and stores would ask, and after my white American friends would casually mention the United States, I would smile and respond "Ana amerikee." I would often receive a confused look, a laugh, and a "La, inti min Korea," telling me I was wrong about my own home, and usually guessing at my race. These incidents became a drumbeat in the back of my head, culminating in one night as we were out looking for late night ta'ameya to fuel a study session. Against the background of the bustling city traffic and the Cairo skyline, my friend and I started talking with the vendors of the stand next to our University. "Intom minein?" they asked, laughing as we fumbled through our broken Arabic. "Ana min America," my friend responded, and they nodded then turned to me. I smiled back, "Ana Amerikee aydan," I replied, stating that I was also American. One of the shopkeepers squinted at me and then responded "la, inti mish Amerikee," or "No, you're not an American." I felt the catch in my breath and my world grew smaller, tunnel visioning into eight year old me in school being told I didn't belong to the one place I knew. "No, I'm an American." I responded, expressionless, unthinkingly switching into English. I felt my inadvertent shift, and tried to regain my footing in Arabic as he continued to list off the countries he thought I could be from. “La. Ana Amerikee.” As we walked away, I thought about my shift into English. I thought about the feeling of desperation as I tried to prove my identity as an American. What does it really mean to be an American, and is English a central component of that identity?

This question is central to our culture today. In the United States, over fifty million people speak Spanish (BBC). Over three million people speak Mandarin or Cantonese. Over one million people speak Arabic, another million French, another million Vietnamese (Statista). “At the annual Lower East Side Jewish Festival yesterday, a Chinese woman ate a pizza slice in front of Ty Thuan Due’s Vietnamese grocery store. Beside her a Spanish-speaking family patronized a cart with two signs: ‘Italian Ices’ and ‘Kosher by Rabbi Alper.’ And after the pastrami ran out, everybody ate knishes” (*New York Times*). The United States has long passed this old ideal of a center of “Western culture.” Our American reality is one of intersections, innovation and individuality. At the same time, American rhetoric is divisive, touting assimilation and English dominance, and contradicting what we claim as our values of freedom and exploration. Ishmael Reed emphasizes this distinctly in his article, “What’s American about America?” with the statement “North America deserves a more exciting destiny than as a repository of ‘Western civilization.’ We can become a place where the cultures of the world crisscross” (Reed 2). Reed points out the contradictions in the American rhetoric, the feeling of both freedom and individuality, crossed with xenophobia and fear. The United States prides itself on individualism and exploration, yet at the same time reinforces stories marking non-english speakers and immigrants as others. Reed emphasizes leaving behind this notion of “Westernism,” as the core of Americanism, and pushes for an understanding of America as an intersectional “bouillabaisse.” Reed concludes his essay by stating simply, “The World is Here” (Reed 2). The American reality sharply contradicts the, perhaps not dominant but often loudest, rhetoric about being an American. In reality, America is the mixing of cultures, languages, and people from across the world. It is more than the clinging to a single identity; it is the interconnection of many.

These are the stories that make up America. In her essay “Crying in H mart,” Michelle Zauner explains her connection with her mom, her language, and her culture through H mart, an Asian grocery store that sells all the things you can’t find in the four foot wide Asian foods section at Safeway (the one where there’s only one kind of crushed pepper and never any mushroom soy sauce). She describes the feeling of walking through the aisles of packaged seaweed and furikake, spicy garlic sauces and fried onion chips. “It’s a beautiful, holy place. A cafeteria full of people from all over the world who have been displaced in a foreign country, each with a different history” (Zauner 9). She describes the international students, trekking from their college town to find flavors from their homes. The Korean grandmother eating jjamppong in the food court. Herself, the daughter of a Korean immigrant, who within the aisles of H mart feels her connection to her mom. “I can hardly speak Korean, but in H Mart I feel like I’m fluent. I fondle the produce and say the words aloud—chamoe melon, danmuji” (Zauner 4). She explains finding pieces of herself through the soy sauce eggs and ppeong-twigi and banchan, and through the connection to all these people she doesn’t know, all also looking for little pieces of themselves. I cry almost every time I read Zauner’s essay, as she describes wondering which kind of seaweed her mom would buy or watching little kids run around with brightly colored snacks. Because she describes this feeling perfectly, of not only looking around and finding pieces of yourself but knowing the strangers around, you find pieces of themselves within you. “We don’t talk about it. There’s never so much as a knowing look. We sit here in silence, eating our lunch. But I know we are all here for the same reason. We’re all searching for a piece of home, or a piece of ourselves” (Zauner 10).

