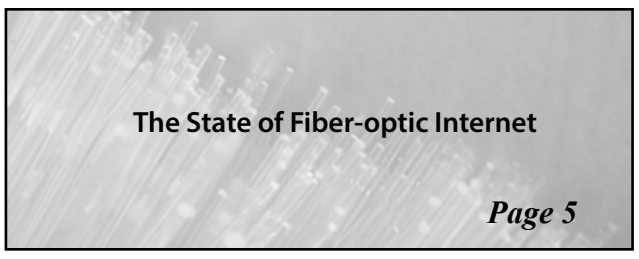
Note: This document is hosted here for archival purposes only. It does not necessarily represent the values of the Iron Warrior or Waterloo Engineering Society in the present day.

THE IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY

VOLUME 34 ISSUE 9 | WEDNESDAY, JULY 10, 2013



facebook.com/TheIronWarrior twitter.com/TheIronWarrior iwarrior.uwaterloo.ca

Waterloo Bike Theft Ring Busted

LEAH KRISTUFEK
2B CHEMICAL

Bike theft has long been an issue for students and residents of Waterloo but recent efforts by Waterloo Regional Police turned up two bicycle chop shops in the Waterloo/Kitchener area.

According to CBC News, Waterloo Police raided two local addresses over the long weekend: one in Waterloo and the other in Kitchener. Although only one of the bikes at the Waterloo address was able to be tied directly to a bike reported stolen through its serial number, the other bikes are also believed to have been stolen. Eight more stolen bikes were found at the Kitchener address. The discovery of the bike chop shops was the happy result of arrests of two separate individuals in their mid-thirties possessing stolen bikes.

How do you know if the second-hand bike you're looking to buy wasn't stolen? Police say buyers should look out for bikes with destroyed or modified serial numbers, bikes that have been repainted, bikes built from a variety of parts and any bicycles at a price that seems too good to be true. These are not hard rules. Plenty of bikes around campus have been cobbled together from scrounged parts and spray painted strange colours to have the most reliable ride with the least likelihood of it being stolen at minimal cost. Take a look at racks around campus; my favourites include the bikes that are completely gold, and the bike with pink handle bar streamers. Keeping it classy people! (No sarcasm intended.)

What exactly is a normal amount of bike theft? People take unlocked bikes for joyrides all the time and in such a large, transient population, there are bound to be a few bad apples. University is pretty similar to summer camp, where the "if you don't want to lose it, don't bring it" adage applies liberally. Statistics on bike theft are hard to come by. This is partially because many students purchase inexpensive bikes to get them through the semester and don't feel the time and effort for reporting its theft is warranted. However, the June 26 issue of *The Cord* (Wilfred Laurier's school newspaper) reported that bike thefts in April and May were up 15% from 2012. Campus police at University of Waterloo as well as at Wilfred Laurier University were cautioning cyclists to be more cautious.

Your bicycle may be slightly safer today, but the closure of two bike chop shops does not mean your two wheeled ride is completely safe. It would seem that students can't have nice things, and if we do, more effort has to be put in to protecting them. The most sure-fire way to protect yourself against taking a large, unexpected financial hit is to keep two bikes. That way an inexpensive one can be used for everyday use and the other for serious riding. Reliability, even with a cheap, beater bike, can be compromised when thieves take pieces of your bike like a wheel, handlebars or the seat. For this reason it is important to still invest in a good lock and to get as many components of your bike caught in it as possible. It is promising that these bike chop shops have been discovered and closed down but also concerning that they existed in the first place. So take heart, but don't let that justify getting sloppy in protecting your bicycle! Happy cycling.

Lucas Hudson

Keep your bike safe by locking it to the many bike racks around campus.

Brazil Protests — From Bus Fares to Class Divison

JAMES MACLEAN
3A NANOTECHNOLOGY

With excitement in Syria, Turkey, and now Egypt filling the front pages of news sources, many may have missed the protests in Brazil. Protests started from a simple increase in bus fares and led to a massive show of discontent with the government and Brazil's standard of living. The protests were mostly concentrated on the large class division in Brazil. Protesters compared the wealth surrounding the World Cup to the poverty in other areas of the nation.

However, Brazil's protests are unique in many aspects. Unlike protests seen in the Arab Springs, the government has largely attempted to address the concerns of the people. This may come without much surprise looking back at the history of the current party in power. The Worker Party's is a center-left, socialist party that has been in power since 2002. Despite Brazil having one of the largest wealth gaps in the world, conditions have improved greatly in the last decade. The Brazilian economy is the fastest growing in South America. In the last decade the minimum wage has been almost tripled. The number of people in the middle class has increased greatly such that over 50% of the country is now middle class. More money has been put toward education and health care. Yet protesters yell for more and, perhaps, rightly so. I wouldn't say just because of the recent advances, the people of Brazil must be passive and content with their government. Now that they have seen what improvements can be made, they don't want to stop there. Now that millions have been raised out of poverty, they expect their living conditions and government resources to match other developed countries.

Since the start of the protests, the Brazilian government has made promises and has attempted to introduce laws to meet the protesters demands. Unfortunately, what would otherwise be a constructive reaction by the government to the people, it is marred by the violence seen at the protests. Whether protesters were out of control or police demonstrated unnecessary brutality, the people have been further angered by deaths and injuries which have resulted from the violence.

The nature of the protests is more similar to the Occupy movement in North America. There is little to no leadership, many different goals, and conflicting ideologies. It is just the people voicing their displeasure. Another of the complaints against the government is the accusation of corruption in aiding continued income inequality and the waste of government money. The Worker Party has suffered from corruption scandals in the past resulting in resignations of government officials, so it is a problem they cannot deny exists. Corruption itself is said to exist at every level of government and results in large sums of money being stolen from tax payers. Taxes are already relatively high for the middle class compared to other Latin American countries and are another source of discontent. While income has increased, a higher amount of tax is being paid yet the healthcare and education lag behind.

The criticisms directed at the World Cup appear to be valid. Although I have no love of sports, I do recognize their value to a society and country that is known for their love of football. However the large sum of money, nearly 14 billion, which is being used to put on the event is extremely high for a country in Brazil's position. In contrast, the United States spent around 5.6 billion USD last time they hosted the World Cup and in 2010 South Africa spent only 3 billion USD. So while hosting the World Cup may be justifiable by the economic gain from the event, the excessive spending of billions of dollars is unacceptable.

While the protests die down for now, the World Cup is soon approaching and we may see a resurgence if conditions don't change. Hopefully, the politicians will not forget the promises they have made in the last few weeks and help push Brazil through even more developments as it begins to emerge as a world power.

Letter From the Editor

Being an Engineering Student Shouldn't Be an Excuse

LUCAS HUDSON
EDITOR-IN-CHIEF

Hello readers, thank you for choosing to read the fourth issue of the spring term. Just under three weeks until classes are done. I can't express how quickly this term has flown by. There's only one more issue of *The Iron Warrior* left to publish. It just blows my mind. I've heard time seems to pass by more quickly as you grow older, but I didn't realize things accelerated so quickly. It feels like just yesterday my father and I were driving down to Waterloo to drop me off at Village 1 and I was starting my university career. In less than two years, which will no doubt feel like a few days, I will (hopefully) be moving onto the "real world," scary thought. I will finally become an engineer, but what does that mean? I will not change as a person, I won't magically have more knowledge in my head once I put on an Iron Ring and receive my diploma. So, what will change?

In short, nothing. The instant I become an engineer, nothing will change. I will be the same person, with the same annoying habits, pet peeves and passions. What is confusing to me sometimes is that I am certainly not the same person that I was one year ago, three years ago, let alone five. I don't feel myself changing day-to-day, how have I evolved into the person I am today? It's through small decisions I make everyday, new habits I form, old habits I try to break. These small, seemingly insignificant incremental changes result in the big change I have observed over the years.

You must be thinking, "why is this guy rambling on about changing, but not changing. What does this have to do about anything?" Well, today I wanted to talk about a few things, one being what I think it means to be an engineer and the small changes I have been making each day to try to become the engineer that I think I should be.

We all know that engineering students, in general, have a bit of a superiority complex. It's not surprising given the amount our ego is massaged during Orientation week and the stigma that persists on campus. The issue of people viewing themselves better than other students is something that needs to be fixed; how this happens I am not entirely sure. For one, we need to remind ourselves that engineering is not the only hard degree to acquire in university. The engineering superiority complex wouldn't bother me as much as it does if we weren't such whiny, entitled twits. Rarely can I go a week without hearing an engineering student complain about a professor, test or any other situation around campus. I realize that we need to be critical about our environment, but the way we address the issues is pathetic. We are going to be engineers, do something about it rather than complaining to your friends! Whenever I hear the phrase "I can't do X, I am an engineering student, not an X student," I get so angry. We shouldn't cower away from challenges, using the fact that we are engineering students as an excuse. We need to say "I can do ANYTHING, I am an engineering student." If we are going to continue to think we are so awesome, our actions and mindset should reflect that. Don't use being an engineering student to absolve yourself from tough situation, use it to embrace demanding situations.

To be honest, I used to be one of those stereotypical engineering students, always critical of other degrees, feeling better than other people merely because I went to Waterloo for engineering. I was an ass-hat. Then, I started to realize that mindset was becoming detrimental to who I wanted to become. It was affecting my current relationships and was extremely detrimental to any potential relationship in the future. I started to be very aware of what I was saying and tried to stop myself before saying anything that was superficially critical of others or just plain mean. It became apparent quickly that I wasn't talking much any more. A lot of my default conversations were those based around making fun of others and pointing out their faults to make a cheap joke. That's not the person that I want to be and over the past few years I have tried to change my habits. Things did not start out very well, like I said I was very quiet for a long time, I had to relearn how to interact with other without being an ass.

Along with active changes to how I spoke with others, I started thinking about empathy. Empathy is something I think everyone struggles with, but I find it incredibly difficult to even comprehend. There are over seven billion people on this earth, each living out their life in a different way, experiencing the world through their own lens, manipulated by their previous experiences. For me, this realization was both one of comfort and terror. It is likely that many people experience the same insecurities and self-doubt that I experience every day but that same realization paralyzes me. Thinking about the amount of people each day that aren't confident about who they are makes me sad. It makes me feel even worse when I think that I may have instigated those thoughts in others. After this realization, I initiated the second personality change. I want to be someone who doesn't make other people feel bad about themselves, I don't want to spread hate or judgement, I just want people to feel good about themselves.

On a regular basis, my past-self and present-self fight. My past-self wants to go back to what feels comfortable, falling into old habits present-me despises. I still struggle with the fact that I can be cruel to other people, being the source of judgement and shame. I have to work everyday to veer off my old path and start steering myself towards who I want to be. It's not easy, and some days I fail, but I hope that one day it won't be such a struggle.

I have been sitting at my computer for a good 45 minutes trying to dump the last few paragraphs onto the screen. I have written and erased at least 10 paragraphs already in attempts to wrap up this editorial. What I really want to say is be proud of who you are. If you aren't proud of who you are, do something about it. Today can be your first step toward that person you want to be. It might not be a very big step, but at least its a step in the right direction. It sounds cliché but I want everyone reading this to feel good about themselves, to be free of shame and not worry about what other people think of them. Shame is one of the most ridiculous human emotions. The fact that someone can feel bad about themselves for liking a certain TV show or wearing a brand of clothing is crazy! As long as what you are doing isn't hurting anyone or anything, people should be able to go on with their day without feeling embarrassed.

It took me a long time to be proud of who I am. I was always told it was "uncool" to be a nerd, a guy who liked video games, played board games and didn't want to go partying every night. Then I started to watch *StarCraft II* games online and saw people truly passionate about something others would find childish and silly. It made me realize that I was focusing too much on what other people thought of me, that I wasn't paying attention to how I valued myself. It turns out, once you stop worrying about what everyone else thinks about you and just do things that make you happy, you start to feel a lot better about yourself and it encourages you to do more things that make you happy. Forget about that stupid feeling of shame, chase that happiness and of course, don't forget to be awesome (DFTBA).

