

Craving Curiosity

Leo S.



Having struggled throughout my time in school, I started losing interest in learning – I lacked the motivation I had once easily found. Over time, school became more about memorizing facts and getting through hours of busy-work to appease a teacher's expectations. I felt my curiosity fade, despite having always been a naturally curious person. However, the topics of physics and philosophy have reunited me with latent curiosity and the craving to understand the world around me. In my search for truths, I have been stimulated by “the vast unknown” that encompasses both of these subjects. This painting explores the topic of learning, illuminating how studying physics and philosophy have positively altered my perspective.

This painting is a representation of the balance found between physics and philosophy. The ocean symbolizes philosophy in representing the vastness of our ability to understand, while the moon depicts the knowledge we have not yet attained or have only begun to grasp. The ocean and moon are opposites in the painting, they push and pull each other since the moon affects the tide while the moon orbits the earth. The marigold petals flow towards the figure because marigolds symbolize creativity and passion. They are also a symbol of the dead which comes into play when looking at both physics and philosophy because they both have very grounded foundations of those who have passed away.

Leo S.
California

I have never enjoyed school, it has been stressful, time-consuming, and beyond tiring; I first started feeling this in 5th grade when I had fallen behind in math. I began skipping school or mentally checking out when I was actually there. I felt hopeless trying to catch up on work and I lacked the concentration to do it myself. As time went on I continued to skip school from time to time because it often felt to tasking and brought waves of anxiety when thinking about it on certain days. When I started high school, it felt overwhelming. I was 1) stressed with coursework; 2) trying to balance a social life, sports, and sleep; 3) felt overtaken with constantly having to be a devil's advocate. It was a lot for a 14-year-old to handle and even now looking back on it I don't know how I did. I don't know why my parents would let me stay home, I would often say I was sick even though I clearly wasn't, I think at some point they begin to understand the situation and as long my grades were fine they were okay with it. School taught me how to do busy work and only remember information for a week while actual learning started to fade as I went from one grade to the next. I have always been a curious person, but I feel that school has stripped me of the attribute in some ways. I have always wanted to find answers to the questions I had about the world, but I was never encouraged by teachers and was often shot down by them. With my experiences with school, it has never been about learning but instead testing memory, how to get through the work course and curriculum with minimal sleep deprivation.

School has become more rigorous and stressful throughout the years, the National Center for Education Statistics studied high school transcripts from 2009 and found high school seniors were taking an average of 27.2 credits, a jump from the 23.6 credits high schoolers were taking in 1990 and the same report found that more students were taking harder classes in 2009 than they were in previous years, 13% of students were taking a rigorous course schedule, but in 1990 only 5% of students were taking the same level of classes. Through personal experience, I have seen that past generations refuse to believe that school has gotten harder and often state that the newer generations have become slothful. It makes the experiences feel inadequate and allows the child to feel further distress with thoughts of insufficiency. The expectation for students has grown immensely and caused a spike in stress levels in teens, in 2011 a survey done by Stanford University with 26 schools, 10,275 students, 87% high schools, with 65% of them public and 67% of our sample said they are often or always stressed about school with the top ten answers were school related.

School is the ultimate stressor for the youth with pressures from parents, teachers, and even peers; it creates feelings of insecurity and low self-esteem. School for me has caused me to lose countless hours of sleep, anxiety over failure, and allowed my depression to manifest in the hours of homework. Throughout my time in high school I have been given an extortionate amount of homework that has kept me up to 3 am on some nights, the average amount of homework a teen gets in high school is 17.5 hours of homework a week¹. It is seemingly impossible to get 10 hours of sleep, go to school every day, 2 hours of sports, and 2 hours of eating; you would have 11 hours a week to do homework if you did nothing else with your free time. We are overloaded with coursework and expected to somehow find the time to complete it all while trying to make it seem effortless. School causes an immense amount of stress on the body, if the stress continues it can cause complete tension in muscles, trigger asthma attacks, hyperventilation, panic attacks, early set on heart conditions, over produce certain hormones,

¹ "Homework Anxiety: Survey Reveals How Much Homework K-12 Students Are Assigned and Why Teachers Deem It Beneficial - University of Phoenix."

constipation, overeating, undereating, tobacco use, alcohol abuse, and nausea². School can cause a massive amount damage to the body and develop poor coping mechanisms later in life. With teen stress on the rise, it could heavily affect the young generation's perspective on school and the systems established there, "It is alarming that the teen stress experience is so similar to that of adults. It is even more concerning that they seem to underestimate the potential impact that stress has on their physical and mental health," says APA CEO and Executive Vice President Norman B. Anderson, Ph.D. We are at a breaking point in education, we need to start putting learning first instead of getting through the assigned curriculum, actual learning has begun forgotten as a priority and could affect generation to come.