This is America. It is reaching for the same frozen packet of barbeque pork bao, and grinning at the other college student that might also miss the homemade version with their family. It is bonding over how long the flight is to see our grandparents and comforting each other over the feeling of not being able to speak their language. It is the shared frustration when someone tells you that you don’t belong, and the understanding eye roll. It is the new language you make with your family, with fragments of Thai and a Texas accent, a nasal “eĕh” to ask a question and an “awh” when you disapprove of something. What is truly American is the interconnection between different people and places, and the combination of your different life experiences. I think back to a younger version of myself. Who was told she was different, that she didn’t fit in, that she didn’t belong. Who was constantly trying to bring herself closer to what felt like the unachievable dream of being seen as "American enough." The idea of being "American enough" contradicts itself. What makes us American is not our similarities. What makes us American is the connection we find in our differences.

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BIANCA PEREZ

My First Friend

Diversity Writing 2nd Place

When Megan walked into the room, I was immediately taken aback by how pretty she was. She's the type of pretty you'd find yourself staring at. She's the kind of girl someone could fall in love with.

One of our first conversations was about "weebs." She talked about how she loved anime and how she was a bit of a "weeb." This term was completely foreign to me, but she was just so cool I simply smiled and acted as if I understood her world. I would go along with what she said because I was nervous.

She was my first friend who was not white, and I didn't want to mess it up. I had lived for 17 years with only white friends.

I met Megan at The School of The New York Times summer program. She was my roommate but would soon become my best friend.

Megan was proud to be Asian and always spoke highly of her hard-working parents. Once while we were talking, she told me about how she wishes she was better at speaking Chinese like her sister, but abruptly paused and asked "since your parents are Hispanic, do you speak Spanish?"

I just said "yes," but it was a loaded question.

Rarely by choice would I speak Spanish in public; both my parents spoke broken English, so I exclusively spoke Spanish with them. Typo-filled texts to my parents were among the few things I wrote in Spanish. I was always a strong Spanish speaker especially compared to my other cousins who were in the United States, but I never found pride in being a Spanish speaker primarily because it rarely helped my life in America. The first few years of elementary school, it was clear that my English literacy level was "below average." I was automatically enrolled in the English Learners Program then promptly tested out as soon as I realized the "program" was just a room with other non-English speakers. At the time I cared not for English or spelling at all, I just wanted to be in the regular classes with all my friends. I wished so badly that my parents could read me English like those of my peers, instead, this was a challenge I battled alone. Thus began my resentment for my language and soon it would erode my relationship with my parents as well.

Every time my soccer team won a game my parents would run to congratulate me with the distinctive bottomless love that only parents obtain for their children. But, I despised every second of it. Every word of encouragement was poisoned by the language they spoke. Deaf to their tenderness, I would painfully scorn them when we got home because they spoke Spanish in front of my all-white soccer team. How could they?

When Megan described her desire to know more Chinese I just thought of all the times I scorned my parents for embarrassing me. For a while I tried to bypass how my hatred for Spanish could have made them feel, only to admit they would remember every vowel of hate that left my mouth.

The first night in my dorm I googled "weebs." The Urban Dictionary describes "weebs" as males who are obsessed with anime and Japanese culture. I looked over at Megan. She was scrolling on her phone with her headphones in.

I wondered if she knew how much I envied her.

Kylie lived two doors down from Megan and me. She dressed and looked as if she was a model for Urban Outfitters; chic yet trendy. Kylie was a true city girl at heart and it felt as if at only 17, she had mastered NYC. Having traits most girls dream of, Kylie was breathtaking. Her clothing was always bright and never bland. Everything about her was uniquely hers. She had a certain confidence that radiated with every move she made.

This was a stark contradiction to how I had been living. As I grew from childhood and into my teenage years I mastered an acute awareness of what made me different and ways to combat them. Constantly focusing on ways to make me fit in every way imaginable, I would only wear what my friends wore. Vineyard Vines and Lulemon Leggings were my versions of being "white." The same shade of BB cream that was perfectly lighter than my natural tone was delicately placed upon my skin. Every morning before I left for my predominantly white high school I would glance in the mirror as if it were my own personal ritual, analyzing every element of perceived imperfection. All the markings of being "American" were there but when I looked at myself as a whole, I was confused.

I met Kylie through Megan and the first time I saw her I assumed she was in the fashion program, but this couldn't have been further from the truth.

"Hi, I'm Kylie, I am in the United Nations and political program" she grinned as if she was accepting me. I quickly responded, "Hi, I'm Bianca and I'm in the film program."

That day, Kylie, Megan, and I were all on our way to get ramen. As I was walking next to them I couldn't help but notice how they were both whole individuals. They were not carbon copies of their environment like I was, and they certainly didn't try to be. From time to time, I would look at the two seemingly perfect girls and wondered if I was even acceptable enough to be friends with either of them. Even though we were all minorities, it seemed like they just did it better than me. They never hid their skin or who they were.

