THE SCRIBLERIAN

Spring 2010 Edition

Sponsored by the English Department and the Braithwaite Writing Center, the Scriblerian is a publication for students by students. Revived during Fall Semester 2004 after a two-year hiatus, this on-line journal is the result of an essay competition organized by Writing Center tutors for ENGL 1010 and 2010 students. The Spring 2010 Contest was planned and supervised by Chair Samantha Gay with the help of Annalee Banks, Lauren Coleman, Adell DeGraffenried, Landon Mitchell, and Amanda Utzman.
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Argumentative- English 1010
1st Place Winner: Celeste Miller, “College for All: Is It Really for Everyone”
For Dr. Carole Schuyler

For centuries, societies have considered education to be one of the most valuable investments in a culture and a privilege to obtain. However, a recent trend is pushing to define higher education as a right and essential for a successful career. As employers begin to follow this trend, many talented and skilled potential employees are turned away because they do not have a college diploma. However, if high schools and occupational colleges can adequately train an individual to be competitive in the job market, employers will hire them without a four-year college degree. By having good "soft skills" and competency at the high school level, many high school graduates, like our predecessors from decades past, can have successful careers without a college degree.

In their essay, "The Mission of the University," brothers Robert and Jon Solomon address some of the purposes a university should serve, and the qualities a college student pursuing a higher education should possess. Both Robert Solomon, a philosophy professor, and Jon Solomon, a professor of classics, are well-published in their respective fields.

Solomon and Solomon point out many reasons why a higher education can enrich a student's life, and, much like Steven Cahn, believe that everyone should receive this opportunity. Cahn is a philosophy professor and author of many books, including Education and the Democratic Ideal. In an excerpt from this book, "The Democratic Framework," Cahn discusses several important topics relating to the importance of a liberal higher education to the stability of society and purposes of a democracy. Cahn supports the view of having a universal higher education and validates his point with anecdotes.

On the opposite side of the issue is James E. Rosenbaum. Rosenbaum is a professor of sociology, human development and social policy at Northwestern University. In his publication, "Universal Higher Education: Challenges and Alternative Strategies for Serving the New College Student," Rosenbaum addresses some common misconceptions concerning a "college-for-all" approach. He also offers some suggestions for college students to be more successful, and alternatives for universal higher education. Zachary Karabell, a well-known author and news commentator, has a similar attitude on universal higher education. In his essay, "The $10,000 Hoop: Has Higher Education Become an Exercise in Futility for most Americans?" Karabell addresses some of the problems and issues that arise with what he believes is becoming a "mandatory higher education."

Although Cahn provides ample support for the importance of higher education using anecdotes, Rosenbaum's and Karabell's essays argue against universal higher education, using empirical and authoritative evidence. They believe that there are many roads to success besides a four-year college degree for many high school graduates.

The first reason college is not for everyone is that universal, mandated higher education is a fairly recent development and as yet an unproven theory. Most of our parents and grandparents did not obtain college degrees (Karabell 256). "Only 32 percent of a national survey of [high school] seniors in 1982 indicated that their counselors urged them to go to college, but 10 years later fully 66 percent of seniors made the same statement" (Rosenbaum 18). Our society is shifting toward a college-for-all approach, even though past generations have thrived with promising careers without college degrees. It is true
that our fast-paced, technology driven society does require a greater number of highly educated technosavvy individuals. However, this mandatory approach is pressuring high school counselors to encourage a majority of students toward a college education whether they are ready or not, even though there are other valid alternatives.

Some of these students being encouraged to attend a university are not prepared for college because they have not acquired the needed skills they should have acquired in high school. These students are at increased risk of wasting time and money in remedial college classes or dropping out altogether. Although these high-risk students may take classes, and a small percentage of them may even finish a degree, this does not always signify competence (Karabell 254). “[Forty-six] percent of students enroll in at least one remedial course, and among those entering community colleges, 64 percent enroll in remedial courses" (Rosenbaum 18). If these students had been given different advice concerning more desirable options or increased their effort in high school, they might have revised their plans for the future. Many of these students are not really "college-bound," but work-bound; they do not benefit from the college-for-all approach (Rosenbaum 16). This recent trend of encouraging all students, ready or not, to attend a university is one reason that the current push for universal higher education is not ideal.

A second reason a college diploma is unnecessary is that many current employers are willing to hire students with high school-level skills. However, employers have found that a high school diploma no longer equates with high school level skills. Employers even complain of high school graduates often being illiterate. "More than 40 percent of high school seniors lack ninth-grade math skills, and 60 percent lack ninth-grade reading skills" (Rosenbaum 18). As a result, employers require a college diploma to ensure that an individual possesses high school level skills. Employers say that if they could trust a high school diploma, they wouldn’t have to hire college graduates to do a job a competent high school graduate could accomplish (Rosenbaum 18). Unfortunately, our high schools are failing these students and leaving many of them unprepared for college or the labor market. As a result, society makes an effort to compensate by implementing universal higher education, which "is a response to the failings (real or imagined) of high school" (Karabell 254). Students who are successful in high school and possess soft skills, such as social competence and a good work ethic, can get great jobs without a college degree. Soft skills are just as important in the workplace as academic skills (Karabell 255). Soft skills are also strong predictors of job performance. Sociability, discipline, leadership, homework time, and attendance in high school were significant predictors for students' educational attainment and earnings nine years after graduating from high school (Rosenbaum 19). "Employers report that they need so-called soft skills even more than academic skills, and high schools can provide these skills as well as colleges can" (Rosenbaum 18).

This leads to a third reason that college is not for everyone. Many high school students don’t realize the importance of their effort in high school and believe that they can slack off until they get to college. This is a common misconception with severe detrimental effects. As it turns out, high school performance is a strong predictor of long term outcomes. "For students who earn no college degree, a rise of one letter grade (from C to B) is associated with a 13 percent earnings gain at age 28—almost as much as that of a B.A. degree, which increases earnings by just over 14 percent" (Rosenbaum 19). Students who are willing to put in the effort during high school are the ideal students for college because they possess positive motivation. This right kind of attitude is "the most important prerequisite for higher education" (Solomon and Solomon 241). Higher high school GPA's are a good predictor of future success because
they are a symptom of the kind of student who is destined for higher education—"one who really wants to learn, who has a thirst for knowledge and a desire for wisdom" (Solomon and Solomon 241).

The value underlying all these points is relevant to all those directly and indirectly influenced by a non-mandatory higher educational system. Those who do attend college will be prepared for the challenges that await them and will be a valuable investment for their community. Those who do not attend college leave more resources available for universities while finding better alternatives for themselves to suit their lifestyles, personalities, and skill levels. Society as a whole would benefit from this type of higher educational system.