Issue #3 Deadline: Friday, July 19 at 6:00 PM for publication on Wednesday, July 24, 2013
Send your submissions to *iwarrior@uwaterloo.ca*
Spring 2013 Publication Schedule: May 22, June 12, June 26, July 10, July 24

THE IRON WARRIOR

The Newspaper of the University of Waterloo Engineering Society

Editor-in-Chief
Lucas Hudson

Assistant Editor
Jacob Terry

Layout Editors
Krishna Iyer

Copy Editors
Dylan Dowling
Kate Heymans
Nancy Hui
Joshua Kalpin
Leah Kristufek
Caitlin McLaren
Andrew McMahon
Spenser Good
Nachiket Sherlekar
Farzi Yusufali

Photo Editor
Vacant

Advertising Manager
Spenser Good
Andrew McMahon

Circulation Managers
Leah Kristufek

Web Editors
Nachiket Sherlekar
Anjida Sripongworakul

Staff Writers
Edward Blake
Meagan Cardno
Ioana Craiciu
Spenser Good
Anjali Gopal
Nancy Hui
Krishna Iyer
Joshua Kalpin
Leah Kristufek
Michael Laanvere
James MacLean
Caitlin McLaren
Andrew McMahon
Graeme Scott
Nachiket Sherlekar
Anjida Sripongworakul
Jacob Terry
Derek Thompson
Wade Wilson
Farzi Yusufali

Contributors
Cody Bechbergr
David Birnbaum
Dylan Dowling
Drew Dutton
Kevin McNamara
Leila Meema-Coleman
Filzah Nasir
Brendan O'Hanlon
Annamaria Reda
Rob Reid
Dodge Yu

Off-Stream Editor-in-Chief
Alex Lee

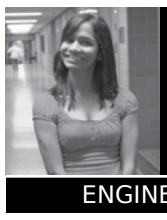
The Iron Warrior is a forum for thought-provoking and informative articles published by the Engineering Society. Views expressed in *The Iron Warrior* are those of the authors and do not necessarily reflect the opinions of the Engineering Society.

The Iron Warrior encourages submissions from students, faculty and members of the university community. Submissions should reflect the concerns and intellectual standards of the university in general. The author's name and phone number should be included.

All submissions, unless otherwise stated, become the property of *The Iron Warrior*, which reserves the right to refuse publication of material which it deems unsuitable. *The Iron Warrior* also reserves the right to edit grammar, spelling and text that do not meet university standards. Authors will be notified of any major changes that may be required.

Mail should be addressed to *The Iron Warrior*, Engineering Society, E2 2347, University of Waterloo, Waterloo, Ontario, N2L 3G1. Our phone number is (519) 888-4567 x32693. E-mail can be sent to *iwarrior@.uwaterloo.ca*

How Decisions Can Make or Break a Day



ANJALI GOPAL
3T NANOTECHNOLOGY

ENGINEERING WELLNESS

When we look at stress management, it's important to notice that a lot of seemingly small and insignificant issues can balloon into overwhelming matters that suddenly start to eat up a lot of time, energy, and effort. Most of us have probably heard more than one talk from professionals that teach us how to deal with really big stressors, but in this article, let's focus on a preventative approach to stress management. A great way to deal with stress is tackling it before it actually happens. To do this, we need to focus on one of the most fundamental factors of stress, which is "decisions." No, I'm not going to make you make a computational decision-making matrix from your PD courses. However, let's go over some ways you can work with decisions to make them more manageable.

Decisions can make a day stressful. On the one hand, decisions can be empowering because they give us a sense of control. On the other hand, having an excessively large number of decisions can be draining to deal with. Between debating about co-op jobs, figuring out which party you should sacrifice study (or sleep) for, and trying to determine how much time to split between those two assignments due tomorrow, it's easy to see how decisions can take up a lot of time and energy. Thus, if you find yourself overwhelmed by decisions, try actively reducing the number of decisions you have to make. You can do this either by making the decision (with intent to follow through), by avoiding situations that have a lot of choices, or by accepting that you aren't going to make a decision.

You are allowed to say "I'm not going to make a decision." Following up with point one, a good way to deal with the stress of decisions it to accept and understand that you don't have to make a decision. Are your parents asking if you'd rather drive up or have them come down? If the choice really doesn't bother you, then don't feel pressured into making a decision. Let someone else decide. Saying "I don't care" or "it doesn't bother me" can be very liberating. Alternatively, if you also have to make a major decision, such as debating between two design project ideas, it's also acceptable to put off a decision for a few days. This might just be a fancy form of procrastination, but spreading out your stress over a longer period can also make it more manageable.

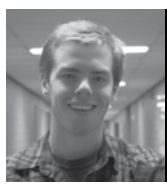
Increasing the number of options won't necessarily make the decision easier. In an interesting TED Talk, Barry Schwartz talked about the "Paradox of Choice." Many stores, services, and institutions seem to make this a rule — to satisfy the customer, give them anything they want. However, being presented with everything you can possibly have actually can make you feel paralyzed, not liberated. Thus, if you're feeling overwhelmed by the sheer number of options, instead of feeling like you have to consider each and every one carefully, try going for the bare-bones version. For instance, don't consider every possible arts course for your CSE; stick to the ones you're genuinely interested in or might do well at. Scratch off the options that are unnecessary, superfluous, or simply just seem nice, and focus on the ones that are important and meaningful.

If you only see two options, don't rush into a decision. The flip side of this is that some situations seem to railroad you down either one of two paths, don't force yourself to pick one right away. A lot of decisions may seem black-and-white (should you stay or should you break-up?) but in reality, most decisions lie on a gradient, and by focusing so intently on the two that are the most obvious, you might be missing out on the plethora of choices in between. And if you're absolutely convinced that there are no other choices, talk to someone about it first. A friend, an advisor, or a professional might be able to see things that you can't.

Finally, once you make a decision, stick to it. You can do this by writing it down, telling a friend, or just having lots of self-control and commanding yourself to follow through. One of the biggest ways to waste energy is to tell yourself you've made a decision and then reconsider. In fact, there are many studies that show that such a tactic can actually make people unhappier, since if you've reconsidered once, chances are that you'll do it again. Thus, it would be more worth your time to spend that extra hour or two mulling over the decision — but once you've decided, stick to it.

If these tips seem deceptively simple, be warned: putting them into practice can be much harder. Nevertheless, don't get discouraged if you find yourself spiraling into a web of too many decisions. Recognizing some of our cognitive biases is a great first step, and it's only with practice that we can learn to avoid some of these decision-making pitfalls, and try to lead a happier university life.

Edward Snowden and America's Disturbing Path



SPENSER GOOD
3A MECHANICAL

There are few figures in today's world that are as polarizing as former National Security Agency (NSA) and Central Intelligence Agency (CIA) employee Edward Snowden. In a little over a month, the man has gone from a mid-level intelligence officer working for the NSA to the world's most newsworthy man. However, with his fame has come great cost, as he is now holed up in a Moscow airport facing charges of espionage if he is extradited to the United States for a trial. Further, he has so far had asylum claims from over 20 countries rejected, and his options are becoming increasingly scarce. He has been dubbed a hero by the whistle-blowing society, and a scourge by the intelligence officials and American politicians. This, of course, is to be expected. However, the facts make it clear that Snowden has done the right thing: he has shown the world that America has strayed too far from its history as a defender of human rights and civil liberties.

For the most part, Snowden confirmed what was already suspected: the American government is systematically ignoring the constitutional rights of Americans, as well as spying on foreign citizens beyond its jurisdiction in an attempt to protect society against terrorist attacks. This was originally confirmed in Snowden's interview with Barton Gellman and Laura Poitras of the Washington Post, when he revealed the details of the NSA's PRISM program. PRISM is a national electronic surveillance program which reportedly taps into the servers of Silicon Valley giants Microsoft, Yahoo!, Apple, Google, Facebook and Skype (in fact, Twitter is one of the few internet giants not partnered with PRISM, according to the leaked documents) in order to perform surveillance on targeted individuals that the NSA believes could be a hazard to American security. Of course this targeted surveillance is, according to Snowden, not based on fact but instead speculation among intelligence officials and, because of this, in many cases a warrant would not be securable. This is the beauty of PRISM, which has forced internet giants into cooperation so that any user can be spied upon without a warrant regardless of whether he or she is a threat. Beyond this, even when a target is selected based upon fact and evidence, all of his or her contacts, and even the contacts of all of the target's contacts are then swooped under the veil of surveillance in a process labelled "contact chaining" by intelligence officials. Basically, Snowden has confirmed that whenever you or anybody else performs an action on the Internet serviced by virtually any internet giant, the United States government could see this action. Although Googling recipes or "creeping" a friend on Facebook may not be within the scope of the NSA's interest, it is still extremely disturbing to know that it is still within their scope of access. It may not operate like a police state, yet the NSA has constructed a program that could facilitate a level of surveillance that would make any police state envious.

Disturbing as programs like PRISM may be, many politicians and intelligence officials still maintain the notion that programs like these are morally justifiable to protect its people. That is ridiculous. The United States, once a pillar of freedom and a staunch defender of human rights, now stands out as a blatant human rights violator. It treats its own constitution, the rightful source of pride for so many of its citizens and one of the most influential legal documents in the history of the world, as a meaningless piece of paper based upon the pathetic cop out that "new threats" (i.e. terrorism) have forced it to re-evaluate. The result has been programs like PRISM, which are based upon a cowboy culture in which officials can spy on whoever they want, whenever they want, without any due process or respect for the legal system.

Another frightening aspect of Snowden's revelations is how much it will hurt America on the global stage. PRISM's blatant disrespect for its own citizens and for those of other countries means that America's criticisms of other nations' violations will ring much more hollow then they did before, although other programs instigated by Bush's reckless "the ends justify the means" administration have already done a fair amount of damage. Yet, unlike other Bush administration scandals (i.e. torture abroad, Guantanamo Bay), Snowden's actions have revealed widespread wrongdoing at home as well as abroad.

Only the future will tell if Snowden will be viewed as a hero or a traitor. Much of this will depend on Snowden's actions in the next few months. His refusal to return to America and face trial may be understandable, since he may face lifelong imprisonment if convicted of his "crimes". Still, a widely publicized trial could only help America and Snowden's image in the long run. If Snowden comes back and defends his actions, supported by a competent legal team that could be easily funded by the vast whistleblowing community, he could separate himself from the more reckless whistleblowers like Julian Assange and instead cement himself as a true defender of human rights who is willing to put up a fight.

Winston Churchill, a true pioneer of freedom, once said that "The truth is incontrovertible. Malice may attack it, ignorance may deride it, but in the end, there it is." All Snowden has done is reveal the truth, and it is not his fault that it is disturbing or unjustified. Many intelligence officials will try to distort Snowden's actions as "dangerous" or "treasonous", yet these are lies by confused men, and as Churchill once said, the truth is incontrovertible. In the end Snowden will be viewed for what he is: a man who has done the right thing. Unfortunately, it remains to be seen if his actions will spur real change and the return of America to what it once was: a pillar of freedom and strength in a world too encumbered by much less respectable values.

The Free Encyclopedia Anyone Can Edit

IOANA CRAICIU
3T NANOTECHNOLOGY

MANDATORY SMALL TALK

On July 1, the Wikimedia Foundation introduced VisualEditor, a new tool for editing Wikipedia articles. This allows all logged-in editors to view Wikipedia pages in their article form while editing. Previously, an article's "Edit" page could only be read and changed using wiki markup, a syntax that many new editors found confusing. VisualEditor is one way in which Wikipedia is making it easier for new editors to contribute to the site.