For most of my life, I hated my skin. But, every year my family would go on a beach vacation in Mexico. Each year I was always incredibly adamant about wearing sunscreen, but one day while we were on the beach, I had foolishly forgotten my sunscreen. Unaware of my tarnished skin, I walked into the bathroom to get ready for dinner with my family that evening. As I looked in the mirror, I saw my once delicate light skin was darkened by the sun and I couldn't help but cry. I was completely petrified. I knew I would be flying home in just a few days but I had no idea what to do. I decided to stay inside for the rest of the vacation in order to let my skin go back to its once lighter tone. It felt as if I had lost a battle. But this was nothing new, it was as if my life was one long war to be "white," and I was losing. Deep down I knew it wasn't right to hate who I was, but at the time it felt obligatory.

The following weekend Kylie texted me, "Let's go shopping." I quickly replied "Yes!!!." I begged Megan to come to avoid it being awkward, but she was spending the day with her aunt. I admired Kylie in a way, and with the absence of Megan, Kylie would be able to see how boring I was.

Rummaging through my clothes I was attempting to find something nice to wear. In a fit of frustration, all I could find was a pair of Lululemon shorts and a black tank top. I looked in the mirror and knew I couldn't wear this in front of Kylie. I considered canceling but before I could Kylie was in my room. She was dressed to perfection and scanned me up and down and said "Awe you look like a white girl."

Knowing she was right I simply laughed.

On the train to Soho, Kylie pleaded that she pick an outfit for me. In order to please her, I said "Okay"

I waited in the dressing room while Kylie ran around trying to find clothes. She brought me a skirt, a headband, and an oversized T-shirt. Initially, I thought the combo was horrendous, but when I put it on, I couldn't help but smile.

When I walked out, Kylie announced, "see I'm always right."

Later that evening we met up with Megan and went to Central Park. We talked for hours about everything; boys, the conflicts of being a minority, high school drama, the struggles of being a woman, and things I wouldn't even consider telling my friends back home.

Megan is Chinese, Kylie is Black, and I am Latina. Maybe it was luck or maybe it was the quotas the school had to reach to ensure diversity, but either way, this was what I needed. The more I learned about the girls the more I learned how little I knew about myself and my own culture. Without Kylie or Megan, I would've never realized I was fighting the wrong war. All these battles to become white were worthless, because I didn't need to be "white."

The first day I met Megan, she told me she was "white-washed." I googled white-washed in the Urban Dictionary later that night; "A derogatory term used to describe a minority who has assimilated with western society."

As I read the screen, I noticed I wasn't fighting a war at all. I was "whitewashed."

ANONYMOUS

Racism Reinforced by the Pandemic: An Examination of the Mental Health of Asian International Students during the COVID-19

Diversity Writing 3rd Place

Introduction

With the COVID-19 pandemic continuing into 2022, most people now recognize that together with its threat to physical heath the pandemic has brought serious threat to our mental health as well. Lockdown and quarantine disrupt people's original life and plunge them into endless feeling of insecurity and isolation as the end of the pandemic looms uncertain. Lots of people develop mental health problems such as anxiety and depression, and many are losing sleep due to the excessive pressure. While our society now notices this problem and starts taking efforts, there is still a neglected group that requires special attention when trying to handle the mental health threat of the pandemic: Asian international students. While all people suffer from great social upheavals, it is always the minority groups that suffer the most, since they possess fewer social resources and are in disadvantageous social status that could further exacerbate their suffering. Asian international students suffered from social discrimination long before the pandemic, but the outbreak of the pandemic has further reinforced the discrimination that they experience. It is argued in this paper that Asian international students, far away from their families and increasingly being isolated, are at higher risk of developing mental health problems. The paper starts by reviewing the extent research on the issue, then analyzes illustrate the different cultural and social factors contributing to the risk, and finally propose suggestions to help improve the mental health of Asian international students.

Literature Review

While research about people's mental health amid the current pandemic abounds, there is little specifically on international students, and rare on Asian international students. Researchers did notice the vulnerability of international students to mental illness amid COVID-19. For example, Chen, Li, Wu, and Tong (2020) highlighted the significance to pay more attention to the mental health of international students, suggesting that international students are not only have difficulty to access public resources, but also find it difficult to have their needs addressed by their schools or the host countries. They briefly touched upon the specific hardship of Asian international students who are either "scapegoated for spreading the virus or be attacked" for their different pandemic reaction due to cultural differences (Chen, 2020, p.54). Lai et al. (2020) identified similar challenges for international students through comparing the different experiences of international students who went back to their home countries (returnees) and who stayed at the host countries (stayer), concluding that stayers suffered from higher stresses due to the lack of social support and that the pandemic could exacerbate their stresses. However, their research did not focus precisely on Asian international students and there was little analysis from a cultural perspective.