Despite the empirical evidence illustrating the detriments of a universal higher educational system, many support the idea of college-for-all. One reason for this is supported by Cahn, who argues that a higher education for everyone is essential for a successful democracy. In order for people to make informed decisions in the political world, they need to be knowledgeable and educated. Cahn elaborates, saying that background information gained in a liberal education is necessary in order to provide the fundamental basics a voter needs to make educated decisions in a democracy. In addition to this, a responsible citizen should also be informed about the current issues being debated in the political arena (202).

Cahn continues by saying that higher education is necessary in order for individuals to become responsible citizens and to gain wisdom. Without these benefits that often come through a college education, a true democracy cannot survive (203-204). However, is a college education really necessary for someone to attain knowledge and wisdom? I'd like to offer an example that illustrates that this is not so. One who has attained national fame and mounting success without a college education is Glenn Beck. Too poor to afford a college education, he made his way in the world with a high school diploma. He is now one of the most watched cable news shows on television, educating his viewers about current political topics and the structure and functions of government and the Constitution. How did he become so educated? He became a voracious reader and learned as much as he could from as many books as he could get his hands on. Beck is a prime example of one who can succeed without a college degree because of his own initiative and motivation (Beck).

A second reason that many support a universal higher education is the belief that Americans are entitled to it. Karabell points out: "Clinton, in his State of the Union address, announced that higher education is an American birthright" (252). Many believe that because they live in the United States, they should be given a college education, with some believing they should be given this for free. Indeed, there are millions of dollars invested in higher education by both state and federal governments. Other political representatives support the idea of making two years of college as universal as high school is now (Karabell 252). However, a college education is not a birthright that every American should be handed for free. The main reason for this is that people often do not value something that they do not have to earn. As a result, students would approach college the same way they do high school which, as Rosenbaum pointed out earlier, is far from ideal. This would lead to college becoming simply an extension of high school, with even a greater number of remedial classes being offered. Lengthening high school would not solve the problems of an uneducated democracy.

Instead of making college mandatory, having a better quality secondary education that emphasizes the importance of literacy, responsibility, and the desire for wisdom would be more effective and yield equal if not more satisfactory results for creating a more educated democracy. Higher education is more
of a privilege than a right, and those who do not have the desire or opportunity for such an education can still lead a happy, successful life and be actively involved politically. Along with improved secondary education, other possible alternatives to college degrees are available for further development and exploration, such as occupational colleges and trade schools. Programs like these can equip students with needed and valuable skills that can prepare them for a variety of different careers. Also, four-year colleges could offer one or two year degree programs and certifications. Universities often avoid this, worrying that it will deter students from completing the four-year programs. However, many Ph.D. programs offer Master's degrees without drawing many students away from completing the Ph.D. (Rosenbaum 29). These alternatives to universal higher education would give many students the opportunity for a better career and higher earnings, while allowing them to do something they enjoy and benefitting society as a whole.

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Karabell, Zachary. "The $10,000 Hoop: Has Higher Education Become an Exercise in Futility for Most Americans?" Durst 252-56.


The notion that government can be small is a misconception. Humanity is always governed by persons like parents, kings and Popes; or by organizations such as massive corporations, religious groups, militaries, mobs etc. that we should more correctly call governments. Government is not only people who we elect to run countries, it is the powers that be, no matter how they came to be. The idea that we can shrink government is only applicable to democratically elected governments.

We cannot shrink the amount of governance that is needed to fill the void created by each individual who is not perfectly responsible. As with a child, each individual can only free them self from needing constant supervision by supervising them self. There are parents, teachers, social workers, sports coaches and a slew of various other forms of government that must exist in some combination or another until a child is self-governing.

It is the soap box cry of anarchists and power mongers, disguised as defenders of our liberty, that we can have a small government working for an enlightened, responsible, self governing people. These beautiful pros only serve to blind citizens to the reality that the human condition is nowhere close to being capable of responsible self-governance. In most cases such dogma serves only to protect the de facto governments that exist in the absence of a sufficiently large and empowered democratically elected government. The cries of libertarians and small government tycoons cause the well intentioned idealist in each of us to quickly inflate and act as a bubble of illusory protection against reality. Thomas Jefferson spoke well when he described the difficulties of maintaining good government as a "tempestuous sea of liberty," (Thomas Jefferson)

Responsible citizens are obligated to take part in the arduous process of democratically electing government and then using their votes to check that governing power. Any other course will lead to the rise of powerful non-democratically elected entities, in the case of having small government, or a powerful democratically elected government that no longer serves the greater good of the majority of the people.

In many countries there is a sufficiently large enough percent of the population that understands their civil duties and that their own freedom depends on active democratic engagement. There is a broad consensus among the people of these countries that they can elect and maintain a big enough government to keep all of the other powerful organizations in check. This is the only way to prevent the people of any nation from being governed by powers that they do not elect. Karl Marx observed that at its core "capital is dead labour, that, vampire-like, only lives by sucking living labour, and lives the more, the more labour it sucks. The time during which the labourer works, is the time during which the capitalist consumes the labour-power he has purchased of him." (Marx) At the heart of capitalism is the need to control the people in order to build more capital. This must be kept at bay by the sufficiently large democratically elected government. The Wal-Marts and Exxon Mobils of our day, by their very nature, seek to control the people.

Only in the last two centuries have we seen the great and arguably successful experiment of separating church government from the peoples elected government. History is littered with tragic tales of whole
civilizations ruled by "God" and robbed of their basic human rights. Only when a rebellious group of intellectuals got together and formed the U.S. constitution, did humans see for the first time the importance of having an elected government in place to ensure protections against theocratic oppression. Socialism is the most accurate word to describe the appropriate size of a healthy government; however, the type of socialism employed is critical. Lenin's socialism (more often called communism) was completely void of the democratic principal that is necessary for ensured individual liberty. Although Lenin understood the concept that good government must hold at bay bad government-esque groups, he did not acknowledge the loss of human rights that would sooner or later occur as a result of abolishing democracy. Today the United States operates with a more mild form of socialism. Socialism in the U.S. has a strong democratic side as well as large government agencies that work to shield its citizens from the powerful interests of religious and corporate groups. That being said, the large body of conservative groups that wield large control over politics and the media prevent an efficient application of truly democratic socialism.

In 1949 Albert Einstein concluded that there is "only one way to eliminate these grave evils, namely through the establishment of a socialist economy..." (Why Socialism?) He went on to describe a government that would have the power to prevent harm from capitalism without losing the democratic voice of the people.

There is no need to distract ourselves with ideas of small government. We will benefit the most by working to be more responsible citizens who ceaselessly strive to maintain our liberties by building and maintaining a large central government that protects the people from competing government entities, who if left unchecked, will rise to power.