Wikipedia promotes itself as "the free encyclopedia anyone can edit." In fact, editing Wikipedia is quite easy. The "Edit" page of most articles is accessible to anyone, whether logged-in as an editor or not, by clicking on the tab at the top right-hand corner of the article's page. You could put down this newspaper and go edit Wikipedia right now! Despite this, the number of regularly contributing editors to Wikipedia's 4.2 million articles, in English alone, is a comparatively small 40 000. This group of dedicated editors at the heart of Wikipedia not only creates pages, but edits existing pages, and monitors them for incorrect edits and vandalism. Since Wikipedia keeps all old copies of an article, these undesirable changes are easily reverted. This is why Wikipedia, a website open to anyone's contributions and with high visibility, is so free of vandalism and nonsense (and you thought it was the common sense and decency of the human race!)

Having a limited pool of regular editors, however, is not all good. In the first place, Wikipedia is built upon the collective knowledge of its contributors. More contributors means more knowledge, and a better Wikipedia. Secondly, having a small community of regular contributors can engender a sense of proprietorship, and create a barrier for new editors. Wikipedia's policy on editing is "Be Bold," meaning no one should hesitate to edit when they can contribute something useful. However, new editors sometimes feel that their contributions are not welcome. Back in April, one clash between newcomers and established editors become news outside of Wikipedia.

Continued at VISUALEDITOR on Page 5

Dear Canada: A Lesson From Egypt

FILZAH NASIR
2N ENVIRONMENTAL

Two years ago, I was sitting inside my high school biology classroom ignoring the diagram of the digestive system I was supposed to be labeling in favour of a discussion about the fall of then Egyptian President Hosni Mubarak. After months of protests calling for him to step down, Mubarak had finally relinquished his role as Egypt's head of state — bringing an end to 30 years of dictatorship in the North African nation. Last week, I sat at my desk at my current co-op, momentarily ignoring the Excel data that just had to be crunched to instead follow real time coverage of the fall of current Egyptian President Mohammed Morsi. To an outside observer the events seem eerily similar. But there's a world of difference separating the two.

Morsi, unlike Mubarak, is a democratically elected leader. In fact, he's Egypt's first democratically elected leader. After the fall of Mubarak's government, Egypt faced the most difficult yet least discussed aspect of the revolutionary process. What to do, once the dictatorship is gone. For the first few months in 2011, the Egyptian people had a difficult yet well-defined task — go out in the streets and protest. But once they had achieved their primary goal, there was a country to rebuild and no one to lead it. It took months of hard work before Egypt was able to hold its first-ever democratic elections which culminated in a victory for Morsi and his party, the Muslim Brotherhood. And while it wasn't the smoothest election in the world, it was a period of hope for the Egyptian populace. They had survived their first democratic election. It was a new beginning.

A year later, Morsi's government has been forcibly removed from power by a military coup. Egypt seems to have returned to the period of uncertainty that followed Mubarak's take down. But the end of Mubarak's reign was also a cause for celebration. It represented the end of dictatorship and the hopeful beginning of an era of democracy. The fall of Morsi and the Muslim Brotherhood, in many ways feels like a failure. Not just a failure on Morsi's part to govern, but the failure of Egypt as a nation. When the removal of a democratic government is reminiscent to that of a dictatorship's — something has gone wrong.

If you were to follow mainstream Western media, there's a high chance you might end up believing that Morsi's removal from office was merely a result of the much ignored non-Muslim population of Egypt reaching their boiling point of frustration and finally demanding a secular government. This is a ridiculous claim and is representative of how little effort has been exerted by mainstream media to analyze Egypt's political climate. Why take the time to understand a situation when there's an easy target? All problems in the Middle East must begin and end with Islam. As their name suggests, the Muslim Brotherhood is not a secular party. And yes, Egypt has a significant non-Muslim population that was unhappy with the election of a religious government. But while separation of church and state is generally considered to be part and parcel with democratic governments, it is by no means a necessity. The people of Egypt did not take to the streets en masse merely to demand a secular government. In order to grasp this, we have to realize that the Muslim Brotherhood's ascent to power had very little to do with their religious beliefs or even their political platform. Their main opposition was a party comprised of supporters of the Mubarak regime who openly declared their intentions to undo the work of the revolution. Morsi was largely considered the lesser of two evils. The causes of the current situation in Egypt require us to dig deeper than the religious beliefs of the ruling party. The failure of Egypt's first democratic government is rooted in our definition of democracy, the concept of legitimate government and our view of the revolutionary process.

It's hard to decide how to react to an event when it can simultaneously be called both a revolution and a military coup. Such is the case for the fall of the Morsi government. There is no question that a significant portion of the public wanted Morsi to step down. But he was a democratically elected leader who was forcibly removed from power by the military. This is the definition of a military coup — an act considered to be in direct opposition to democracy. For Morsi's opponents, the military's role in his take down is a sign that the military is simply doing their job, which is first and foremost to defend the public. Yes, the military is controlled by the government but their job is protecting the citizens of the country. According to the Department of National Defence, the role of the Canadian forces is to protect Canada and Canadian interest and values. When public sentiment turns against the government, technically, the military should be honour-bound to side with the public. As the use of police brutality by the government in Turkey, or locally, the countless allegations of police abuse during the G20 summit in Toronto show, this is sometimes not the case. The police and the military are constantly used by governments the world over to control the public and silence dissent. This is just as true in Egypt where police brutality was a major cause of the revolution. The foreign-funded Egyptian military is simply taking advantage of an opportunity to gain power. And their best chance was to side with the people that wanted Morsi gone. The military's role in this situation should be condemned. But while we cannot condone the role of the military in removing a democratic government from power, it's a lot harder to decide how I feel about the public's role.

In a speech, outlining his refusal to step down, Morsi made it clear that he believed his government was legitimate. They had been elected democratically, they had received a majority and they had a mandate to govern. What gives the public, let alone the military, the right to remove this government from power? There's a very interesting area to explore here — in what circumstances does it become okay to remove a democratically elected government from power? Does a 51% majority in an election give a party carte blanche to rule as they see fit until the next election? What is the trigger that will allow the public to remove them from office? Morsi insisted that his government had legitimacy to rule. And by the definition of any developed nation, he was correct. In fact, considering the standards they've set its shocking that Western governments haven't condemned the coup in Egypt. It makes one wonder, what the West stands to gain from a politically unstable Egypt. Former Canadian Prime Minister Pierre Trudeau once stated that, a majority government meant that he could do what he wanted. And if the public didn't like it, they were free to show him at the next election. Such a bold statement from a democratic leader is symptomatic of a larger problem facing the world. The decline of democracy.

Democracy in the West has come to mean a system in which every four years or so, there must be an election held. Elections have become the ultimate symbol of democracy. This system, which can more accurately be termed a "ballotocracy," is mostly successful in the West because it keeps the public from revolting. Due to the economic strength of Western nations, quality of life in Western countries tends to be higher and the population tends to be more content, therefore easier to control. An election every four years is accepted in lieu of real political engagement. Most people do not desire anything more. Why question a system that seems to work for you? But this set of norms doesn't translate to developing countries that don't have the economic strength to provide the population with a lifestyle that distracts them. So when a country like Egypt, which faces severe economic problems, tries to enter this Western defined democratic realm, the holes in the system become much harder to ignore. For many Egyptians, the fall of the Morsi government represents a truth that we in the West have yet to grasp: Elections, rather than being the symbol of democracy that many claim them to be, are actually a symbol of the illusion of democracy. Emma Goldman, labour rights activist and revolutionary, said it best: "Voting doesn't change a thing. If it did, they'd make it illegal." Democracy isn't about institutions, it's about people. We can't wave a magic wand, hold an election and expect a nation to transform into a democracy. For the people who rallied on the streets of Egypt to have their voices heard, it's clear that they haven't had that opportunity. What is their role in the new government? How do we ensure that the people behind the revolution actually get a say in the future of the nation? Part of the answer lies in redefining democracy. At its heart democracy is supposed to be about inclusivity and participation. It's a system where people should be able to directly participate in the making of all decisions that affect them.

The other change that's necessary is to reevaluate how we view the revolutionary process itself. I have heard a lot of references to Egypt's "second revolution" recently. This phrase not only signifies a misunderstanding of the current situation in Egypt, it also signifies a misunderstanding of revolution itself. Revolution is a process not an event. So the current events in Egypt and the events that began two years ago in 2011 are all part of the same revolution. Risking one's life to march in the streets in order to bring about change is a brave and terrifying act. For most of us, it's unimaginable. Yet, this action is simply a necessary first step in bringing about revolution. We need to start thinking about what follows. When the streets have emptied, when the dictator is gone, what follows? And the people who fought so hard to make those things happen have to start considering the role they should play in rebuilding. The birth of Egypt's revolution in 2011 was characterized as being led by young people, but after the take down of Mubarak those young people seemed to have disappeared from Egyptian politics. None of the major parties running in the election had been involved in the revolution in any major capacity. Why was this so? Why is it that young people can be trusted to sacrifice their lives and bring down dictatorships but when it comes to the actual work of rebuilding and running a country, everyone turns to established parties with experience? And why is that young people can find the motivation to bring down a dictatorship but seem reticent to get involved in the political arena and actually build the kind of government they fought for? Much of it stems from a distrust of government among youth and a disbelief in the power of governments to bring about real change. But part of the revolutionary process is to break this cycle. The people who start revolutions have to stay involved throughout the process in order for it to be truly successful.

It's easy to characterize these issues as the problems of far-off developing nations but they hit much closer to home than we realize. Last year, the Quebec student strike also successfully managed to evict a democratically elected government from power after months of protests. However, the reticence of the leaders of the student strike movement to enter the political arena allowed a similar government with a different face to take their place. This proved a temporary victory for the students, but the cause of the movement — accessible education — was lost. On the issue of legitimate government, Canada provides one of the best case studies for questioning whether a government is democratic. The current Conservative government has a majority mandate, which in our system means that they can pass any piece of legislation they wish and appoint anyone they wish to the Supreme Court as well as the Senate. If you have a basic understanding of Canadian government institutions you realize this is a tremendous amount of power, and that's not even considering the fact that the government gained this power with only 40% support. The Conservative government has a mandate, but one that they only got because of a broken electoral system. There is no question as to whether public sentiment has turned against the government (it always was against them), but because we have defined democracy by elections, they are allowed to rule for the next five years. In five years, the Harper government could cause significant damage to Canada. What's especially egregious about their actions though is that the majority of the public opposes them. For a government to continue to rule as they wish while public sentiment is against them with no avenue to create change is characteristic of a dictatorship, not a democracy. As a populace, Canadians are far too apathetic and unwilling to challenge the status quo.

Mohammed Morsi and the Muslim Brotherhood faced what must have seemed like insurmountable challenges to a new government. They had to rebuild Egypt from the ground up in the wake of a revolution. They had only been given a year to prove themselves and have an endless list of explanations for their failures. They had offered to work with the opposition. They had even held a referendum on the proposed constitution. One year in power after 30 years of dictatorship isn't enough time to truly test a government. They should have been given the chance to rule — a real chance. I cannot say the same for the current Canadian Government. Perhaps, it's time we redefine our understanding of democracy and question the system we live in. There's no rule out there that says we have to wait until 2015 to remove the Harper government from power.

The State of Fiber-optic Internet

JACOB TERRY
3A NANOTECHNOLOGY
T CUBED

Some Canadians may not have to wait for Google Fiber to meander through the Midwest United States before getting their own taste of Gigabit Internet speeds, as a new Vancouver-based startup is hoping launch its own fibre Internet service.

OneGigabit bills itself as Vancouver's fastest Internet Service Provider (ISP), promising to offer 1-10 Gbps (gigabit per second) speeds for $45 to $65 a month with unlimited usage. For comparison, Google Fiber offers their Gigabit Internet plan in Kansas City for $70 a month, which has received very warm reception from potential customers. OneGigabit's business model lies in providing fibre-optic networks to small and medium-sized office and apartment buildings. Incumbent ISPs like Bell, Telus and Rogers are working towards providing fibre-optic networks to their customers, but they typically only offer ranges of up to 250 Mbps (megabits per second) in best case scenarios, charging upwards of $200 per month for those packages. The incumbents usually only offer these services to very large buildings in urban centres, where it is most economical to do so.