The importance of a cultural analysis in addressing the current topic is self-evident. Humphrey and Forbes-Mewett (2021) conducted research to study the mental health of international students during the pandemic. Their research, albeit conducted in Australia, is of special relevance to the current research topic since they identified that cultural differences had a role in forging the experiences of international student during the pandemic and thereby impacted their mental health (Humphrey and Forbes-Mewett, 2021). For example, the difference between the collective culture of China rendered Chinese international students rather difficult to adapt into the individualistic culture of Australia amid the pandemic (Humphrey and Forbes-Mewett, 2021). The current research, on the basis of extant research, seeks to focus specifically on Asian Chinese students in the U.S. Given the huge cultural differences between Asian countries and the U.S., it is reasonable to assume that Asian international students have rather different pandemic experiences compared with native students. Their experience is further added by functioning social factors that are either pandemic-specific or race-specific. This paper intends to identify both the cultural and social factors and their interplay in forging impact on the mental health of Asian international students and to figure out specific ways to help this minority group.

Factors Building the Vulnerability

To begin with, it must be acknowledged that mental illness is a serious problem among Asian international students. Statistics abound on the mental health of international students, but little specifically on Asian international students. A 2019 statistic discovered that about half of the total 490 international students investigated "met the clinical standards for depression, and one-fourth had moderate to severe anxiety" (Zhang, 2021). Despite the lack of statistics, many reports did highlight the issue facing Asian international students. Exemplarily, Fritz, Chin, and DeMarinis's (2008) research suggested that compared with European international students, Asian international students faced larger stress and "scored significantly higher on the anxiety measure" (p.250). And Hahm and Hsu (2021) stressed the very vulnerability of Asian international students to mental illness who face social stigma and discrimination amid the current pandemic.

A cultural perspective in the very first place suggests that the difference between the individualist American culture and the collective Chinese culture renders Asian international students vulnerable in the face of the pandemic, thereby increasing their likelihood of developing mental illness. Hofestede (2011) identified a total of six cultural dimensions including power distance, individualism, masculinity, uncertainty avoidance, long-term orientation, and indulgence, among which individualism is defined as "the degree to which people in a society are integrated into groups" (p.11). According to this model, major Asian countries, such as China, South Korea, and Japan all exhibit lower level of individualism as compared with the U.S. (See **Table 1**). Historically, all these three countries are under the impact of Confucianism that stresses a family-centered collectivism. In the contemporary world, it is stressed more in terms of mutual relationship and assistance, which manifests in the current pandemic is the community-based mutual help as seen in China. Doubtlessly, mutual help and connections provide both solid material support and stable mental support to individuals going through the crisis.

	U.S.	China	South Korea	Japan
Individualism Score	91	20	18	46

Table 1 Individualism of Countries In Comparison

(Source from: Hofestede Insight: https://www.hofstede-insights.com/country- comparison/japan,the-usa/)

For Asian international students, the pandemic increasingly isolates them, increases their feeling of loneliness and helplessness, and gives rise to serious mental illness such as anxiety and depression. They on the one hand are thousands of miles away from their families. Even though contact could be kept through online communications, the feeling of loneliness is still strong due to the physical distance. Closure of campus could deteriorate the situation as it cuts students from their teachers and classmates, from whom they might have been acquiring the least minimum of support. On the other hand, they struggle to adapt to the American individualistic culture. They might find it difficult to acquire either material or spiritual support from surrounding people. Language and cultural differences have important role in their hardship. They might find it difficult to resort to the right institutions for health information and are thereby under greater pressure as to how to protect themselves from the virus. The health system in the U.S. is different from that of their home countries. They also have difficult in accessing needed medical treatment.

More important, the different pandemic-reacting actions due to the cultural difference could put Asian international students at a loss as well. The research of Maaravi et al. (2021) discovered that culture plays a role in the spread of the pandemic and that "The more individualistic participants were, the higher the chances they would not adhere to epidemic prevention measures" (p.37). Asian international students might not be able to understand the Americans' resistance to wear masks. Such different in cognition towards the role of face masks could result in serious conflicts between the two groups. According to Lai et al. (2021), while East Asian students proactively engaged in countermeasures, Western students in the U.K. were unwilling to learn from East Asian students and to wear facemasks. In contrast, Chinese international students wearing facemasks there were increasingly stigmatized and suffering from xenophobia due to their active pandemic-preventing measures like wearing facemask (Lai et al., 2021). In short words, wearing a facemask could convince native students that those international students are different from them and further isolate Asian international students. Under huge social pressure, both from the pandemic and from the surrounding environment, the risk of Asian international students to develop mental health problems is high.

The pandemic exacerbates the long-entrenched racism and xenophobia in the U.S. and deteriorates the situations of Asian international students. Particularly, when the pandemic firstly emerged, a lot of people viewed as a Chinese virus and blamed China for its spreading. Chinese international students thereby suffer from lots of discrimination, segregation, and even violence in the U.S (Hahm and Hsu, 2021). Notably, Chinese international students are not the mere victims to stigmatization and racial prejudice. Students from other Asian countries are the victims too. Research has revealed that people's existing stereotypes and beliefs about Asians played the major role in their stigmatizing Asians during the pandemic (Grabmeier, 2020). The fact about the origin of the virus does not really matter. Some people pour their anger onto all Asians alike because they have long stereotyped Asians. Statistics identified 3,800 racist incidents in 2020 against Asians, including violence towards older Asian Americans (Yam, 2021). As such, what Asian international students must strive to cope with is not only the pandemic of COVID-19, but also the pandemic of racism. Mental health problems do not emerge out of nowhere, but originate from individuals' interaction and communication with the surrounding environment. For Asian international students, a hostile and isolated environment with which they can never feel a feeling of belonging renders them huge spiritual pressure which in turn gives rise to a variety of mental health issues.