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"Qué dijó?" is probably the phrase I've stated the most in my whole life. It's Spanish for, "What did you say?" It was the most useful phrase in helping me learn to speak Chapín. Chapín is what the Guatemalans call themselves. I lived among them in Guatemala for two years as a missionary for The Church of Jesus Christ of Latter Day Saints. One of my primary responsibilities as a missionary was to serve the people of Guatemala in any way possible including: teaching them, helping them, living with them, and basically becoming one of them. As I first stepped off the plane into the capital city and breathed in the dirty capital air, I realized that to "become Chapín" was going to be a lot harder than I thought. My blonde hair, blue eyes, tall thin figure, gringo accent, and American way of thinking dug a canyon of cultural differences between myself and the Chapíns.

Guatemalans are a very nice and friendly people once the ice is broken, and they accept you as friend, or better put, a fellow Chapín. They’re a God believing, beer drinking, and fighting to survive people. They're accustomed to (and tired of) being cheated by their employer, government, church, family, and friends. The whole history of Guatemala has truly been the story of someone else coming in as a friend then running off with all the goods and leaving the Guatemalans poorer than before. So with that background, it was hard to gain their trust. The mere sight of me (a gringo) quickly flipped open the book of bad memories and hurtful grudges they stored deep in their souls which was often exhibited by loudly shouted words of hate and anger, thrown bottles of glass, or a drenching as they drove by you on a rainy day. Therefore, the Guatemalans kept the cultural canyon wide and deep for strangers. They only filled it in when a stranger would speak Chapín with them. They wanted someone who wasn't afraid to admit that they also were Chapín. To be Chapín meant you spoke their language, not just Spanish but knew their unique sayings and jokes and liked their soccer teams. You were someone that wasn't shocked or disgusted at the sight of their dirty towns, garbage filled streets, or smog, stained buildings and parks. Someone that didn't look disgusted when asked to sit on old rotted furniture or look appalled at their plain cement housing, rusted doors, or dirt floors. The Guatemalans befriended the people that wouldn't pause in a conversation and stare blankly at the chickens that lived in the house. They welcomed someone that loved their food and didn't waste it. Over all they accepted people that were humble not arrogant. They distrusted someone that thought themselves better because of money, clothes, parents, nationality, history or race. They wanted someone that spoke Chapín with them. I was determined to learn Chapín, but I first had to learn to communicate. They spoke Spanish. I didn't. That created a crevice of differences. So I set about to learn the language.

The first lesson I learned in order to speak Spanish was that "Spanish isn't English." You can't speak Spanish if you're thinking in English. The words, their meanings and their feelings, are all different. The way they speak seems backwards in English, for example, "el carro rojo" translates to "the car red." It sounds horrible in English, but in Spanish it sounds perfect. For two years, I had to change my traditional way of thinking from red car to car red. Every day was spent thinking, reading, and pronouncing in Spanish. I would read out of the scriptures and grammar books. I would ask what signs meant and inquire about the meaning of the sayings the people used. Every day I would write down five words in
my little agenda that I keep in my shirt pocket. Throughout the day, I would review them repeating them in Spanish and then checking in English to see if I had it right. I would use those words in my simply built sentences during the day with people. Sometimes I just wouldn't get the meaning of a word or a grammar principle. It would be like trying to loosen a rusted bolt. You twist and tug and pull at the wrench. You hit it with a hammer as you get madder and madder, but still the bolt doesn't budge. I would find a word that no one could explain. They would just say, "That's how it is." or "You just say it that way" which doesn't help the one learning the principle. I would figuratively tug and pull and hit at the word as I asked people and studied, but my brain was just rusted shut. Sometimes I would think I had it and say it to a crowd of people. I would be so excited, but that excitement would turn into frustration as I saw their reaction of blank faces painted with zero understanding. I can't really explain the horrid feeling of having no one understand you. I would slump down and just have to live with the frustration and continue to twist and tug at the word until it became loose. This usually happened when I was not expecting it. We would be teaching. Then I would hear the word and the use of it and (though I had heard it many times before) the understanding of the word would just click. The rusty bolt would come loose. My brain would open as though I would feel something settling in it, and I would finally understand the word. It felt like I had discovered a new continent. Spanish came to me in this way, one rusty word at a time and a lot of hammering and whacking until it came loose and made sense.

Once the Guatemalan people saw that I had a desire to learn "their" language, they were eager and very helpful in assisting me on my journey to speak Spanish. For more than a year, I struggled with the basics of Spanish. I was very surprised with the patience and love that most of the Guatemalans showed me. They would try very hard to explain and show me how I should use the words or why they said it a particular way. Although I messed up a lot or said the wrong words, they never made me feel dumb or embarrassed. They laughed a lot, but I had to learn to laugh with them. I would have to learn to laugh with them when I would say I loved a boy when I meant to say I liked him as a friend, or I would say "monkey" in place of "hand." "You make a million mistakes when learning a new language," a teacher told me. "You might as well get it over with quickly." I lived by that, and I'm sure I made two million mistakes before I tamed the Spanish language.

It's really quite a miracle when your dreams, thoughts, sayings, and counting convert themselves into Spanish. Once I filled in that language crevice, the Guatemalans began to accept me and the journey of learning to speak Chapín began. They let me in on their jokes and stories about work. I was able to take part in the important soccer discussions. I was allowed an opinion on which team was better Barsalona or Real Madrid. My excitement grew as my soccer team won. I cracked the ice a little more as I let the chickens scurry past my feet without being surprised. I learned to overlook the dirty streets and cities; soon they became common place to me. I stopped commenting on the dirt floors or taking pictures of the crude houses to send home to my family. Guatemalan slang, dress, hair style, table manners, customs, doors, water, food, work, habits, and everything was beginning to be natural and normal to me. The loud busses and smoggy streets were a way of life. As I accepted these things into my life, the people began to accept me into theirs. I went from being a snob nosed gringo to a proud Chapín in their eyes. Once that happened to me, they finished cracking the ice and let me swim in their culture with them. I was Chapín to them, and that was the best thing I did to help me serve them as a missionary. I learned to speak Chapín.
The rain started to come down harder than normal in the Uinta Mountains. A fog rose up from the direction of Crystal Lake. Sitting in the vehicle, I could just barely make out a figure of a man running out of the woods towards us. He yelled, "Help! Somebody has been struck by lightning!"

Earlier that day, I arrived in the parking lot of Crystal Lake with my brother and father. My eleven-year-old body was finally able to take a break from hiking the Notch Loop. I sat on a little hill of dirt right next to my older brother Mike. The adults found out that a couple of the scouts from our troop got lost. Some of the adults tried to find these scouts—the rest went to get their Suburbans from another parking lot.

After about half-an-hour, it started to rain lightly. The sky turned from a blue to a dark gray. Due to fog, I could barely see a couple feet in front of me. In a couple of minutes, the drizzle turned into a more steady rainfall. I tried to find a place to keep my pack and myself dry. I soon found myself huddled with my brother and a few other boys under the lip of the outhouse next to the parking lot.