Fibre-optic networks can be challenging to install as they require end-to-end fibre-optic cables to provide the promised high speeds. Upgrading the main segment of the network can be easier logistically as only one segment of wires must be replaced in a neighbourhood, but replacing the line from the street-level cable box to each building can be challenging and costly as there is a lower return on street-to-building wiring, particularly if one replaces a wire connecting rural or suburban homes. OneGigabit hopes to somewhat nullify the logistical headaches and extra costs associated with replacing wiring to the building by partnering with property developers while the buildings are under construction, so that the wiring to the building is already set up to include fibre-optic cabling. As a backup plan for buildings that cannot easily replace the network cables, OneGigabit hopes to use microwave transmitters much like those used in the wireless industry to beam high -speed Internet to homes.

If OneGigabit implements enough of their fibre network to attract interest from other cities, there's the potential that a larger company such as Google may demonstrate interest in purchasing them and expanding the network. This was done in April in Provo, Utah, where Google announced their intention to purchase the city's home-grown network iProvo, which was suffering from cost overruns and underuse. Google offered little explanation for why they purchased the system from Provo City Council, yet the incredibly high cost and time requirement of building any such network is a good indicator that Google saw this as an opportunity to expand to another city without having to go through the slow development process and high cost of rolling out the network. This is the process they are currently undergoing in Kansas City, their first supported city, where residents sign up within "Fiberhoods" to gain enough support to build fibre-optic networks in their neighbourhoods.

The price of Google's Kansas-based fibre-optic network so far has been expected to be in the range of $100 million, and analysts have estimated that if Google built out to 20 million more urban homes, it would cost them in the range of $11 billion, which would place them in the market at an above-average size for a nationwide provider. The high implementation cost will prevent Google from expanding too fast too soon, but building out partnerships like the one in Provo may be advantageous for earning Google more money to use as an investment fund for their future network expansions. Their Austin expansion is expected to start taking requests in 2014, and it is likely Google will find another high-usage city, like those in the San Francisco Bay Area, to choose as their next project.

In Canada, Google likely won't be here for a while, if ever, and OneGigabit is probably sticking to Vancouver for the time being. In Ontario, for now, we are mostly relegated to relying on Rogers and Bell to provide our highest speed connections. If Google is not ready start laying fibre networks in Ontario or Québec in the near future, there could be a good business model in starting fibre networks in Toronto, Ottawa and Montréal, where there is a large enough population at a high enough density that they could support a pilot project for fibre networks to businesses and homes in the area.

Many of the country's top universities and corporate head offices are located in these cities, and would probably be the groups most willing to support these investments. Gigabit Internet is good for universities and research groups that need to support thousands of people and would open up opportunities for Internet-based research and offloading tasks to servers throughout the campuses they support. Universities already have some of the highest Internet speeds in most countries, and fibre would enable them to unlock new possibilities in research and connectivity that would encourage further learning and development. Corporate offices would be able to incorporate more adventurous productivity initiatives, such as higher-resolution video-conferencing and more offloading of office services into cloud-based offerings. Many offices make use of server-based storage for user files and often store these servers in centralized locations, accessing them from offices throughout the countries in which they are stored. In Ottawa, improving the network infrastructure could help governments make more use of their Internet resources, and by extension, encourage better use of their Internet services to improve access for citizens across Canada.

Until more is heard from fibre-optic network companies, we will have to work with the slower networks we have now to accomplish our tasks, but the possibilities of laying out fibre-optic networks, while expensive, would change how we view our Internet resources greatly and the productivity cost saved by spending less time waiting for connections to complete would be unimaginable.

VisualEditor Helps New Users Contribute

Continued from FREE on Page 3

Steve Joordens, a University of Toronto professor, assigned the 1900 students taking his introductory psychology class the optional assignment to edit the Wikipedia pages on the topics covered in the course. The influx of new edits, all in the same subject area, and several of which were erroneous or improperly cited, raised flags in Wikipedia's regular contributor community. Discussions got heated on the article talk pages, but the issue was ultimately resolved, with both sides claiming to have learned something from the experience.

The Wikipedia community, made up by volunteer editors and some 150 employees of the Wikimedia foundation, is aware that its goals of outputting high quality articles and growing the number of editors are sometimes contradictory. VisualEditor is one example of a tool aimed at reconciling these two goals. Other examples include style guides, countless tutorial and help pages for newcomers, the "Teahouse" discussion page where new editors can ask questions of experienced editors, and a page directed at established editors entitled "Please do not bite the newcomers." Naturally, friction within the old and new members of any association of people is bound to happen, and none of this is to say that new editors do not make changes to Wikipedia all the time. You can actually see a live global map of newcomers making changes to Wikipedia live on *hatnote.com*. Logged-in editors do not need to provide their IP address and therefore do not appear on the map.

It is difficult for us 20-somethings to remember a time when we actually used a paper encyclopedia. Incidentally, the English language Wikipedia alone, if written out, would fill over 2600 volumes of the Encyclopedia Britannica (as of 2010). These days, not only is Wikipedia often used in universities and the workplace, it is used in casual conversation, where almost any factual debate can be resolved by one or both parties checking Wikipedia on their smart phones.

It is easy to forget, however, that Wikipedia is a community tool that is created, maintained, and funded by volunteers. It is not a free encyclopedia, but rather a give-what-you-can encyclopedia. Seeing as your contributions to Wikipedia are needed and wanted (so long as you read and follow the guidelines), and given that the editing process just got a whole lot easier, why not give it a try? If writing, fixing spelling or grammar, adding references and links, or translating are not your thing, you can always give a monetary donation. Due to the fact that Wikimedia is a not-for-profit organization that does not use advertising, it runs entirely off donations.

Examination Procedures and Policies

DREW DUTTON
VP EDUCATION

It's the last month of classes everyone! Where has the term gone?! Well, like it or not, exams are fast approaching. This issue, I will highlight regulations and policies regarding final examinations.

I think we can all agree that exams are a stressful time of year. That being said, the University of Waterloo strives to create a level playing field for all students. Examinations are scheduled with three principles in mind: no student shall write two exams in two consecutive exam periods, no student shall write an exam in the last period of one day followed by an exam in the first period of the next day, and no student shall write more than two exams in a single day. University policy guarantees accommodation for examination conflicts when a student reports the conflict with the Scheduling Office within seven days of the appropriate examination schedule being released. That being said, if you have neglected to report examination conflicts within this time frame, talk to your professors about what accommodations might be possible. This should be done AS SOON AS POSSIBLE!

Accommodations for religious conflicts are made at the University of Waterloo. The University of Waterloo recognizes and values the incredible diversity of cultures and religion found on our campus. Such conflicts should be reported following the same procedure as above: inform the Scheduling Office within seven days of the applicable examination schedule being released.

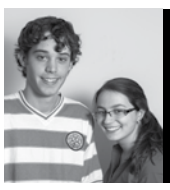
Final exams cannot exceed 2.5 hours in duration, and are scheduled for Monday through Saturday. Additionally, there are four prearranged time slots exams can be written in: 9:00 a.m. to 11:30 a.m., 12:30 p.m. to 3:00 p.m., 4:00 p.m. to 6:30 p.m., and 7:30 p.m. to 10:00 p.m. Exams scheduled outside of these times and days must allow for student accommodation if a legitimate conflict exists.

If you should become ill during final examinations, students are required to provide a Verification of Illness Form, available on the University of Waterloo Health Services webpage. Bear in mind that a cold does not count as an illness with grounds for special accommodation, only significant illnesses are grounds for deferred examinations. A general rule of thumb is that if you think you can reasonably sit through 2.5 hours, then you are expected to write the exam as scheduled.

In regards to the act of writing examinations, there are a few rules of which to be sure. This is likely an extremely rare event, but if there are no proctors at the assigned examination room, students must remain in the room for 30 minutes after the scheduled start of the exam before leaving. Assuming all goes well and the exam begins as scheduled, students must remain for an hour before they can submit their exam and leave. During the last 10 minutes of an examination, all students still in the room are required to remain in their seat. Any students who arrive late for an examination will be allowed to enter and write the exam, but additional time will not be granted. The single exception to this rule is if a student arrives over an hour late, and other students have already completed their exams, in which case it will be at the proctor's discretion whether or not the student will be allowed to write the exam.

For the complete list of procedures and policies please visit *uwaterloo.ca/registrar/final-examinations/examination-regulations-and-related-matters*, and feel free to stop by the EngSoc office if you have any questions. Happy studying, and don't forget to bring your WatCard!

Let the Good Times Roll



ANNAMARIA REDA
BRENDAN O'HANLON
VPS INTERNAL

The summer heat may be upon us, but that doesn't mean we aren't rolling out a multitude of events in the upcoming weeks! You may need to roll down the window to stay cool, but come aboard the bus to Beach Day, this Saturday, July 13. Tickets are on sale in the EngSoc office — get one before it's too late! The next day, Sunday, July 14, is the Engineering Alumni & Student Golf Tournament. You can also buy tickets for this at the EngSoc Office; this includes 18 holes of golf, a golf cart to roll around the course in, a meal, and prizes. The next next day, Monday, July 15, is Cardboard Boat Racing. You can sign up in the EngSoc office this week, then roll up your sleeves, build a cardboard boat, and race it (and/or sink it) at the PAC. We're on a roll here!

It's also that time of the term again: EngPlay performances are coming up! There will be three performances, July 17 and 18 at 7:00 p.m., and July 20 at 2:00 p.m. Tickets are $5, and will be on sale in the EngSoc office until the show, and also at the door. Don't miss this hilarious show and all the hard work everyone has put in this semester. It's going to be an event you'll be sad you missed!

The final workshop in our Student Skills series of workshops, on Microsoft Excel, was on Tuesday, July 2. Overall, while the workshops did suffer from low attendance, we feel that those students who participated found the events useful. We plan on running the series again in the winter 2014 term, when more first-year students are on term, and potentially rolling out some new workshops as well.

Commissioner applications are open! A Commissioner is in charge of a specific aspect of the Engineering Society. For example, the Student Life Commissioner manages the Directors that run social events. We are looking for students interested in being the Student Life Commissioner or Student Services Commissioner. If you are good at organizing and managing people, want to further your leadership abilities, and want to have fun, apply to be a Commissioner via the EngSoc website. The deadline to apply to be a Commissioner is this Friday, so hop to it!

Similarly, Directorship applications are open too. A Director is responsible for running an event or service. Different Directorships require different time commitments, but the amount of time you invest into a Directorship is up to you. Is there an event you really love, or a new event you think would succeed? Then you should apply to be a Director! Applications close August 2.

That just about covers everything. You should get rolling on your commissioner and/or directorship applications!

Outreach & Opportunities

LEILA MEEMA-COLEMAN
VP EXTERNAL

Oh, hello fellow engineering students, I didn't see you there! I was having too much fun at all of the fantabulous events that happened recently! On the long weekend instead of cottaging, canoeing or canoodling, many dedicated engineering students volunteered their time at the Pride Parade and the Kids' Olympics for Canada Day!

We had around 25 engineering students and supporters march along with the Federation of Students in the Toronto Pride Parade accompanied by our glorious mascot, the Tool. The Toolbearers were out in a full rainbow to show their support for the benefits of diversity in life and engineering. If you missed the parade this year, don't fret, we will be marching again next year, bigger and better than ever! The very next day, as hundreds of families poured into CIF for Canada Day Celebrations, many bright faced engineering students started setting up bubble blowing stations, ring toss, bean bag throwing, and water slide stations for the Kids' Olympics event. Our two amazing first year directors Jenn and Anson along with all the volunteers entertained the children of Waterloo till the late hours of the afternoon.