Recommended Actions and Conclusion

The above analysis highlights the very vulnerability of Asian international students to mental illness due to the cultural and societal factors they are facing at present and therefore the need for the public to take actions to better protect them. It must be noted that efforts to fight the pandemic must be conducted together with efforts to improve people's mental health, which makes the measures of pandemic prevention and control more effective. Government and schools could consider the following as a way to better help Asian international students:

Firstly, campuses should strive to create a more inclusive environment through establishing programs or seminars that educate and inform students of the truth about the pandemic and that work on correcting their notions about race;

Secondly, school administrators should specifically consider the settlement of Asian international students during campus lockdown to ensure that they are not cut off from people they know, and offer more opportunities of social interaction to Asian international students through organizing online communication programs;

Lastly, the government should increase publicizing efforts to educate the public to form the right cognition about the pandemic, either its origin or prevention, so as to steer them away from stigmatizing Asians.

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NAOMI LAWTON

From Amyloid Fibers to Super Silk: A Study on the Reprocessing of Scientific Research Articles for Popular Distribution

Mackison Award

Link to Scientific Paper

Microbially Synthesized Polymeric Amyloid Fiber Promotes β-Nanocrystal Formation and Displays Gigapascal Tensile Strength

Links to Popularizations

https://interestingengineering.com/artificial-spider-silk-is-stronger-than-the-real-thing

https://www.futurity.org/lab-made-spider-silk-polymeric-amyloid-fiber-2602842/?utm_source=rss&utm_medium=rss&utm_campaign=lab-made-spider-silk-polymeric-amyloid-fiber-2602842

Introduction

When we think of translation, we often imagine a specialized process performed by language experts, perhaps decoding ancient texts or arduously recording ten language options for the latest global hit show. However, many people engage in subtler forms of translation on a daily basis, often without fully realizing they are doing it. As information is passed along between different audiences, there are alterations that must be made—the tone softened or harshened, the vocabulary simplified for clarity or dressed up to impress. The greater the differences in audience, the greater the magnitude of the necessary translations. If the original audience for the message is assumed to have specialized knowledge uncommon to the average layman, this translation is fully essential when the audience shifts. We see this exemplified in the process of sharing scientific research with the public, but often consumers of the popularizations are ignorant of the vast differences between the colorful article they read over breakfast and the dense original text written by the scientists responsible for the research. In her 1986 article *Accommodating Science: The Rhetorical Life of Scientific Facts*, author Jeanne Fahnestock identifies and breaks down the many changes that carve the gulf between scientific publication and the resulting popularization [1].

Almost immediately in her article, Fahnestock mentions a recent "explosion of scientific popularization" and questions the degree to which the scientific information may be oversimplified or confused in the popularizations. Although a valid concern in 1986, the landscape of today's public media consumption renders the question of factuality and clarity in the popularizations not only interesting, but essential. With the rapid adoption of social media, easy access to online publications, and the resounding impact of recent global health crises, the public has been more exposed to, and engaged in, the discourse around scientific research than ever before. Thus, the importance of striking a balance between creating a marketable article that will be easily understood and preserving the integrity of the scientific research has only increased since Fahnestock first examined the subject.

The main themes in the translation between research paper and population that Fahnestock identified were the genre shift, changes in information, and application of stasis theory. The genre shift, as described by Fahnestock, draws on Aristotle's classifications of oratory discourse. Fahnestock argues that the original research article usually follows a structure and tone associated with forensic discourse, that which is associated with a discussion of past events. By highlighting the importance of the "Materials and Methods" and "Results" sections of the rigorously structured scientific article, Fahnestock points out the primary importance of communicating the observations of the research. By contrast, Fahnestock argues that the popularizations primarily follow the form epideictic discourse, that which instead celebrates a judgement of the current situation. Frequently these judgements are positive, following an optimism that excites the reader to the relevance or potential of the scientific research. However, recent years have also seen the integration of a potential negative viewpoint as well, one which works to instill a fear of the unknown possibilities in the reader as a way to promote the rapid propagation of the article or incite a public outcry against research deemed unethical or premature by the population.

The second main theme identified by Fahnestock is that involved in change in information provided by the articles. Again, this results in the vastly different intended audiences and the expected technical expertise and vocabulary associated with each group. Additionally, Fahnestock argues that the popularizations additionally insert an element of certainty not present in the original publications. Scientists frequently soften their language and avoid outright claims, instead employing language such as "the evidence *might* indicate" and "this *could* imply." The expectation with the research articles is that the experimental data and observations will speak for themselves, and the scientist should be cautious in making any strong claims lest their reputation be put on the line. Fahnestock shows that, in contrast, the popularizations revel in absolutes. The pressure on authors to make claims that are assuredly correct is greatly reduced and language that implies utter confidence in the findings is prevalent.