As a kid I thoroughly enjoyed reading as a kid and was a big fan of history books, I would breeze through them in hours soaking up all the knowledge. It was one of my favorite pastimes, it allowed learning to be something new; it didn't involve tests or essays, it was about the appreciation of the knowledge. I continued through different subjects that intrigued me and would study them on the side of my other work for school, but as the workload got bigger and bigger that time seemed to vanish. My interest in learning started to deplete and I stopped looking at subjects I was intrigued by, I was taught by the school's system that I shouldn't seize new information but instead continue with the assigned busy work. I got very good at busy work, I learned all the tricks to complete it the fastest while retaining none of the information. I started to lose interest in other hobbies I had, my passion for writing disappeared as the essays begin to pile up, my passion for art became school projects, and my curiosity begin to fade as it got me wrapped up in listless information. When I arrived at Oxbow it was strenuous to try to treat work beyond the assignment and word count. I wanted to give personal style to my work, to try to push it past what is assigned, and try to see the assignments as an opportunity. As I struggled with this, I felt sparks of curiosity in the subjects I was looking at. Philosophy was often discussed in classes to further points and give an ethical viewpoint on subjects, it created a curiosity on moral codes and how we developed them. It became wrapped with my curiosity of psychology and how we develop moral compasses and what effects them. Then while doing a project in trigonometry, I was studying light waves and I realized we have very limited information on what I thought was basic subjects. There was so much unanswered while looking at light and a lot of the information was debated by different physicists. As I continued to look at these subjects, I found a that they were intertwined by their very foundation; philosophy and physics both seek the truth, one in the world around us and the other past ourselves. I found this fascinating since I have always felt lost in the sea of information that is grounded here, the idea of laws being used throughout the universe that I can barely comprehend was very grounding in other information. It showed me that there are there is more than where I am and concepts that we have begun to understand, that we are starting to understand more than what is around us. I want to understand philosophy and physics and become more than a student to them.

The first law of physics I was intrigued by was the theory of relativity determined by Albert Einstein in 1905, it says that the laws of physics must apply the same to all non-accelerating observers and accelerating observers and that the speed of light in a vacuum was independent of the motion of all observers. This was the theory of special relativity. It introduced

² American Psychological Association, American Psychological Association, www.apa.org/helpcenter/stress-body.aspx.

a new framework for all of physics and proposed new concepts of space and time.³ I have never thought of how time could change or how the speed of light could affect the laws of physics in place. It creates a uniform foundation for the situation and shows how certain dimensions can be altered. It took me awhile to understand the concept of the theory of relativity, I finally grasped it one I thought of the superhero the flash, when you see his sequenced scenes everything slows down and time becomes slower. It allowed me to see how everything would be affected and how time could dilate for everyone involved not just the accelerating person. When reflecting on the idea of truth I connected the idea of relativity to moral assessments. Absolute moral philosophers view human equality and argue that all humans are equal no matter what, such as in Socrates book Euthyphro, Euthyphro states “morality says that morality is the same for everyone regardless of gender, creed, or lot in life,” which can reflect the ideas of the theory of relativity because of the uniform bases. They connected since the theory of relativity states that all laws of physics must be the same for both objects (accelerating and non-accelerating) and Euthyphro states that morality creates the same equality for all humans, no matter what situation. I was impacted by this discovery because of the idea of having equality on all levels. In society we view people at different status because of their gender, creed, and money; it all impacts how we see one another and if we equate to each other. Seeing that both physics and philosophy state that equality must be on the same level changes how I perceive how we see equality in society.

While continuing my research I came across Carnot’s proof done by Leonard Sadi Carnot in 1820, it looks at how to create the most efficient engine with the water reservoirs, having the same temperature of heat reservoirs will allow the minimal amount of heat loss which limits the amount of heat fraction and lets the engine work at maximum speed⁴. There are some flaws in Carnot’s proof because it is a very idealized view on heat loss and how much can be saved, but it does work with heat engines. Carnot’s proof is important because it seeks to create the most efficient outcome, I see Carnot’s proof heavily connected to the foundation of Utilitarianism which tries to create the most happiest outcome and minimize sadness. Early forms of utilitarianism were articulated by Jeremy Bentham in the 17th century. His insight was that the best moral behavior will not harm others, but work towards the increase of happiness. There is a debate on how this theory is affected by one’s connotation with actions since we have our own association about actions that can be perceived differently person to person. The argument was rejected by many utilitarians who followed Hume's ideas on emotion and they believed that, naturally, we all have the same sense of sympathy for each other.⁵ Utilitarianism argues to create a society that works to have the most efficient amount of happiness produce and Carnot’s engine tries to create the most efficient engine. These weave together to show how as a society we try to find the best possible outcome and that even in dark times that there can always be someone hunting for efficiency on the level of mechanics or happiness.