If all of these events seem awesome and you either wish you had come to them or did and had a great time, then you should just head on over to the EngSoc website and apply to be the OUTREACH COMMISSIONER for the Winter 2014 term! The Outreach Commissioner is responsible for helping all of the directors for the outreach events in the winter term and making sure that the events run smoothly and the directors have all the support they need! Just to give an overview of the events in the winter term we have CANstruction (build a super duper large structure out of cans), Bus Push (pull a super duper large bus through Waterloo), Rube Goldberg project (build a super duper large provincial wide Rube Goldberg) and many other super duper large projects. This commissioner gets the chance, along with a team of directors and myself, to show that engineers care and want to give back to the community.

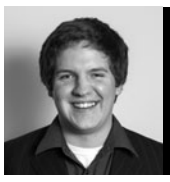
If being a commissioner is not your thing or you aren't sure you want that much responsibility we also have DIRECTORSHIP APPLICATIONS OPEN!!! That means you can take on one of our super duper large projects or one of our littler, but just as fun, directorships! New for the winter term we have a Waterloo Park spring clean-up directorship, a Professional Engineers Ontario (PEO) relations director to work with the PEO on increasing our involvement in the chapter and of course fantastic charities directors! There is something for everyone, so if you are looking to get involved and make a difference consider applying for one of these fantastic opportunities!

Upcoming Events Calendar

Wednesday July 10	Thursday July 11	Friday July 12	Saturday July 13	Sunday July 14	Monday July 15	Tuesday July 16
EngSoc Meeting #5 17:30 - 19:00, CPH 3602	Photography Contest Charity Pancakes 08:30 - 10:30, CPH Foyer Purplepalooza! 14:00 - 17:00, CPH Courtyard Running Club 19:00 - 20:00	Commissioner Application Close Enginuity Design Competition 11:30 - 13:30, CPH Foyer	Beach Day Grand Bend Engineering at THEMUSEUM 10:00 - 14:00, THEMUSEUM	Alumni Golf Tournament Foxwood Golf and Country Club, Baden, ON	Ice Tea Monday 15:00 - 17:00, POETS Patio Cardboat Boat Racing 17:30 - 19:30, PAC Pool Running Club 19:00 - 20:00	Colouring Contest Feds General Meeting 16:00 - 18:30, SLC Great Hall Iron Warrior Meeting 18:30 - 19:30, E2 2347 Running Club 19:00 - 20:00 2016 Campfire 20:00 - 22:00
Wednesday July 17	**Thursday July 18**	**Friday July 19**	**Saturday July 20**	**Sunday July 21**	**Monday July 22**	**Tuesday July 23**
EngPlay 19:00 - 22:00, MC 2065	Charity Pancakes 08:30 - 10:30, CPH Foyer Running Club 19:00 - 20:00 EngPlay 19:00 - 22:00, MC 2065	GradComm Event #5 12:00 - 02:00	EngPlay 14:00 - 17:00, B1 271 Jazz Band End of Term Gig	Paintball EngSoc at Canada's Wonderland 09:00 - 22:00	Ice Tea Monday 15:00 - 17:00, POETS Patio Directorship Appreciation 18:00 - 20:00, POETS Running Club 19:00 - 20:00	Course Critique Screening Party 16:00 - 21:00, CPH 1320B Iron Warrior Meeting 18:30 - 19:30, E2 2347 Running Club 19:00 - 20:00

Check out up-to-the-day event postings on the EngSoc website at engsoc.uwaterloo.ca

Putting the Monie$ to Good Use



KEVIN MCNAMARA
VP FINANCE

Hey there everybody! It's been a good two weeks for the finances, and I've got a few things to update.

Sponsorship proposals took place this past Sunday. A total of 11 student teams and groups submitted proposals, to be allocated $5,000 of the EngSoc Budget this term. After the presentations, the Sponsorship Committee (which is made up of 6 at large student members, chaired by myself) deliberated to come up with an allocation. This will be brought forward to EngSoc council at Meeting five. Check the next issue of *The Iron Warrior* for the official allocations.

ECIF Applications are still open, but they won't stay that way forever! This term we have just under $2,000 to allocate towards EngSoc making capital purchases to help improve the facilities of the society, of our affiliates, and of engineering in general at Waterloo. Past allocations have gone towards purchasing new lighting equipment, a new drum kit for Jazz Band, and some of the new LCD Screens that you will see popping up around the halls soon (there's already one over the C&D). If you have any ideas for things that EngSoc can purchase to improve the facilities that you use, please submit a proposal! The form is available on our website at *engsoc.uwaterloo.ca/services/ecif-application*. Feel free to send me an email if you have any questions.

Coverall Day was held this past past Thursday, and it was a great success! We sold a total of 20 pairs (even one to a professor), which for a spring term is pretty awesome. Thank you to everyone who came out and bought a pair, and those who showed your spirit by wearing your covies. The order went in, and the coveralls should be here within the next few weeks! Everyone who ordered them will receive an email once they have been delivered.

The T-Shirt Fire Sale Bonanza went quite well too, and there will be a lot more people wearing some very nice inexpensive t-shirts around campus. I still have quite a lot of t-shirts and frames left over to sell, so keep an eye out for EVEN CHEAPER PRICES over the next few weeks and an even more awesome sale!

Note to all the directors: if you have outstanding receipts to be reimbursed for purchases you have made for your directorships, be sure to submit them as soon as you can! Just fill out an expense statement in the EngSoc Office and leave that, stapled with your receipts, in my mailbox.

That's about it for now, as always let me know if you have any questions or concerns about EngSoc money. Get your ECIF Proposals in! VP-Fin, out.

Officers, Commissioners and Directors, Oh My!

DAVID BIRNBAUM
PRESIDENT

The title may seem irrelevant, but I promise we will get to that!

Over the past couple of weeks I have been having meetings with all of the department chairs and program directors. These meetings were to talk with them about how the Engineering Society (EngSoc) can better engage and serve the students. I am happy to say that they have all been very receptive to my ideas, and I am excited to work with all of them.

All of you should have received (or should be receiving) an Engineering Society feedback form from your class reps. These are very important because it allows us to know what we are doing well, what we need to improve, and what you would all like to see. Our Chief Feedback Officer will also be running an in person feedback session tonight at the EngSoc Council meeting, so be sure to attend if you have complaints or praises for the executives! She will then be presenting all of the results to us at Council Meeting six on July 24.

There is a lot of other stuff going on at the meeting tonight. Dean Sullivan will be presenting; she will be talking about E7 and the Faculty in general, and as always, will be available to answer all of your questions. If you would like to hear from our Dean, be sure to come out. As well, we will be discussing the student awards program, and an elections bylaw change.

Engineering Society Commissioner and Officer applications are open until Friday! If you are interested in running the EngSoc meetings, helping organize all of the events and services we run or running the exam bank, be sure to apply! We will be conducting interviews next week, so definitely check it out! The applications can be found at *engsoc.uwaterloo.ca/commissionerapplication*.

If you are looking to help out with the Society, but don't want such a huge commitment, definitely check out our Directorships! We have a ton of different Directorships which range from organizing a charity bus push to running resume critiques to just organizing a running club! There are LOTS of options to choose from. Full descriptions and the form can be found at *engsoc.uwaterloo.ca/directors/asoc_application*.

Other than that, I am still working on the final touches for the textbook library and student deals program. They will definitely launch in the fall term, but hopefully they will launch before then.

As always, questions, comments, and concerns can be emailed to me at *president.a@engsoc.uwaterloo.ca*.I welcome your feedback! I hope to see you all tomorrow and around the halls!

Columbia Lake Canada Day Celebrations!

JOSHUA KALPIN
2B SOFTWARE

On Monday July 1, the University of Waterloo held its annual Canada Day celebration at the Columbia Lake area on North campus. The festivities were a partnership between the university and Feds, but also had a number of events run by the Engineering Society. The celebration, with over 40 000 people attending, was so large that the police shut down a large portion of Columbia Street to help people stay safe.

Food was plentiful throughout the event, with many food trucks that served the attendees everything from poutine to Asian cuisine. Later in the evening, a beer tent sponsored by local breweries opened up to the delight of many of those attending. The variety of food and drink showcased the diverse group of people that make up not just the Waterloo community, but Canada as a country.

Keeping with the diversity theme, there was also a variety of events for all ages. The Tool was present and anyone attending could get a chance to take a picture with it. The Engineering Society also had a water slide, hula hoops and many other activities that anyone could participate in. Other smaller events included face painting, a Blackberry Demo truck and lots and lots of bouncy castles.

On a larger scale, there was a massive stage set up that featured a variety of acts. Of note on the non-musical side, there was a Timbit eating contest that initially featured five University of Waterloo students competing against each other. After a winner was declared, competitive eater Takeru Kobayashi took the Timbit challenge and ate 85 Timbits in two minutes. After this, the main stage featured the indie band Hollerado, and Canadian folk band Spirit of the West. Both bands played to an excited crowd, and Spirit of the West's finale, "Home For a Rest" had the crowd going wild.

All of this excitement led up to the big finale of the evening, a massive fireworks display over Columbia Lake. The display went on for over 20 minutes and featured everything from traditional fireworks to smiley faces and hearts. People were seated across all open stretches of grass surrounding the lake and it was clear that this was the big event of the evening.

Canada Day in Waterloo is definitely not an event to be missed. It has great food, music, activities and, most importantly, an amazing fireworks show.

Teaching Excellence Initiative — David Cory

FARZI YUSUFALI
3T NANOTECHNOLOGY

Prof. David G. Cory is, as of 2011, a Professor of Chemistry at the University of Waterloo and researcher at the Institute of Quantum Computing. He currently holds a Canada Excellence Research Chair in the field of Quantum Information Processing. He is a visiting researcher at the Perimeter Institute for Theoretical Physics (PI), a member of the Waterloo Institute of Nanotechnology (WIN), and the chair of the advisory committee for the Canadian Institute for Advanced Research (among other titles he currently holds). Prior to his current position at the University of Waterloo, Dr. Cory was a Nuclear Engineering Professor at the Massachusetts Institute of Technology (MIT), where he was known for his work on nuclear magnetic resonance processes. He is known for his leading role in experimental quantum physics research and its applications in a wide range of industries, ranging from medical to oil. For more information about his past work and current research, look to the WIN and PI websites.

Can you briefly describe your research and its potential future uses?

We work on making quantum devices and, of course, quantum mechanics is at the foundation of the universe. Everything that we can do at the level that's uniquely quantum mechanical, we gain advantage over the classical world. We make quantum sensors, quantum actuators, and quantum computers (hopefully!) for which the applications are much broader than people recognize. If we want to image a single molecule, which would be great for drug discovery, quantum sensors are necessary to do that. To build a sensor that is sensitive to one molecular species and to differentiate it from another, quantum mechanics is a great way to do it; some examples include personalized medicine, environmental sensors, or even detection of past radiation events. Almost anywhere you can imagine, whether it's oil exploration to drug discovery to health to environmental issues, there are places where quantum mechanics can make a difference. If you went into the labs, you would see a lot of different modalities. You will find labs that look very much like physics labs (which are low-temperature labs that operate under strong magnetic fields). In other labs, we use optics as opposed to [other available] labs that resemble materials science ones (where we grow devices, diamond, magnetic thin films). Some labs very much resemble chemistry labs where we grow two dimensional crystals. All of these labs have to come together in order to make quantum devices. Quantum devices are at the foundation of the world; yet, as we wander through the world, we never see something that is quantum. If you want to something to reveal its quantum nature, it takes a lot of new developments in engineering.

What is the one application of quantum mechanics that is the weirdest or that most people would not recognize?