Finally, Fahnestock explores stasis theory as an additional lens through which to view the rhetorical differences of the scientific and popular publications. Fahnestock explains that stasis theory provides a structured format for questions that can be used to analyze the intentions and content of the paper and asserts that the original versions mostly dwell in the realm of the first stasis while the accommodations for the public lead to rhetoric using the next stases.

In this paper, we explore the validity of Fahnestock's analysis and the magnitude of the changes in recent scientific and popular publications through the examination of rhetorical methods used in a highly technical and recently published research article, *Microbially Synthesized Polymeric Amyloid Fiber Promotes β-Nanocrystal Formation and Displays Gigapascal Tensile Strength*, and that employed by two of the resulting popularizations [2].

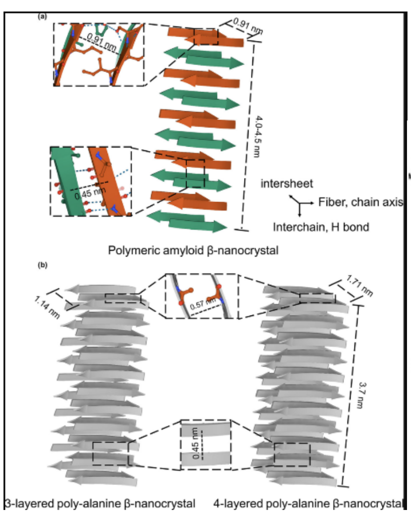
Technical Prowess: The Rhetoric of the Scientific Paper

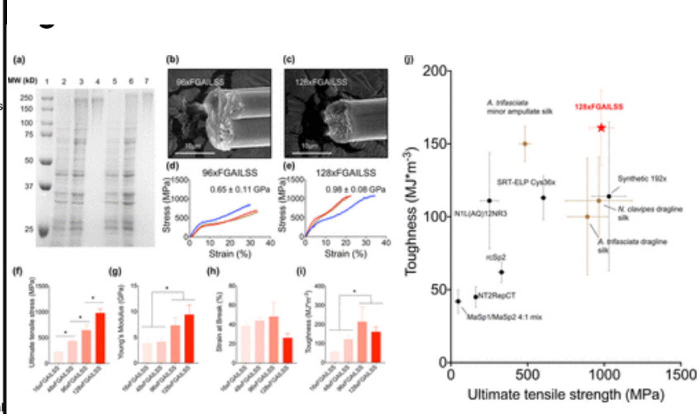
Before the reader even has a chance to dive into the text of the scientific article, several noticeable rhetorical tools signature to the standard research paper stand out. The wording of the title, *Microbially Synthesized Polymeric Amyloid Fiber Promotes β-Nanocrystal Formation and Displays Gigapascal Tensile Strength,* acts almost as a gatekeeper to warn away the unitiated. The highly technical vocabulary, note "amyloid fiber" and "β-Nanocrystal Formation" immediately implies that the article will most certainly require proficiency, or at least base knowledge, of the topic under discussion. Directly below the title, displayed prominently, are the names of the authors. This establishes a necessary accountability, showing that the data, assumptions, and conclusions in the paper can be clearly attributed to these people, and thus, the responsibility for any errors can also be quickly assigned. The third key feature that instantly grabs the eye is the inclusion of a list of keywords. This list serves two purposes for the article: first, it allows discerning researchers to better find the article via internet search, second, it further establishes the vocabulary and, to a degree, the scientific context of the research.

Next of interest in the research article is the overall structure of the text. A classic trademark of the scientific paper is the clean breakdown of sections – affording the reader a clear roadmap of where to go to find information in the dense text. The sections are listed in the order of abstract, introduction, results and discussion, conclusions, materials and methods, supporting information, author information, acknowledgements, and finally, references. This skeleton illustrates what information the authors deem most important to the reader. The abstract, time-saver extraordinaire, allows the reader to spare only a glance and determine if the article is covering a topic they are interested in enough to invest the time needed to fully read the text. The methods and materials section, previously featured after the introduction, has instead been relegated to a position after the conclusions. This allows the researchers to cohesively present their hypothesis, observations, and conclusions without interrupting the reader with an extensive and highly specialized passage detailing the process. This is perhaps a step in the direction of making the article more directly accessible to the casual reader. Of particular interest in this piece is the inclusion of the supporting and author information sections. The supporting information includes a multitude of additional figures, long strings of the DNA sequences discussed, and more details on the results. This need to include an additional section just to detail all of the necessary information highlights the required transparency of the scientific paper – the authors must provide as much relevant information as possible to support their study and claims. This is further reflected in the author information section, where the institutions the authors are associated with are recorded alongside a listing of the responsibilities of each researcher in the project. The breakdown of responsibilities holds the authors individually accountable, and thus further instills a sense of confidence in the integrity of the content.