A single bolt of lightning crashed twelve feet in front of me. I looked at the face of my older brother and laughed to myself. It looked like he was having a panic attack or wet himself in front of a cute girl. I didn't understand why he was scared—the bolt of lightning didn't seem that bad to me. I thought that lightning wasn't deadly or even dangerous.

After a few minutes, my dad and the lost group of scouts could be seen at the entrance of the trailhead. At about the same time, a fleet of white Suburbans pulled into the Crystal Lake parking lot, ripping the dark fog apart. I could finally get out of the downpour of this rainfall.

I hopped in the closest Suburban, relieved that I could finally take off my somewhat wet backpack. I started to unlace and take off my boots. Once the Suburbans where loaded, the leaders turned on the vehicles and began to back up.

We heard a man crying out, "Help! Somebody has been struck by lightning!" The Suburbans all stopped immediately. The leaders and a few other boys opened the doors and ran towards the man. I put my hiking boots back on and went out into the onslaught of weather.

I called back to my friends who stayed in the car, "Well, it could have been worse for them, they could be dead. I'll be back in a sec."

I ran towards a scene that I thought two years of examining the Scout Handbook prepared me for. An older boy and I entered the Crystal Lake Trailhead, zipped up our jackets and tried not to get soaked. We went about twenty yards when one of our fellow scouts came staggering from the direction the leaders sprinted to. He was the most outgoing scout in our troop, but this time he wasn't joking around or even smiling. He looked like he just got hit in the crotch—something was wrong. He threw-up right in front of us. The older boy took this as a sign that we shouldn't go further and turned back, but all of these events made me even more curious. I couldn't help going forward.
I continued on the trail for another fifty yards and there was the scene. I went closer. About half-a-dozen men tried pushing me away from the area, attempting to save my innocence. I just kept on walking towards it. I was only a foot away from them, two adult bodies with faces that appeared to have been contorted and covered with what seemed to be blood. I didn't see them breathing. I bent down and stared into their glossed eyes. I smelled their burnt flesh. I thought that they were dying. I thought that if I could only get a closer look at them, maybe I could find the life that these people were losing. Maybe if I looked into their eyes, they would be healed. Maybe I could cause a miracle like the Nazarene.

I started to lose the sense of the people and things going on around me. The leaders kept trying to push me away. I would not budge.

"Can I please just tie my shoes?" I asked.

My father answered that I could.

I stopped on the rock that was closest to the bodies. I tried tying my shoelaces and couldn't. Two times, three times, four times...I tried tying one boot over five times. I didn't care about my shoelaces. I wanted to bring these people back to life. I stared into their frosted eyes. Each time I tried tying my shoelaces, I stared even harder. My scout leader saw that I was having a hard time tying my shoes and offered to help. I declined instantly.

The first boot finally was tied; I went to tie the second. I continued to stare. I thought that they would get up and everything would be fine. I was waiting for them to stand up—they didn't.

When I was able to finish tying my second boot, I stood up. I was able to leave, but then a nurse, who happened to be in the area hiking, came along to help. I waited to see her revive these people. I waited for a miracle to happen. The nurse looked down at these victims and said that they were dead. She didn't check their pulse; she didn't do anything. The nurse moved on. She didn't give them a second glance.

I wanted to yell at her. I wanted to tell her to come back and save them. Everyone else lost hope. They gave in to the fact that these two people were dead, but I didn't. I was outraged when I saw that everyone but me believed that they were lifeless.

I stared at them and witnessed a miracle in my mind. If these adults wouldn't save them, I would. Then I heard a sound that I didn't expect to hear: the cries of children. They were crying for help. They didn't know what was going on. They didn't know that their parents were dead. They didn't know that they were now orphans.

There were three children. I saw a three-year-old girl foaming at the mouth. To me, she seemed like a doll thrown onto the dirt floor. I then saw a six-year-old girl who was crying for help. I wanted to rush over and pull out the twigs in her hair—maybe she would calm down. I was about to run over when I saw a ten-year-old boy having a seizure. The leaders tried to keep him safe. I couldn't help them.

I glanced at the victims' bodies. I was finally able to see the state that the bodies were in, not just staring into their eyes like I did before. I lost my hope that they would be saved. My scout leader was finally able to force me to turn around and head back to the parking lot. Before he turned to go back to the scene, he gave me the task of making sure that no one else came and saw what happened there.
I took my commission and recruited an older scout. I found a wooden stick for my staff. I positioned myself on a large boulder located in the middle of the trailhead. I stood there making sure that no one would set foot near Crystal Lake. I wanted to do what my leaders weren't able to do for me—protect innocence. I was left to ask myself questions for what seemed like hours until a large group of young women came and tried getting past me.

These girls had just lost their leaders, but they didn't yet realize it. I, the guard of this scene, kept them from knowing the fates of the lightning strike victims. I held out until the stretchers with the bodies came out. I couldn't stop them from seeing the body bags. I couldn't protect these girls from the truth.

Three years later, when I was fourteen, I went back to the Uinta Mountains, to Crystal Lake. I took with me a simple pine cross and a small bouquet of flowers. I walked the same path that I did a couple years earlier. I stumbled along the path and finally found where I thought the lightning strike had occurred. I didn't recognize anything. The tree that was attacked by the lightning grew back most of its limbs, and there was only a small indentation and burn mark where the lightning struck and went down to hit Richard and Lisa Goff, the victims of the lightning strike. There were bushes now where their bodies had been. The land healed itself.

All the images of that day flooded over me. I remembered everything that happened. I then thought I saw the bodies staring back at me, calling for my help. I fell to my knees and started to cry.

I was wrong in thinking that I could save them; I couldn't bring back the dead. I came to the fact that it wasn't me who let them down, but that it was their time to die. Death took these parents, this son and this daughter, this brother and this sister.

For the next few years, I hated happiness. I thought that if I ever had an enjoyable time, I betrayed the victims. My friends didn't understand why I turned from a cheerful person to a pessimist. It took me years to smile again. It took me even more time to laugh without feeling some form of regret. Death scrapped my childhood out of me.
Today it is known as classic rock, but in the 1980s it was simply called "rock." With bands ranging from Styx to Led Zeppelin, it was a time filled with a variety of subgenres including arena rock, hard rock, and glam metal. Band popularity ranged from one-hit wonders like Autograph to worldwide megastars, including Van Halen and Def Leppard. Classic rock and its subgenres have helped shape the modern rock of today. The evolution of rock included changing concert performances and entertainment structures, different instrumentation, and the development of new subgenres.