They're all weird! Anytime you have quantum mechanics operating in the real world, it's weird. Magnetic resonance imaging is something that many people have experience with but is, fundamentally, a quantum device; right now, there is constant work being done to improve the ability to use this device. A funny thing (that I'm not doing) but one of my former students is doing is that he's looking at electron spin resonance in fingernails because looking at the electron spin resonance signal in a nail can tell you about past radiation events. They are developing this as a tool so that, in the event that there was a dirty bomb or any other sort of horrible event, you can track it using people's fingernails to tell you if they were exposed to radiation or not.

How does the approach of scientific research differ between the US and Canada?

Science is international. As we develop our science, we connect to an international community. If we ever advance in our lives, it doesn't mean anything until we can effectively and broadly share that. Moving here, I didn't actually change that community; before I came to Waterloo, I was already engaged with people in Canada and now that I'm in Waterloo, I'm still engaged with people in the United States, Europe, China, and Japan. I think that globally, there is no difference. As for locally, there are always strengths that each community has to offer; the Canadian system, perhaps, strives to have a very broad-based research initiative. In coming from MIT, which is a wonderful place with lots of energy, great students, and great colleagues, and then coming here (to Waterloo) which has the same great things, you can see the difference in culture. At the Institute of Quantum Computing, you're trying to do something collectively and part of the fun of being here is, when I wake up in the morning and come to work, there is a bunch of colleagues that share my passion and that want to do something together in a specific area. In contrast, MIT is, noticeably, a collection of individuals (whereas Waterloo is a collection of groups). Waterloo has, at its foundation, strong undergraduate programs and outreach through the co-op program that connects the university to students across the world at an early age. Waterloo is continuing to build something that, in my opinion, you can't find anywhere else in the world. It is taking an institute that is strong at co-op and simultaneously uses that foundation to build a research university. At other universities, these activities are often separate. We have students working in labs during their co-op terms or travel to other universities to do research and, subsequently, bring those skills back to Waterloo. It's a wonderful new exploration to say that we don't have to choose one or the other, that we can do both well, and that we can do each of these activities because the other one is also here. As you come to a new place, you get to engage broadly with the community and you get to see people bring their vision here (like Feridun's [Hamdullahpur]) who has been able to share it across the institute).

What do you think University of Waterloo needs improvement in currently as an institution?

I'm not sure I'd keep the word 'needs improvement' but I will say that the world changes. The context for how we deliver education and research continues to change; this is certainly true for education which is changing very rapidly at the moment. It's a good time to rethink and reinvent how we deliver education. As we bring people to the university who are contributing to the excellence in research, it is also important to engage them in the academic program because teaching is a very rewarding thing to do. When you build a community, you want the community to be rewarding and enabling to the individuals. As we're building our research-intensive university, part of the reward and the enabling is the ability to do great new science through engineering for which the rewards of having it done well are even better. That may be the piece that undergraduates don't recognize right away; research and, of course, education in the classroom is learning new things. When each activity is done well, one activity can communicate effectively with the other activity and it would be hard to imagine, for me, to be a professor and not to profess.

How do you believe students should learn and why is this?

To teach students effectively, you have to engage them. It helps to believe that what you're teaching is interesting and to have some passion. You need to share with students that, when they walk out of the class, it's not enough that they've heard new things – they need to know that they can do new things. As I teach, whether it's here or MIT, one of the challenges is to convince students of their own capabilities. It's easy for students to not realize how much they can do; therefore, you need to find ways to challenge them so that they can discover for themselves how much they can achieve. You can see, whether it's a project or a design activity, or even a challenging homework assignment in a course or a being confronted with a problem in co-op, that these are the opportunities that you can learn for yourself that you are, in fact, capable; this is, of course, what I strive for. I put a lot of emphasis on homework and projects and don't care so much for what happens in a final exam. There is a place for final exams in that it's necessary to test some aspects of the coursework but does this equate itself to the question of 'are you capable?' You don't want somebody to equate their future success in a field with the ability to write a final exam.

What kind of teaching styles do you use and why do you think it works?

I think, for me, teaching is to make sure that the students develop new skills and knowledge as well as a chance to display it. Students teach each other very effectively, therefore, one thing I like to do is to stop the class and ask the students a question that they're going to work on together. Spend a few minutes and let them learn from each other. This year, we tried a new method that worked really well; since we're in the QNC which has boards all over the place, we stopped and said, "Okay, let's go into the hall and I'll hand out some really challenging problems. Break yourselves up into groups of four and five, take a board and work through the problem together while I and the TAs are there to help." Obviously, this is harder than something we'd normally ask them to do. The amount of interaction in the halls, where the students stayed late and really worked to the ends of the problems, really worked well. I was very impressed with the community of students at Waterloo – the interaction the students have and the self-motivated organization when they need to talk about the problem and learn it was great to see. If you want to learn something, you need to test your knowledge and testing your knowledge with a homework assignment or an exam is not very productive. Testing your knowledge by trying to describe what you know to a fellow student and then having them come back and probe you the questions is very effective; the more we can do that, the better.

How would you adapt these methods to a broader course like Calculus?

Quantum mechanics is at the foundation of everything! You can't get any broader than that!

Granted, but civil and mechanical engineers never touch the subject of Quantum Mechanics.

They should! When I was at MIT, I had PhD students from almost every department in MIT; that included Civil Engineering, of course, Mechanical Engineering, Electrical Engineering, Nuclear Engineering, Physics, Chemistry, Biology, Bioengineering, Health Sciences, and even a student for business school. They all have important things to bring and the same thing will happen here. To answer your question, what happens when you're teaching Calculus? Again, there needs to be a dialogue that needs to be developed with the students and, of course, a set of skills. Calculus is challenging in that we teach tools without necessarily teaching the concepts or even, what I would call, skills. I would definitely try to find a way to go deeper…

To try to, go towards the way you teach Quantum Mechanics with the sense of collaborating with students and giving practice problems and putting less emphasis on being able to write a final exam.

Absolutely! If I taught Calculus, there would be lots of homework!

With that said, what's the one thing you struggle with when teaching a course like Quantum Mechanics?

There are a few things that I struggle with. I'm not organized; I can bring a lot of enthusiasm, I hope, but as one is teaching an undergraduate course, it always helps to have more organization and I always struggle with that. Of course, it always shows up in the way I organize things on the board, which is everywhere. I'll tell you, the best course I ever took was taught by a wonderful, brilliant, kind old man, Les Foldy, who was Oppenheimer's student; the worst course he would teach was general relativity. He started from the left and worked through all the way to the right and, finally, at the end of the right, he would write the last equation and then, he would say, "This is wrong. It should be this." He must have made a dozen errors in going from the left to the right – we had a rule in the class: nobody was allowed to correct him because, if you pointed out his mistake, he would stop (and it's very hard, at the board, to find your own mistake because you don't have any perspective as you can't get far enough away) and try to find the mistake. What we would do is, every day after class, we would all go and take over the same coffee shop, everyday, and we would work through the notes ourselves, correcting all the mistakes. At the end, even though it took an extra hour and it's not the way I aspire to teach, but it was a very effective learning experience.

Would you say that, not necessarily on purpose, you ended up learning better than you would have if you copied the notes blindly?

Absolutely! Remember that learning is an active process, it can't be done passively and so how ever people get engaged in the process of learning, it's always good. The engagement that I see here, of students getting together and talking about whether it's homework or a problem or a lecture or last year's quiz, is really beneficial. I would go very far out of my way to make sure that those conversations occur. Sometimes, they should, of course, occur with the faculty and TAs but then, if you're able to convince your fellow students that you know something, then you probably really do know it.

Because the best way to learn is to teach someone else. Given that you've mentioned that you like the collective nature of how students learn, a big part of that has to do with the cohort system considering that we see the same people eight hours a day, every day, for five years. There is talk of introducing a system where it is more like the other faculties where you have a certain set of courses that you have to take but can take it whenever you like as opposed to progressing with a class; do you think this would be detrimental?

I haven't thought of that because I haven't been a part of that discussion. I find it extraordinary that the students sit there in the same seats and that it's the faculty that come and go; I know, as a student, I would go crazy. However, I'm amazed at how collegial and well-run the student population is (which is a real strength in the program) and so, I hope that there's more flexibility within the program but I wouldn't want to lose the sense of a shared experience which the Nano program has right now.

What's the best critique you've gotten or the one critique you took to heart?

I find that it works when students come to ask something directly after the class. In class, you'll notice that I try to hit important points twice such that I'll give a lecture and then, during the next lecture, I'll compact it with a little bit more organization. The reason why I do that is, from discussions with students, when you see material for the first time, it's very difficult to figure out how it fits together. You need to have the second look at it after you've had a chance to think about it. If students think about it first, then it works well. I used to teach Introductory Electronics at MIT where I would teach an electronics course for non-EE majors (so everyone else at MIT besides electrical engineers). Very much like the Quantum Mechanics course in Nano, the Electronics course had to cover everything in one semester but still be useful. I changed the course from how it was taught; it used to be taught where lectures were given and then there were a bunch of labs at different random times. I changed it so that we built a new lab and, after the lecture, we would all stand up and walk together to the lab (I would be in the lab) and we would spend a couple of hours doing something that would start off as pretty directive to 'I want you to build something that does this,' so that you had to bring some ideas. We'd go around every lab connected to the lectures and talk to every group of students and find out 'what did they know' or 'what didn't they know' or 'what did work' or 'what didn't work.' You combine the efficient means of communicating to a group with the local means of 'let me hear what you know' (thereby catering to the individual's needs). I would love to do that with Quantum Mechanics as well (where you'd attach a lab component somehow to every lecture).

How has the Quantum Mechanics course changed since you first taught it?

I can thank you [the 2014 Nano class] for putting in all that work. Based on the first year I taught in the Nano program, we've changed the course so that it has a bit more application and more uses of quantum mechanics. I think we'll continue to do that; the first time I taught it, the comments about 'what is this good for' were a little bit too throwaway but now, this is more central to the course. I hope, at some point, as the curriculum for Nano develops, that there will be a second course in senior year where we can teach quantum design and quantum devices as you take the information and apply it in the light of everything you've learned as well. It would be fun to put more devices into what's taught in Nano.

In the interest for Nano students, what analog course is there on campus that you could direct us to that would give us this education or, if there isn't one, what is something the Nano students can look into in the event that there isn't an option for this technical elective course in fourth year?

There are good courses in Electrical Engineering [in photonics for those interested] where you can go learn the material. There's a beautiful structure to photonics and so it's a nice thing to learn and teach. I would hope we can do something more, that we could say, 'now if you're sitting in the quantum world, you can do these things that you can't do otherwise.' One of the pieces you want to give students as they're leaving a program is to put them on a trajectory to developing on their own. A key measure, today, of success of an academic program is how effectively you've taught 'lifetime learning.' Lifetime learning does not mean you take night school; what it means is that you decide that you're going to go in this direction and you're going to make a habit of learning. You're going to be pushing against the frontier and if you want them to push against the frontier after they leave, it helps them to bring them to the frontier first and that's what we can do. IQC is well-positioned to bring them to the frontier; the lovely thing is that IQC added a lot of young faculty members and continues to do (so there are great opportunities). In the area of photonics, we've just hired Michael Buchin from Stanford who's an expert in nanophotonics.

To the effect of bringing students to the frontier and promoting a lifelong habit of learning, do you think the technical electives bring students up to that point or are we still (sort of)…stuck?

No, we're not stuck! We're enabled to do anything we like so we should do something good and great. It helps to not speak too broadly and to say, 'Ah! Where can we make a difference?' Even for a place that's as big as the University of Waterloo, you can't do everything. One of the advice I give to students is that it's important to take courses for more than just, 'yes, I have to learn all of these things.' You also need to look around and say, 'Oh! I know I can learn this piece; I don't know why this is necessarily useful but there's a great professor who's very enabling of future ideas and I know it will be a wonderful experience.' To populate your life with wonderful experiences…

Any and regardless of the knowledge you get, it's all equal. Going off of that, is there somebody in your past that set the tone as to what your career was going to be?