The references section is its own testament to the reliability of the information. With a total of 80 references, all pointing to equally technical reports, the authors assert their position in an extensive community of research. The references give credit where due, but they also paint a picture with a small blank space, which the authors of the article fit their own research into with an elegant finesse. Returning to the introduction of the article, we see thirty reference links in three short paragraphs. The authors call forth previous research with these references, but then transition with a bold sentence which highlights the essential “gap” in the research. By pointing out this gap, the authors create a motivation for their own research and render the reader more engaged by the satisfaction of filling in a missing piece. This sentence is thus immediately followed by the author hypothesis and elegantly transitions the reader into the results and discussion.

Although the casual reader may be lulled into a false sense of comfort by the brief, clear abstract and introduction, the article shatters any misconceptions with the results and discussion section. The language is highly technical throughout, and the frequent incorporation of technical names such as “16xKLVFFAE fibers” makes the reading slow and choppy. To break the text up, and provide alternate ways of conveying information, the authors incorporate and interesting series of figures throughout the section. These are divided into two categories: illustrations which help the reader visualize a detail, and graphs or pictures which simply present the results.





Figures 4 and 5 from the scientific article [2]. Figure 4 (left) is an example of an illustration which provides a helpful visual. Figure 5 (right) conversely is a simple presentation of results, providing visual support to author claims.

The wording of the section supports Fahnestock’s expectation of forensic rhetoric. The sentences revolve around the straightforward reporting of results and how they differ from past research and findings. However, as we transition to the conclusions, we see a slight deviation from the rhetoric observed by Fahnestock. The authors assert their conclusions with strongly confident language, “our results proved,” and avoid the careful hedging seen in the example pieces Fahnestock analyzed. At the same time, Fahnestock’s conclusions still hold with the lack of hopeful discussion on the applications of the research. A small statement is included on the potential for expanding the work to other amyloid sequences, but never transitions to an epideictic hypothetical on the wondrous applications that could impact the reader.

Awe & Application: The Popularizations

Moving on from the dense and highly technical scientific article, the colorful and brief popularizations seem at first glance to hardly discuss the same research. A search on the topic reveals a series of bold, exciting titles that vie for reader attention. This competition is entirely contained within the popularizations. Since the scientists are responsible for the original research, and generally receive funding from grants prior to the research, they generally avoid the need to market and employ "clickbait" titles to gain attention. In contrast, the popularizations are produced by a variety of authors, all of whom are counting on user attention for financial support. Thus, we can partially attribute many of the differences to a change in economic models as the original research is adapted for popular reading. In this section, we examine two of these flashy articles. First, we look at *Lab-Made Spider Silk Beats Steel and Kevlar,* by author Brandie Jefferson-Wustl, and then move on to an analysis of *Artificial Spider Silk Is Stronger Than the Real Thing*, written by Chris Young [3],[4].

Even before diving into the text of our first popularization, we see a number of stark stylistic differences from scientific article. As mentioned above, the title shifts drastically from one which contains as many technical key terms as possible, to one which contains as many excitement-inducing terms as possible. The scientific article never once mentions steel or Kevlar, but the author of the popularization found the opportunity to incorporate common materials which, already familiar to the reader, will convey the concept of super-strength and invoke comparisons for application possibilities. The heading also prominently features a photo, shown below, which was only a minor component in a flowchart figure in the scientific article.

Heading for the popularization [3]. Note bold title and engaging "product" photogra

ph.

Starting the article with this picture grants the author two affordances. First, it provides "proof" to the reader, indicating that the research did manage to create something. Next, it gives the reader a clear picture of the product, allowing a mental image to capture the reader's imagination as they read through the article. Another new element in the popularization is the inclusion of the cheerful series of icons near the top of the page. These icons are universally recognized symbols for popular social media sites and clearly encourage the reader to share the article with friends and colleagues as a source of free proliferation for the author, thus further supporting the popular dispersal of the article via online methods. This is a new development since Fahnestock published her analysis, which existed in the time of primarily paper news, but further supports the need to transform the scientific format into one which can be understood and shared by all.

Social Media Icons [3].

Rather than transition with a clear set of standardized section headings, the article clearly undergoes a genre shift as it is structured in only one section, with quotes and key statements highlighted in dramatic colors. Included in these highlighted terms and phrase are “natural counterpart,” “stronger,” and “Kevlar.” This method of drawing a reader’s attention is interesting not only due to the colorful impact on the article design, but also because these terms indicate what the author thinks the readers will care most about. In theme with Fahnestock’s conclusions, we do see in these terms a trend of invoking comparisons which lead to emotional responses. By highlighting how this research not only produced a new material, but a material which is *better*, the author captures the awe of the reader. This awe is further incited by quotes from author interviews, in which the scientific researchers themselves venture to make claims that are entirely left out of their research articles. For example, we see in the *Futurity* article a quote from author Zhang in which he says: “This demonstrates that we can engineer biology to produce materials that beat the best material in nature.” This language is in no way echoed in Zhang’s scientific writing, and provides further evidence for Fahnestock’s findings that, when not faced in with the knowledge of a peer review, the author will speak much more boldly and make assertions they would not dare in the technical report.