The birth of classic rock in the United States began in the 1950s. This music is linked to a merging of early 1940s blues, gospel, and jazz music in the South. The first artists in this group typically performed with instruments that included electric guitars, bass guitars, drums and a lead vocalist. Rock influenced fashion, lifestyles, attitudes, and the overall culture. The first rock and roll artists that are associated with this style are Chuck Berry, Elvis Presley, Buddy Holly, and Little Richard. In the 1960s, rock and roll became an even bigger success with the introduction of British rock stars including The Beatles and The Rolling Stones. According to Recording Industry Association of America, The Beatles have sold over 170 million albums and The Rolling Stones an impressive 66 million.

Rock of the 1970s began the division process of subgenres in rock. Some of the first offspring groups included folk rock, psychedelic rock, southern rock, and glam rock. The 1980s continued the trend of branching out from the mainstream "rock and roll" category. Countless genres were created during this era. Arena rock, hard rock, and glam metal were three of the most popular subgenres. These unique styles of sounds continue to influence music today ("Hard Rock").

Arena rock or stadium rock is typically defined as a subgenre of rock, whose artists usually played very large, theatrical concerts and were notorious for their performances along with commercial success. Bands of this type were known for having interactive concerts that engaged the audience and whose main goal was to get attendees involved in the actual performance. Journey was one of the first bands to begin the transition from traditional rock music to arena rock. With power ballads such as "Open Arms," "Faithfully," and "Don't Stop Believing," the band was well known for its chart-topping hits and sold-out stadium shows. Journey sold 47 million albums worldwide and toured in over 35 different countries ("Billboard"). Their shows were known for containing the use of large screens and "louder than life" sounds. Led Zeppelin, Styx, Boston, Queen, and Kiss are all bands that are associated with this style of music.

Arena rock influenced current rock and roll by creating a new level of entertainment in concerts. Laser and light shows, stadium screens, fire and smoke tricks, and giant amplifiers began to be incorporated into the traditional concert scene. This genre was the first of its kind to strive for a bigger focus on pleasing the audience rather than selling albums (Peake). Hard rock was another variation of 1980s classic rock that changed the face of rock and roll. In the 1980s, rock was generally categorized by a regular rock and roll band instrument set-up. For the first time, a variety of other instruments was also included. The new genre usually had strong bass beat and often contained a notable electric or bass
guitar solo. The vocals in hard rock often had a distinct sound which may have included spoken word, yelling, or raspy voiced singers much different from the smooth crooning styles of earlier rock and roll bands.

AC/DC was a band that received monumental success in hard rock history with their distinct vocal style. Their album, Back in Black, was released in 1980 and is still the fifth highest selling album in United States history. The Australian band recorded the album which spawned seven singles, six music videos, and sold nearly 50 million albums worldwide ("Top Selling"). In an interesting twist, AC/DC actually had two different lead singers, but both were able to sing with very distinct "raspy" voices that are still recognizable today.

Hard rock changed the status quo of rock and roll vocals and the instrumentation as well. By including the use of pianos, keyboards, synthesizers, and other instruments, the bands began to distance themselves from the traditional rock style. The band Styx commonly used these new synthesizers in their albums. The song "Mr. Roboto" is a good example of this. It contains both an Oberheim OB-XA and a PPG Wave synthesizer (Deem). According to Billboard Music Charts, the song reached number three on the Billboard Hot 100 in 1983 ("Billboard").

Another subgenre of 1980s classic rock was glam metal. Glam metal was a derivative of the popular 1970's genre glam rock. It is characterized by its usage of flamboyant fashion, dramatic stage shows, and hard rock music style. Glam metal bands are also known as "hair bands" because of the long shaggy hair, excessive use of hairspray, and the androgyny style of the members of the bands ("Glam Metal"). Some of the most popular glam metal bands included Motley Crüe, Twisted Sister, Quiet Riot, and Poison. Many other glam metal bands, including the American band Autograph, had relatively small success, only producing one or two hits. Glam metal is typically given credit for inspiring the contemporary genres of metalcore, glam pop, and post-grunge. Buckcherry, Hinder, and Andrew W. K. are all modern artists that have been inspired by the glam metal subgenre. The Broadway musical Rock of Ages was also influenced by glam metal ("Glam Metal").

Classic rock has been a large part of my own music collection for many years. As I was growing up, my parents would listen to hard rock bands frequently. I discovered arena rock artists when I was older and became a huge fan of that genre, constantly listening to Journey and Styx. In May, I was able to attend a Styx, .38 Special, and REO Speedwagon concert and got to experience arena rock for myself. I was enthralled by the bands usage of lights, pyrotechnics, and sound quality. Glam metal is another genre that I am also very interested in. Recently, I became involved with the Rock and Roll Club on campus and was excited to learn more about rock and roll and to study where it began. Arena rock, hard rock, and glam metal were all subgenres of 1980s rock and roll music. These three new categories along with countless others have helped shape modern day rock and will forever be remember for their editions in the rock and roll history books. These subgenres helped changed the concert experiences, include innovative instrumentation, and to inspire many new rock and roll offspring today.

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Works Cited


AC/DC. Back In Black. Atlantic, 1980. CD.


10 Things I Hate About You, a 1999 film, provides a fresh perspective on Shakespeare's classic comedy The Taming of the Shrew and makes the story more accessible to young adult audiences. One of the ways 10 Things does this is by utilizing the idea of the "best friend" in order to define the characters and make the story relatable to the life of today's teenagers. This concept was present to an extent in Shakespeare's original play, in the form of Lucentio and Petruchio's servants, Tranio and Gremio. These characters are included in 10 Things, but altered to fulfill further roles. In the film, Tranio is replaced by Michael, who is not considered a servant to Cameron (Lucentio), but plays a similar role to that of his counterpart. Scurvy, an obviously rebellious character who never speaks, highlights the even more excessive oddities of his friend Patrick (Petruchio) through his physical appearance. Unlike the play, the usefulness of the best friend figure does not end with these two, and is extended to the sisters as well. Bianca has her friend Chastity, an equally gorgeous and popular girl who accents the changes in her character. Kat (Katherine) is often seen with Mandella, a character who is able to show the audience how Kat really feels.

In a similar way to Tranio, Michael is savvy to the ways of the world, and becomes a guide to Cameron while providing the audience with an insight into Cameron's nature. When Michael makes his first appearance in the film, it is to introduce Cameron to the status quo at the school and acquaint him with the wisest way to behave around each group. Michael at first attempts to deter Cameron from interest in Bianca, from "The Don't-Even-Think-About-It Group," but once he learns how much Cameron cares for this girl, he is willing to help him win her over. Michael's behavior is selfless and loyal; it is clear that he is a good man, and his devotion to Cameron shows him to be a reputable individual as well. Michael becomes Cameron's right-hand-man almost immediately, conveying to the audience that there is something about Cameron that makes him worthy of having Bianca. This something makes Michael want to help Cameron get close to Bianca, despite his initial reservation that a relationship between the two would be disastrous. In the case of Cameron and Michael, the best friend character is used to show that the major character has honorable intentions and worthiness.