There were many; Les Foldy, who I already mentioned, is probably the top example at Case Western Reserve University (where I went to school). The final physics course in everything was always taught by him as a nice end-all in university.

Was it his teaching style or his enthusiasm?

His enthusiasm, his knowledge… You want somebody who you never have to guess, 'Does this person really know this subject?' Demonstrably, you want somebody who knows what they're talking about and is a very practical [hands-on] person. When it came time to doing something, he could do it; you want to build that into the program such that students see, right in front them, that 'Yes, you can make a difference.' He was the kind of person who inspired you to say, 'let's see what I can do with this or contribute to it' (rather than the normal nine-to-five and doing something that the person before you has done). I hope that I can bring some of that enthusiasm and share some passion.

Point Vs. Counterpoint

Should Canadian Citizens Be Allowed to Wear Masks During Unlawful Assembly

POINT

MEAGAN CARDNO
1T NANOTECHNOLOGY

Internet culture has given us several images and symbols that we cannot help but associate with certain ideas. Perhaps one of the most memorable is that of the Guy Fawkes mask, most easily identified with the Anonymous movement of online activism and their efforts. However, the idea of anonymity has existed far before the group's beginnings, and far before the birth of the internet. Perhaps one of the biggest problems that arise with our generation's current passion for the internet is just how much we now seem to think of it as a simple human right rather than a privilege. Don't mistake this for me belittling invasion of privacy though, it is a very serious issue. Especially considering how much talk there already is concerning the NSA and spying. The main issue is when we confuse our rights as humans with our rights to safety.

The new bill passed by the Canadian government is not one aimed to strip people of their freedom to speak, or their freedom to protest or any other liberty that they currently possess. It is one aimed to keep protests peaceful, and to minimize illegal activity during such large, public events.

One of the biggest factors to consider during any large assembly of people is the authorities' concern for public safety. Most often the number of police available for security during such gatherings is insignificant in comparison to the amount of civilians and protesters. As many of these events are fueled by legitimate sentiments and passions for change, there are also worries of emotions running too high, and dangerous actions can be incited given the right circumstances.

People who seek to start riots and perform other destructive activities at protests can be easily lost in the mayhem, and so successfully identifying them during the event itself is often the difference between charges being pressed and the agitator getting off scott-free. When authorities are facing a sea of identical faceless protesters in masks, the task of identifying perpetrators can become impossible. Investigation quickly reduces to an endless process of interrogation and finger-pointing, with minimal success rates.

In extreme cases police are sometimes left with no choice but to detain absurd numbers of protesters. Sometimes they even have to detain all people present at the event just to settle matters. Not only is this a huge undertaking both in magnitude of size and time, but it pleases neither the protesters nor the authorities and often more harm is accomplished than good in the process. Such undertakings can be avoided with the new law prohibiting concealed identities — violators of public safety can be identified, detained, and charged in a much more efficient manner.

One of the biggest issues people have against the new law seems to be for people who have legitimate reasons for wanting their identities hidden, such as risk of losing their job if they are recognized at the protests and their employers do not agree with their political views. While this is most definitely an unfortunate circumstance, and one that I personally do sympathize with and hope will change in the future, I do also believe that sometimes such sacrifices increase the impact — and are sometimes necessary — when conducting such politically-sensitive protests. By allowing your own identity to be attributed to the movement, you are committing to it far more seriously than those who feel the need to shield themselves from potential ridicule and consequences. If one felt strong enough about a cause to proactively protest and seek change in the matter, one should also be willing to commit personal sacrifices to the cause. One human face at a protest should be worth one hundred masks.

In short, the Canadian bill should be the first in many steps towards cleaner, safer protesting in the country. Anonymity has a time and a place when it comes to activism, but unfortunately physical protests is not one of them. The time has come for people to start valuing personal safety over attempts at artistic symbolism. It is time to respect our protesters as the humans they are, risking more than just their time, and not just a mask on the street or another statistic in tomorrow's headline.

COUNTERPOINT

CAITLIN MCLAREN
1T CHEMICAL

As of June 19, it is now illegal to wear a mask while attending an unlawful assembly. The penalty for doing so can be up to 10 years in prison. Needless to say, this is highly controversial.

The controversy is mainly due to the fact that this is a law that deals with and restricts civil liberties, while at the same time involves protests and activism. Furthermore, the Bill C-309 is a pile of excessive buffoonery that will serve no useful purpose except create a hassle and increase already-great police powers.

In the first place, there is already an existing law, against "Disguise with intent" while committing a criminal act. The more astute readers will have no doubt observed that it is unlawful to attend unlawful assemblies. Thus, there are plenty of laws just waiting to prosecute ill-intentioned rioters. The only possible purpose Bill C-309 serves is to increase the punishment that can be dealt to such people, few of whom do much damage. Very few indeed commit crimes that in the ordinary course of things would lead to ten years of imprisonment!

If this law is to be strictly enforced, it will lead to many perfectly harmless people being imprisoned, costing taxpayers money and wasting police resources. If it is not to be strictly enforced, what on earth is the point? There is, however, one further option: it could be used specifically against protest leaders and other individuals whom the police consider to be an unusual threat, while in the meantime less high-profile activists will be tacitly ignored. This is in fact plain discrimination, and the worst option of the three in terms of civil rights.

Meanwhile, there are other cans of worms that this bill might open: that of religious head coverings. While the bill does specify that those with a "lawful excuse" may continue to cover their faces, how long before such an issue arises? Perhaps bigoted police officers will cause trouble when confronting people who wear such coverings. Perhaps non-religious protesters will use such provisions as a flimsy excuse while committing crimes, causing legal hassle and baseless accusations of discrimination against honest police officers. The law could easily cause trouble for everyone.

What is more, how will this law actually be applied? Perhaps Anonymous masks stand in clear violation, but what about face paint? If face paints are overly blatant, what about heavy make-up? Many members of subcultures, such as goths and punks, wear a good deal of make-up every day: perhaps not coincidentally, these types are commonly seen at protests. Suppose the police were grasping for excuses, say, sunglasses make people difficult to recognise. Would sunglasses now be illegal to wear at protests? Suppose protesters took to growing a beard or moustache before protests, and shaving them off afterwards? Or vice versa? These situations could be considered as instances of identity concealment, and under the new law, could be prosecuted.

What many people do not realize is that a peaceful protest becomes an "unlawful assembly" the moment the police say it is. The potential here for abuse of police power is astronomical. Imagine a protest against police corruption, or some police brutality scandal. With such a harsh punishment available for people who commit the crime of concealing their face, which in itself is completely harmless, think how easily police with something to hide could silence those speaking against them.

In fact, the police admit that this law is intended to make it easier to break up "potential" riots, and to pre-emptively arrest suspicious characters. This overly vague nonsense merely emphasises the fact that this is a law explicitly designed to arrest those who have done nothing.

Bill C-309 is a pointless restriction on civil liberties and a dangerous weapon in the hands of an unscrupulous policeman or politician. It does not serve to protect the public from danger, and it expands police power to an alarming extent. There is no reasonable justification for its existence.

Editor's Note:
Point Vs. Counterpoint is a feature meant to stimulate discussion on thought-provoking topics. The views and opinions expressed here do not necessarily reflect those of the authors, *The Iron Warrior*, or the Engineering Society.

Human Papillomavirus Vaccine Works

Doesn't Increase Incidence of Sexual Activity

NANCY HUI
3N CIVIL

The vaccine against human papillomavirus (HPV) infections has been found to be more effective than expected. A study published in The Journal of Infectious Diseases stated that since the vaccine was introduced in 2006, the incidence of HPV has decreased 56% among all, vaccinated and unvaccinated, females aged 14 to 19, including those who had not been vaccinated. Amongst vaccinated females, HPV incidence decreased 88%. Introducing the vaccine at a younger age prevents the virus from being passed through other sexually active people later on in life and lowers the incidence of certain cancers of the whole population in the future.

HPV consists of a group of 150 viruses, of which 40 can be spread through direct skin-to-skin contact.

HPV itself is usually not dangerous, since around 75% of men and women have HPV infections during their lifetimes, most of which resolve themselves and do not cause cancer. However, a few HPV strains such as HPV types 16 and 18 cause nearly all cases of cervical cancer and anal cancer. HPV types 16 and 18 are also responsible for half of vaginal, vulvar, throat, and penile cancers, and have been also been linked to oral cancers. HPV infections cause 5% of all cancers worldwide. However, it is important to apply Bayesian reasoning and remember that most HPV infections do not cause cancer.

Because of the high rate of prevalence and general harmlessness of the infection, STD tests do not usually screen for HPV. Pap tests can be conducted for females to identify lesions and cytologic abnormalities that may result because of HPV and progress into cervical cancer if left untreated. There are currently no FDA-approved tests to detect HPV infections in men. There is also currently no medical treatment for HPV infections, but precancerous lesions can be exised in various ways, such as through freezing, surgical removal, or with lasers.

Since it would be commercially unviable to develop vaccines that protect against all strains of HPV, vaccines are developed to protect against a few strains that are linked to cancer.

However, only a third of girls 13-17 have taken the full three-stage vaccine against HPV. This may have been caused by parental fear that vaccinated against a sexually transmitted disease would promote promiscuity among teenagers. But along with showing the decrease in HPV incidence, the study also found that sexual behaviour did not vary significantly between groups of vaccinated and unvaccinated females.

The vaccine was introduced to 11 year old girls in 2006 and recommended for boys in 2011. Unfortunately there is no data as to how many boys have received the vaccine.

There are currently two HPV vaccines available: Gardasil and Cervarix. Gardasil is covered by the undergraduate university health plan, and offered in Health Services for male and female students. Gardasil protects against HPV types 17 and 18, responsible for 70% of cervical cancers, and HPV types 6 and 11, associated with 90% of genital warts.

Human-centred Design and the Developmental Politics

ROB REID
EWB JUNIOR FELLOW

I like to say that anyone who's human is already an expert in human-centred design. We see around us many poorly designed products, processes, and organizations/structures, which I find really frustrating because all it takes is some empathy and humility to design well. Good designs lie at the intersection of technical feasibility, financial viability, and user desirability. As engineering students, we take courses looking at all three of these to some extent, but for most programs the emphasis is on the technical side. In addition, very traditional management structures separate "engineering" as the strictly technical part of a given task. Professional engineering ethics dictate a duty to society, and typically people would like to contribute personally to society as well, however this aim is constrained by the inability to do higher-level design.

The ideal human-centred design process, as used by the philanthropic arm of the legendary design house IDEO, has a few steps. First, qualitative research is used to get a basic level of understanding about different potential users. Then this research is synthesized to develop broader themes. Within this landscape, opportunities for solutions in different areas are identified, and specific products/processes are brainstormed (directly with users if possible). The best ideas are then prototyped and iterated upon to test assumptions made to overcome missing and imperfect information and interpretation. Finally, a design passes a tolerance and may be scaled up and deployed. Good processes don't end here, and the design continues to be monitored to influence similar designs in the future. Because the process relies heavily on user input and feedback and goes through real-world testing, if followed it produces something more driven by user needs than typical engineering ways of thinking. In my job at tech startup VOTOmobile.org, I'm constantly coming back with usability feedback to our software developers who have designed based on how the languages they use. If I get them to step back and look at the product from the user perspective, they understand me, but intentionally taking that point of view is not part of their daily work routine yet.

In addition to producing more desirable designs, human-centred design can also be looked at as a political statement. Governments forming policies based on recommendations from technocrats can easily be ineffective even if they made sense on paper. Designing from the user side forces technical decisions to be made in a different way, and thus changes the way the government works and thinks. For example, classic macroeconomic theory says that unemployment insurance creates disincentives for value-adding job-seeking and entrepreneurship, increases unemployment, and results in dead weight added to the economy. However, if you are designing something the address unemployment, looking at unemployed people and potential employers as users, you might design something different. You might realize that people are looking for access to credit and mentorship to start their own businesses, or that the social pressure to be employed is a stronger motivator to work than unemployment insurance is a motivator to not work. Whatever you found, it would probably be different than the simplified, clinical theories used by policy makers and would push the government somewhere new.