The intertwining of physics and philosophy show how on a fundamental level that we want the truth, we want to push what we know. These subjects have brought back curiosity for me that had vanished because of pressures in school and the lack of time that I had. Studying

³ Contributor, Nola Taylor Redd Space.com. “Einstein's Theory of General Relativity.” Space.com, www.space.com/17661-theory-general-relativity.html.

⁴ “Carnot's Engine.” Carnot Cycle, Hyper Physics, hyperphysics.phy-astr.gsu.edu/hbase/thermo/carnot.html.

⁵ Nathanson, Stephen. “Act and Rule Utilitarianism.” Internet Encyclopedia of Philosophy, www.iep.utm.edu/util-a-r/.

these subjects have pushed how I perceive learning and reunited me with a new sense of hunger for knowledge. Curiosity has been a fundamental attribute for society throughout our time, yet in recent years it has begun to fade in the youth because of school and how it changes the idea of learning, intelligence itself forms into new tests for memory and repeating statements that we do not understand. I felt like I was drowning in information that I could not find any substance in, teachers wanted memory and I wanted to understand what I was being told. Physics and philosophy have brought back hope for learning and continue to push me to try to understand other subjects that revolve around them. I now want to further my understanding of math, I want to find new literature, I want to push my writing skills and find that passion again. I want to have a passion for learning again, I will rewrite what school wants to see learning as and will find a new way to learn and understand. Physics and Philosophy have once again sparked creativity in learning and reunited me with the idea of furthering my knowledge.

The theory of relativity, morality, Carnot's engine, and utilitarianism now represent a possibility, an opportunity to seek out knowledge. Throughout the years school has warped the idea of learning and built new obstacles to the task. School has pushed stress and creates new anxieties, loses sleep, and changed perspectives on how I view many different things. I once wanted to understand more than school gave but was quickly shot down by teachers and eventually gave up on the idea without having the time to do so. Physics and philosophy create a new opening and have left me craving more curiosity and have allowed me to push my understand how time, movement, heat and much more; I now want to once again find those passions I have left behind and have the same hope for them I once did. I have never enjoyed school, but I hope I can find appreciation for learning once again through the studies of physics and philosophy.

Work Cited

American Psychological Association, American Psychological Association,
www.apa.org/helpcenter/stress-body.aspx.

Carnot's Engine.” Carnot Cycle, Hyper Physics, hyperphysics.phy-astr.gsu.edu/hbase/thermo/carnot.html.

Cohen, S. Marc, "Aristotle's Metaphysics", *The Stanford Encyclopedia of Philosophy* (Winter 2016 Edition), Edward N. Zalta (ed.)

Contributor, Nola Taylor Redd Space.com. “Einstein's Theory of General Relativity.” *Space.com*, Purch, 7 Nov. 2017, www.space.com/17661-theory-general-relativity.html.

“Definition of ‘Law’ - English Dictionary.” *Law Definition in the Cambridge English Dictionary*, dictionary.cambridge.org/us/dictionary/english/law.

Driver, Julia. “The History of Utilitarianism.” *Stanford Encyclopedia of Philosophy*, Stanford University, 27 Mar. 2009, plato.stanford.edu/entries/utilitarianism-history/#JerBen.

“Homework Anxiety: Survey Reveals How Much Homework K-12 Students Are Assigned and Why Teachers Deem It Beneficial - University of Phoenix.” Go to the University of Phoenix Homepage, www.phoenix.edu/news/releases/2014/02/survey-reveals-how-much-homework-k-12-students-are-assigned-why-teachers-deem-it-beneficial.html.

Kraut, Richard, "Aristotle's Ethics", *The Stanford Encyclopedia of Philosophy* (Summer 2017 Edition), Edward N. Zalta (ed.), <https://plato.stanford.edu/archives/sum2017/entries/aristotle-ethics/>.

“Q: Why Does the Entropy of the Universe Always Increase, and What Is the Heat Death of the Universe?” *Ask a Mathematician / Ask a Physicist*, 6 Oct. 2017, www.askamathematician.com/2011/12/q-why-does-the-entropy-of-universe-always-increase-and-what-is-heat-death-of-the-universe/.

“The Global Search for Education: On Success.” *Education News*, 14 Nov. 2011, www.educationnews.org/education-policy-and-politics/the-global-search-for-education-on-success/.

“The Laws of Thermodynamics (Article).” *Khan Academy*, Khan Academy, www.khanacademy.org/science/biology/energy-and-enzymes/the-laws-of-thermodynamics/a/the-laws-of-thermodynamics.

Nathanson, Stephen. “Act and Rule Utilitarianism.” *Internet Encyclopedia of Philosophy*, www.iep.utm.edu/util-a-r/.

Nord, C., Roey, S., Perkins, R., Lyons, M., Lemanski, N., Brown, J., and Schuknecht, J. (2011). The Nation's Report Card: America's High School Graduates (NCES 2011-462). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.

<https://nces.ed.gov/nationsreportcard/pubs/studies/2011462.asp#pdflist>