The silent character of Scurvy plays an important role in making sure Patrick's bad boy nature and reputation is understood from the beginning of the film. Scurvy is dissimilar to his counterpart of Grumio from the beginning; Grumio is constantly speaking, even if it's only to himself, while the closest Scurvy comes to speech is a few seconds of laughter when Patrick is first asked to date Kat. Despite his silence, he is able to highlight those ill traits in Patrick that make him seem undesirable. Scurvy is constantly dressed in an intimidating fashion, with a black mohawk, an otherwise shaved head, and black mesh clothing with thick chain necklaces and silver studs. In one scene, Scurvy and Patrick are seen sitting side by side in biology class, the contrast of their appearances alone suggesting that Scurvy is the more radical and threatening of the two. But as the scene progresses, Scurvy diligently writes notes for the class, while Patrick angrily stabs at the frog he's supposed to be dissecting. Patrick continues by using the Bunsen-Burner in front of him to light a cigarette, which Scurvy promptly snatches from him and puts out in addition to throwing him a reprimanding look. It is through the presence of Scurvy that Patrick is able to become such a terrifying figure in the school. Scurvy's calm and studious nature allows Patrick's "bad-ass" reputation to increase within the film.
Bianca's friend, Chastity, is present in the film to provide a contrast to Bianca as she grows in maturity and wisdom. When the two girls are first seen together they are almost the same character, with the same way of speaking, fashion choices, and personality. They are both presented as being conceited, vapid, and extremely peppy, as well as oblivious. Through the course of the film, however, both of them change dramatically. Chastity begins to sink further into the world of high school popularity and relationships, while Bianca gains maturity and intellect as she learns what's really going on in her world, and what is worth holding onto. This division begins at Bogey Lowenstein's party, when Bianca tries to introduce Chastity to Cameron. Bianca feels guilty for the fact that she has used Cameron and is trying to fix it by creating a connection between him and her best friend, but Chastity reacts with disgust and seems to feel that he was just a necessary pawn that can now be thrown away. The separation between these two continuously grows, reaching its highest point at the prom when Chastity snidely tells Bianca that Joey only wanted to go out with her in order to sleep with her. Bianca is horrified, because of the wisdom she has gained, but all Chastity can think about is that she is the one there with the popular guy and that she's therefore better than her "friend." Because Chastity and Bianca are going separate ways, Bianca's increasing maturity is highlighted more than it would otherwise have been.

The character of Mandella shows the audience elements of Kat that she doesn't portray herself, and is in a sense the physical manifestation of Kat's internal desires. First of all, though Kat does not dress in the same fashion as the popular girls, she does have a fairly conservative style. Mandella, on the other hand, wears strange, old-fashioned clothing, in addition to a pink streak in her hair. Through her outward appearance, Mandella represents Kat's rebellious nature. Mandella also gives an insight to Kat's desire for a love life before Kat is willing to admit it herself. When they are discussing the prom, a societal ritual that Kat is against and Mandella is implied to have formerly been against, Mandella reveals that she would like to go if she had someone to go with. Kat tries to encourage Mandella to return to her former feelings on prom by telling her that they're making a statement, to which Mandella replies, "Oh, goody! Something new and different for us." As Mandella is slowly revealed to be a romantic, it is shown that Kat may be as well, eventually culminating in the two of them having dates at the prom. Mandella's pining for romance and partial normalcy presents this attitude about love as a possibility for Kat as well, while also providing her a way to directly resist the ideas surrounding romance.

Shakespeare's *The Taming of the Shrew* is made more relatable to those in modern day, especially teen audiences, through the film *10 Things I Hate About You*. Though many tactics are used to create this modernization, the most important is the addition of the best friend character. Through these everyday kind of people surrounding the major characters, the viewer is able to get more from the story than they might otherwise have been able to. Each of these new characters plays a significant role for the adaptation. Michael, an intelligent young man who understands the rules of society is key in helping Cameron get to date Bianca and in helping Cameron appeal to the viewer. Patrick's friend Scurvy is present in the film to illuminate Patrick's odd and rebellious nature. Chastity highlights the wisdom Bianca gains through the course of the storyline by losing what wisdom she had. Finally, Mandella, through her clothing and open opinions, shows us the truth about Kat.

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You wouldn't expect, walking down the aisles at The Home Depot, to find a book on how to deliver a baby. You'd probably also think it was ridiculous to shop for birthing supplies at the local hardware store. And yet, there I was, Mr. Fix-it, the do-it-yourselfer, timing contractions, measuring station and position, and getting ready to deliver my first child into the world.

Before I go too far ahead of myself, perhaps I should provide a little background. From my earliest memory, I've had a do-it-yourself attitude. My mother still tells stories of when I, as a toddler, took a butter knife with me to my crib one night so I could dismantle the light switch in an effort to figure out how it worked. From then on, she had to keep butter knives and screwdrivers locked away so as not to find the electrical outlets hanging out of the walls. Three years later, after my baby brother was born, I gutted his sound-and-light toys to try to better understand the electronics. A few years passed and I discovered power tools. I started building trucks and jets from scrap wood for my GI Joe action figures, and eventually graduated to projects as large as sheds and "clubhouses" in the backyard. When my wife and I purchased our first home, the do-it-yourself gene kicked in once again. The house had an unfinished basement, which, to me, was a dream come true – oh, the possibilities!

At this point, you might be wondering where I'm going with this. Well, I was in the middle of work on the basement; the walls were framed, the electrical was in, and I was getting ready to start hanging drywall when my wife came to me with an outrageous proposition. "I've been reading on the Internet," she exclaimed, "and I just found out there's a whole group of people who have their babies at home, without midwives, doctors or anything! Could we do that?"

I could have been shocked, flabbergasted, stunned, dumbfounded (pick an adjective – I'm sure you get the point). Instead, I answered, "Sure, why not?"

To someone who doesn't have a do-it-yourself personality, this may seem like a preposterous answer to a ridiculous question. The very idea of having a baby at home may conjure in your mind the image of medieval peasant women, writhing in squalid agony. And yet, I wondered, why not? If, in our modern age, someone else was doing it, surely my wife and I could. Besides, I thought, we'd been trying to conceive for years; it may have been years more before we'd even have to worry about this. But, within months, we found ourselves staring down the barrel of a positive pregnancy test, and it was time to start studying.

My wife had already trained as a massage therapist and had once shadowed a midwife for several weeks, so she was well ahead of me in knowledge of the subject. I had only some basic medical training from my time in the Army (stop the bleeding, plug the hole!), whatever knowledge I had gleaned from my wife in her studies, and a good grasp of medical terminology. Thus armed, I dove into a crash course on how to bring a baby into the world.