Another step clearly made by Jefferson-Wustl in their translation of the scientific piece is the alteration of the technical language into terms more clearly understood by the casual reader. There is still some specific language, note “beta-nanocrystals” and “amyloid fibers,” but the popularization attempts much more to include explanations when needed and simplified language where possible. This removes the “gatekeeping” seen in the scientific report and renders the uninitiated more capable to understand the scientific findings. Also in a move to accommodate the casual reader, the popularized article contains no mention of the methodology utilized by the researchers. This allows the author to avoid clogging the reader’s attention with forensic methodology and keep the article focused instead on the wonder of the results.

A final note on the Jefferson-Wustl article is on how it fits in with the rest of the website. In the scientific piece, we saw a plethora of citations that tied the research to other reputable findings that supported the author’s goals. In the popularization, we see no citations and instead are faced with a sidebar of illustrated links with loosely related research on spiders. These links have similarly fascinating titles and aids the author in maintaining traffic on their website, and thus increasing revenue.

Eye-catching advertisements [3].

In our second popularization of interest, we see many of the same rhetorical shifts employed. The title includes a comparison to spider silk to orient the reader and establish the category of material research. Immediately following is the supporting subtitle: “Spider silk is one of the strongest, toughest materials on Earth. Or at least, it was.” This is an incredibly effective hook for capturing reader interest and awe, and clearly indicates the difference in expected audience. Scientific readers want to be convinced by meticulously gathered data, but for the casual reader, even bold statements are accepted without question. The design of inducing of wonder is further carried by the generic, yet beautiful, picture of a dew-coated spiderweb. This image is hardly related to the investigation of mechanical properties which make up the bulk of the research article, but the author of the popularization included it as a visual trigger for readers who follow the “a picture is worth a thousand words” media trend.

Awe-inducing stock photo used in the popularization [4].

Even more extensive icons for sharing [4].

The structure of this article is even farther from the rigid scientific structure, as the author breaks up the text with unrelated video and text advertisements. As with the *Futurity* piece, there are also social media icons featured for ease of sharing.

If anything, this article strays farther from properly conveying the scientific results, trading technical information instead for a cluttered webpage teeming with distracting icons and advertisements. The author must be given credit for mentioning in the body of the article that this project is a follow-up from previous fiber research, but amongst the sea of links for nonrelated stories, the existence of a link or citation for these previous works is noticeably absent.

It is also interesting to note with this article that the website it is posted on is an engineering-focused site. Thus, there is some expectation that the audience for the article will have some preliminary interest and technical language proficiency. Despite this, the language of the text is still highly simplified. Most obvious is the emission of the technical names for the "the fiber," which is frequently referred to with the nigh unreadable string of characters, such as "378 kDa 128xFGAILSS," in the scientific article.

Conclusion

Through the examination of *Microbially Synthesized Polymeric Amyloid Fiber Promotes β-Nanocrystal Formation and Displays Gigapascal Tensile Strength* and two of the corresponding popularizations, we analyzed the changes made as highly technical scientific reports are translated for consumption and dissemination by the public. In her 1986 essay, Fahnestock laid the groundwork for recognizing these changes, particularly in the areas of genre shift, the changes in information contained, and the application of stasis theory in the rhetoric design.

Our investigation primarily supported Fahnestock's findings as we saw a clear shift from forensic to epideictic rhetoric between article types. However, with the changes made in article format, namely the explosion of purely online articles designed to be accessed and shared on the internet, we see an additional shift not present in Fahnestock's time. The altered economic system of free and easily accessed articles supported by in-site advertisements has caused the authors to incorporate a new series of links, advertisements, and in-text references designed to pull reader attention and keep them on the website for as long as possible, even to the detriment of the article being viewed. Additionally, the advent of clickbait culture has further encouraged authors to go for the flashiest titles and keep their articles as short as possible in order to cater to the limited attention spans of today's readers. Thus, the positive impact of rendering scientific popularizations made more available to the public is tempered by the inclusion of overly dramatic language and omission of many details which the original scientific article deemed important. As this fast-paced culture, so different from the world as Fahnestock saw it, continues to grow, we hope that future generations of writers find a balance between the scientific and the stunning so as to both inspire awe and accurately inform readers of scientific advances.

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Free Self Defense Classes at CU

Multimodal 1st Place

https://www.colorado.edu/pwr/sites/default/files/attached-files/wrtg_-_free_self_defense_final_podcast.mp3