From Ina May Gaskin, America's foremost midwife, I learned the mechanics of childbirth: how the early contractions serve to open the cervix, the "mouth" of the uterus, and the later contractions ease the
unborn child into the birth canal. I found out about APGAR scores, positioning and station. I became informed on how to turn a breech baby and how to dislodge a stuck elbow; when to proceed with the birth at home and when to get to the hospital – now! From her books, Spiritual Midwifery and Ina May's Guide to Childbirth, I learned all of the nitty-gritty details of getting the baby from womb to bedroom, safely and efficiently.

My further studies were less about the childbirth process than about the experience. From Childbirth Without Fear to Birth Without Violence to HypnoBirthing to The Continuum Concept, expert after expert attested that pain in childbirth is a reaction to stress and fear and not an intrinsic part of childbirth, that pain and fear are to blame for common labor complications like failure to progress, and that a peaceful pregnancy and labor will result in a happy, well-adjusted child.

Then my wife ordered the book written by the woman who had sparked this idea of homebirth without a professional birth attendant, Unassisted Childbirth by Laura Shanley. Although this was mostly a rehashing of Dr. Grantly Dick-Read's Childbirth Without Fear, it introduced me to the term "unassisted childbirth" and Shanley's reasoning for both practicing and advocating it. Shanley declared, "Women's bodies were designed to give birth. When a woman is physically and psychologically healthy (free from fear, shame, and guilt), babies can often be born easily. Although some women find the presence of midwives or doctors comforting, others find it inhibiting. It is up to each one of us to decide for ourselves who we want to be with us in birth." Although Shanley herself isn't considered an expert in her field, she does have Dr. Dick-Read's backing. He states, "If left alone in labor, the body of a woman produces most easily the baby that is not interfered with by its mother's mind or the assistant's hand.

If left alone, just courage and patience are required. Faith, if she is a believer, is the secret to having a healthy baby and being a happy mother."

So, now I understood the pro side, but what about the cons? I spent several hours reading reports on the internet that purported to prove, via statistics, that homebirth, particularly unassisted homebirth, was unsafe. Obstetricians and gynecologists, while admitting that they had never had anything to do with homebirth, decried the practice and declared that the safest place to have a baby was in the hospital. On that point I had to disagree whole-heartedly. I had been a medical administrator in the Army, tracking patients and ensuring that the doctors and medics were documenting all of their treatment properly. None of my experience led me to believe that pregnant mothers were better off in the hospital – in fact, several doctors I had worked with admitted that the worst place for an otherwise healthy person is in a hospital!

Pros and cons weighed, I went with what felt right. I'd support my wife, and we'd have this baby at home. Our only experience with the hospital during the pregnancy was when a nurse friend of ours let us try an ultrasound to determine the baby's sex (wouldn't you know it, that baby kept its legs crossed up so tight we never saw a thing. I should've known it was a girl, a boy would've been displaying his little peter for the whole world to see!). We did our own prenatal checkups every month, dutifully checking weight and progress, looking for abnormalities in blood pressure that would indicate pre-eclampsia. We tried to eat a good, balanced diet, and did everything we could to keep stress levels low.

When the countdown to B-day got down to the last couple of months, it was time to take inventory. We had alcohol, medical necessities and essential instruments. Homeopathic and herbal medications to speed childbirth, slow it down, and ease discomfort. For weighing the baby at birth, a digital fish scale
straight from the sporting goods section of Wal-Mart. For cleanup, a pile of old towels, garbage bags and a plastic shower curtain. My wife and I had both been trained in infant CPR. As unprepared as I felt, we were as ready as we were going to get.

Two weeks before the calculated due date, my wife's water broke, and it was time for me to spring into action. Since timing the contractions showed that birth was imminent, and a couple of weeks early or late is perfectly normal, I prepared our chosen birth location – a spot in the kitchen where my wife could labor comfortably while holding onto the bar countertop, if necessary. But, as the Scots poet Robbie Burns wrote, "The best laid schemes o' mice an' men gang aft agley." During a trip to the bathroom, hard labor hit, and that's where we stayed. I was glad I'd taken some time to sanitize it as much as I could beforehand! I crammed some towels and a stool into the small lavatory and supported my with through the first stage of labor.

I'll spare the gory details of two hours of first-stage labor. Fortunately, the second stage, during which the baby actually travels down the birth canal and is born, lasted only a few minutes. I had enough time, while the head was crowning, to see that the baby was positioned left occiput anterior, the easies and most common head position in birth, before she squirted full-body and without preamble into my waiting arms. That's right: It was a girl! A quick APGAR evaluation as she was cradled in her mother's arms determined that she was breathing well, had a great pulse, and her muscle tone and reactions were excellent. Other than a blue color to her hands, lips and feet (considered normal for our altitude), she was perfect: nine out of ten on the APGAR scale.

I helped her and my wife, her new mother, into a warm bathtub to help prevent shock, took care of the afterbirth and the umbilical cord, cleaned up, and was finally able to be a father instead of a midwife. I pulled out the camera, aimed it at the beautiful new infant and her mother, and announced, with more pride than I had felt at the completion of any other project in my life, "Kathleen Page, born at home."
"You can't do that. You're only twelve." That's what my sixth grade teacher, Mr. Weaver said on an overcast day in the fall of 1974. I had just announced that I would construct a Diffusion Cloud Chamber for my very first Science Fair Project. As I recall, Mr. Weaver was the first person ever to tell me I could not accomplish something. My father, the man I respected most in life, never used such words with me. Dad had always told me to do things, period. He never mentioned the possibility of failure. Thus, I literally never thought of it. Consequently, I ignored Mr. Weaver.

My journey toward this discussion with Mr. Weaver began four years earlier. My father had purchased the fourteenth edition of The Encyclopedia Britannica, in an effort to, "slow me down." His reasoning was that this single purchase would take me many years to read. I was an inquisitive child, almost from birth, and discovered books at an early age. By the time I was six I read at high-school level and college level by age eight. Our family had a modest library of some sixty or so books, which I had completely read through before turning eight. Dad gifted me with the Britannica on my birthday that same year. I was fascinated, to say the least. It was like giving me my own library. That set of encyclopedias was indeed the beginning of my own personal library.

This collection of reference material appealed to me in ways no other volumes had. Bound in leather, they smelled somehow more important than the other books in our library. All dressed up, they had paces to go and wanted to take me along for the journey. Knowledge seemed to ooze from their stately bindings. They even looked more important, with their richly embossed covers. Lined up in chronological order, they were an impressive, orderly sight. Just gazing at them made me feel smarter. I opened the first volume and quickly began to develop a rabid appetite scientific knowledge of any kind.

Four years later, I was nearing the end of these magical, wondrous books, when I read about a man named Charles Thomas Rees Wilson, who had won the Nobel Prize in 1927 for creating the Wilson Cloud Chamber. This chamber was used to detect particles of ionizing radiation and map their path. My reading revealed that this was done by super cooling water vapor in a sealed environment in which a cloud was artificially formed from water vapor. When alpha or beta particles of radiation passed through this environment, they caused water droplets to form by ionization and left a trail. After further research, I discovered that Dr. Wilson’s work led to the naming of "The Wilson Cloud," which occurs during the negative phase of a nuclear blast. My research described this phenomenon as a reduction in the air density during this phase (known as rarification), in which there is a temporary condensation of water vapor in the cloud that is visible after the blast. I learned that this is also referred to as a "condensation cloud."

It was the mention of radiation that caught my attention. We lived in Londonderry Township in Dauphin County, Pennsylvania. The Three Mile Island Nuclear Power Plant (TMI) was located about a mile and a half to the west of our house and had just started operations that year. The Cold War was in full swing, and we had nuclear blast drills weekly at school. Everyone knew at least a little about radiation. To those of my young age it was big, powerful, mysterious, and frightening. At the time, many people thought that an eventual nuclear holocaust was inevitable. But we also looked at nuclear power as the future, considering TMI was quite literally in our back yard.
I wanted to learn more about the future, nuclear power and the Wilson Chamber, so I began my very first research project. In the course of my studies, I found a book with instructions for building a smaller version of a Diffusion Cloud Chamber, which was actually developed by Alexander Langsdorf in 1936. It was a variation of Wilson's chamber using alcohol instead of water. I'm afraid I cannot remember the name of that book, but it probably still resides in the Harrisburg, Pennsylvania Public Library. I was intrigued. The school Science Fair was approaching and I had not yet chosen a project. I made the decision to build my own diffusion chamber. That, of course, was the easy part.

Despite Mr. Weaver's assertion that a twelve year old could not pull off such a project, I began. I needed dry ice to super cool my chamber, a concentrated light source (preferably one that created heat), something I could use as the chamber itself, pure alcohol to produce a cloud, and a source of radiation. I began to think this might not be as easy as I thought.

The dry ice was the easiest part, as it could be purchased from the ice cream truck that came by twice a week. I would wrap the ice in burlap I obtained from an empty chicken feed bag in the barn. Once wrapped, I needed to cut a hole in the top of the burlap to accommodate a wide-mouth, quart sized Mason jar I would use as the actual chamber. The book I was using as a reference suggested lining the lid of the jar with felt, but I decided to use crushed velvet instead. The light source suggested was a slide projector, readily available at school. I obtained the pure alcohol from the local hospital. That left only a source of radiation.

My father knew a man that was an engineer at TMI, so we consulted him. He suggested a mutual acquaintance who was a doctor at Harrisburg Hospital. Dr. Palmer was able to obtain permission from the hospital to loan me a small radioactive pill that was used in a medical procedure to locate tumors. Dr. Palmer explained that the patient would swallow the pill, about the size of an aspirin, and x-rays would be taken of the suspected area, revealing the tumor. This seemed an appropriate source of radiation for my project.

After a rather intense lecture on the safe handling of the radioactive pill, I assembled my diffusion chamber. The wrapped dry ice was placed on a small table along with the slide projector. I cut a circle of black velvet to fit inside the lid ring of the jar and positioned it there, gluing a circle cut from a paper grocery bag to the top of said ring. I did not use the lid itself, as metal vibrates and makes an annoying squeal when it comes in direct contact with dry ice. I then turned the modified lid ring upside down and placed the pill just inside the outer edge. I poured a carefully measured tablespoon of pure alcohol into the glass jar and swirled it around to distribute it as evenly as possible. Placing the lid ring on the dry ice, I inverted the canning jar and screwed it tightly to the ring. As an additional seal, I wrapped electrical tape around the lid, taping it to the jar. The light from the slide projector would heat the air in the jar and the dry ice would super cool it, hopefully creating a cloud. Now came the proverbial "moment of truth."

I admit to being slightly apprehensive that my chamber might not work. We turned out all the lights, except the slide projector and waited. A misty white cloud began to form almost immediately. Dr. Palmer, my father, and I watched closely. I believe we all held our breath, but cannot truly vouch for the other two. After about five minutes, faint, spidery lines began to appear on the velvet. We could actually see them move gracefully across the tiny field. We observed two distinct types of lines. The first were lines that started straight, then veered off at about a 45 degree angle. The second type where jagged and somewhat thicker and brighter than the others. Dr. Palmer explained that the first type of line
showed something called "muon decay." He explained that a muon is an elementary particle, similar to an electron with a negative electrical charge. Dr. Palmer continued to explain that the second set of lines represented "multiple scattering," or low energy cosmic rays bouncing from atom to atom. It is impossible to describe exactly how I felt at that moment. It was my first real experiment, my first moment of discovery. I looked at my father and asked, "Does this mean I'm a scientist?"

He beamed back at me and said, "Yes it does, son."

I found out later that it takes a bit more than successfully recreating someone else's work to make you a real scientist, but I felt like one just then. I imagined the sense of discovery and elation I felt in at that moment was akin to those of the great scientists I had read about. I suddenly felt a more personal connection to Wilson, Langsdorf and others of their kind. I had used the scientific method for the first time. It would not be the last. Mr. Weaver was wrong. It turned out that a twelve year old boy could, indeed, build a functional Diffusion Cloud Chamber.

I set up at the Science Fair on the stage in the auditorium. The curtain was kept closed to create the necessary darkness. I had written a report, detailing my entire process, and drawn a three-section poster to illustrate the chamber and my findings. Mr. Weaver was one of the judges, and I eagerly awaited his visit. When he arrived, he looked over my written material and visual aids, pronouncing them worthy of an Honorable Mention. I asked if he wanted to see the actual chamber in action. He had apparently not noticed the sign I had placed on the door to the stage.

"You mean you actually built it?" he asked, somewhat incredulously.

I led him to the stage and demonstrated the mechanism. It was the first time I had ever seen Mr. Weaver at a complete loss for words. He simply stared at the chamber for a few moments, then turned to me and put out his right hand. I took it and shook it vigorously. He congratulated me and told me that I had taught him never to underestimate a student.

The experience of that Science Fair was the beginning of my personal love affair with science. I had discovered that it did not matter how young I was, or who I couldn't do it. Even a boy could achieve results in scientific endeavor. Scientific method did not discriminate against the inquisitive at any age. I thought of the great names I had read about, like Wilson, Langsdorf, Einstein, Curie, Edison, and so many others. Did anyone ever tell those great minds, perhaps in their youth, that they couldn't do it? Had anyone ever told them they were inadequate to the task? If so, I'm eternally grateful that they didn't listen.