Although human-centred design is powerful, it is not without limitations. For one, it limits itself to what people will say they want. This is not always the best choice, as people have imperfect knowledge and might never anticipate that going in an unexpected direction could be beneficial. Secondly, the iteration process is similarly prone to finding local optima and will typically not produce a revolutionary redesign, even if it would be beneficial. In the end, human-centred design is just one lens to use a designer, but one that typically is ignored by designers who have been raised to believe they know more about what would work for their users than their users. In the development sector, this view is pervasive, and in addition to enforcing a damaging colonial mindset, also results in ineffective projects.

There is a project just up the road from our work and living space in Kumasi, Ghana. A sign tells us that USAID, WSUP, CARE, and WaterAid are responsible for the borehole and water tower the was put up to give people access to water. However, you can immediately see that they have overlooked the drainage system necessary after water is provided, and a filthy puddle persists in the middle of the road where the gutter crosses. From the perspective of someone living there (like me) who cares about not getting diseases and wet feet, I would want to give some feedback to USAID and friends, but they have not included any contact information on their sign. What is the point of the sign anyway? I don't even know who all these groups are or what they do. chainlink and razor-wire around the bottom exacerbated the fact that I now feel like I can't participate in the community, and toward these NGOs I feel distanced from and patronized, their water tower much higher than my house or any of the other buildings around. USAID even writes "From the people of America" on their projects, making me feel worse about not being American. In this situation, applying user-centred design to consider my feeling that I want to be involved in my community is quite revolutionary. External donors and NGOs fundamentally believe that they have better ways of doing things than they people they want to serve do (and they often do). It's a persistent tension in development, as Eric Dudley puts it "The very idea of doing good implies an us and a them. This is an embarrassment we cannot escape." Attention to my concerns of feeling like I have no voice builds ideas of indigenous sovereignty into the system, something that doesn't typically come with foreign development interventions, especially in Canada where domestic indigenous sovereignty is treated with such little urgency.

Human centred-design can offer valuable new perspectives, and presents a way of legitimizing grassroots concerns to traditionally exclusive structures. As engineers or as designers in other roles, I would encourage trying the process out. A great place to start is IDEO.org's Human-Centred Design Toolkit, available free from their website.

Texas Pro-choice Filibuster Barely Succeeds

JAMES MACLEAN
3A NANOTECHNOLOGY

As many may know Texas has a very large Christian population combined with being a Republican state, creating a very pro-life atmosphere. Despite this Texans have enjoyed access to abortions since Roe v. Wade. Republicans have introduced multiple bills in the past few years to ban or hinder the clinics. This month an anti-abortion bill, HB2, disguised as a health regulation bill was introduced. Its purpose was to create requirements for abortion clinics that were so hard to meet that the majority of the abortion clinics in the state would be closed from financial failure. Although Republican leaders have directly claimed these measures will make abortions safer, doctors have condemned the bill, calling the requirements proposed unreasonable.

For pro-choice Texans this bill would be a nightmare. Texas already has a high unplanned pregnancy rate especially among teens and those in poverty. Many are just ashamed that we still have to fight for the right to an abortion. However Senator Wendy Davis, a pro-choice Democrat took a stand on Capitol Hill to prevent these measures from passing. To do this without having majority support in the senate she performed an unorthodox move called a filibuster.

A filibuster is a loophole in the rules that allows a speaker to delay government proceedings. The rules vary depending on the situation but in this case a filibuster involved a person refusing to yield the floor by talking continuously often for hours until the end of the session so that there was no time for a vote to be made. However due to the physical and mental stress needed to successfully perform a filibuster they are quite uncommon. Admittedly the ability for one person to halt the progress of the entire government is somewhat anti-democratic, perhaps even deceitful. However in this case the Governor had called for a special session to pass the bill. Unlike a normal senate session in which two thirds of the vote is needed to pass the bill, this time Republicans only needed a majority. Wendy called this a "raw abuse of power" and responded accordingly with a nearly 13 hour long filibuster.

Thousands watched the situation online as the session came to a close Tuesday night. While politics is often dull, this was anything but. Wendy Davis stood for over 12 hours, talking continuously about abortion and how this law must not be passed. However, one catch is that she had to remain on topic or risk losing the floor and therefore fail the filibuster. As the day began to end, she received a third and final warning for being off topic around 11:30 p.m. and was forced to yield the floor. For the next half hour Texans and their supporters expressed anger at her removal and worried that the vote may pass. The hash tag #standwithwendy and "Let Her Speak" exploded over Twitter and Facebook. Those physically situated at the State Building were not content sitting by idly. By creating noise, distractions, and rushing into the room, pro-choice supporters were able to delay the vote until almost exactly midnight. The vote was called at 12:02 a.m., two minutes after the session should have ended. Lt. Gov. David Dewhurst immediately attempted to declared it legitimate and within the required time frame despite objection from Democrats. The next morning a review of the situation revealed that the vote was indeed after midnight and therefore illegitimate. Texas women and families are able to keep their right to abortion a little longer.

Unfortunately, Texas Governor Rick Perry has vowed to continue to push pro-life laws and has already called for a second special session to pass this same bill. In a special session only a majority vote is needed for the bill to pass and therefore minority democrats in Texas may not be able keep delaying restrictions on abortions. However this event surprised many Texans and the rest of the world with the number and energy of those in Texas supporting Wendy Davis. Although Republicans have dominated Texan politics for years, the Democrats are hopeful that things may begin to change.

Boycott of Lethal Injection Drugs May Force Use of Gas Chambers in Missouri

MICHAEL LAANVERE
3A MECHANICAL

Currently, pharmaceutical companies throughout the world are refusing to sell the drugs used in lethal injections to correctional facilities. This has caused shortages in many states and has caused most states to switch from a three-drug protocol to a one-drug protocol.

The standard method of lethal injection uses a three-drug combination: an anaesthetic (usually pentobarbital), a paralytic agent (pancuronium bromide), and potassium chloride which stops the heart.

Now many states have switched to using just one lethal dose of anaesthetic due to shortages of the other drugs.

The anaesthetic formerly used was sodium thiopental. The only US manufacturer of the drug stopped producing it in 2011 due to controversy over its use in executions. Sodium thiopental cannot be imported into the US because it is used for the purpose of executions which is unapproved by the Food and Drug Administration (FDA). This caused many states to change their anaesthetic to pentobarbital. Pentobarbital is the same drug used to euthanize animals. The manufacturers of pentobarbital have refused to sell their drug for executions and require all medical facilities who buy it to sign a document saying the drug won't be used for executions.

Lethal Injection Supply State-by-State

State	1-drug protocol?	Remaining Supply	Notes
Alabama	No	Unknown	Switch to pentobarbital caused executions to be on hold while courts review.
Arizona	Yes	Two executions	
Arkansas	Yes	None	Plans to use phenobarbital. No other state has used or has planned to use phenobarbital.
California	No	Unknown	Executions on hold due to challenge in courts
Colorado	No	Unknown	Executions on hold due to challenge in courts
Delaware	No	Unknown	
Florida	No	Unknown	
Georgia	Yes	None	Last supply of drugs expired March 1, 2013
Idaho	Yes	Unknown	
Indiana	No	Unknown	
Louisiana	Yes	Unknown	Executions on hold while courts evaluate 1-drug method
Mississippi	No	Unknown	Executions on hold due to challenge in courts
Missouri	Yes	Three executions	Executions on hold while courts evaluate 1-drug method. Only state that plans on using propofol, the drug Michael Jackson overdosed on.
Nebraska	No	100 executions	Nebraska imported Sodium Thiopental from India. FDA ordering them to turn it over. Nebraska refuses. Case is in Federal Courts
Nevada	No	Unknown	Executions on hold due to challenge in courts
North Carolina	No	Unknown	Executions on hold due to challenge in courts
Ohio	Yes	None	Last supply expired September 2012
Oklahoma	No	20 executions	
Oregon	No	None	Oregon sold all its drugs to a wholesaler after Governor vowed there to would be no executions while he is in office
South Carolina	No	Unknown	
South Dakota	Yes	Unknown	
Tennessee	No	None	
Texas	Yes	23 Executions	
Utah	No	Unknown	
Virginia	No	Unknown	
Washington	Yes	Unknown	Choice of 1- or 3-drug method
Wyoming	No	Unknown	

deathpenaltyinfo.org

The switch to a one-drug injection has caused lethal injections throughout the US to be postponed due to court challenges stating that the one-drug method constitutes cruel and unusual punishment. These delays are causing problems for states like Missouri because their dwindling supply of drugs are set to expire relatively soon.

Hangings, electrocution, firing squad, and lethal gas are secondary methods that can be used depending on the state in which the execution is being performed. The electric chair was last used in Virginia last January, firing squad was last used June 2010 in Utah, and lethal gas was last used in March 1999 in Arizona. The Attorney General in Missouri, Chris Koster, is now advocating the use of gas chambers, the only other allowable method in Missouri, for executions while the courts decide whether one-drug injections are legal.

Missouri currently has no gas chambers, its only gas chamber is now a tourist attraction. If Missouri decides to start using gas chambers they will have to build new ones. The table above illustrates drug protocols for executing convicts sentenced to the death penalty for those states which still utilize capital punishment.

Not Representing Students is Hard Work and You Should Too

SEAN HUNT
UNDERGRAD. STUDENT GOVERNOR

The last week has been a bit of a blur for me. Last Tuesday, at the meeting of the Board of Governors of the University, I set aside my role as a student representative. As is the duty of every governor, I made my decision on each matter before the Board in what I believed to be the best interests of the University. Accordingly, I voted in favour of the tuition increase effective this term.

In making that vote, I did not put any consideration into the measures that the administration had taken and would take to ensure that students were properly informed about the increase. I wish I had, because although I think that my final vote would not have been changed, I could have asked the administration more about their implementation plans and maybe have changed the way they did things. As it was, the fact that the increase was happening in the middle of the term went mostly unremarked.

Since then, there's been a flurry of activity as students noticed the new fees, got upset, and started talking about it. In a hurry, I decided to do an AMA (for Ask Me Anything, a form of open Q&A period) on Reddit on Thursday evening. I spent most of Thursday morning running around the University to get more information so that I could be sure I was giving accurate answers rather than just speculation, and then I spent several hours Thursday evening doing the AMA itself.

Being a student representative, even when you're not actually representing students directly such as at the Governor's meeting, is hard work. It takes a lot of energy to do a good job, and with a few exceptions — I'm not one of them — is entirely unpaid. I still have much to do: there are some follow-ups I need to make with students from the AMA and I, along with others, need to talk to the administration about the plans going forward to prevent this sort of thing from happening again.

As a student body, it is very important that we have representatives willing to stand up and take this time to work on behalf of their fellows. But somehow, this does not often materialize. Elections for senators and for Students' Council are often not elections but acclamations, because only one candidate wanted the job. At MathSoc Council this week, Council decided to affirm the statement made by the Federation's Students' Council on tuition increases without so much as a question asked. We owe it to ourselves to stand up and have real elections, real discourse, real debate, because if we do, then what will we say to the University will carry that much more weight and that much more force.

What do you do for your fellow students?

CHL to Ban European Goaltenders

ANDREW MCMAHON
3A ENVIRONMENTAL

The Canadian Hockey League (CHL) draft that took place last Wednesday was the last time that a European goaltender will be drafted to a team in the CHL. The league announced June 10 that goalies born in Europe would be ineligible for the entry draft starting in 2014, all goaltenders eligible for the draft in 2013 could still be selected and have the ability to play out the remainder of their eligible years in the league.

The CHL is comprised of three leagues: the Western Hockey League (WHL), the Quebec Major Junior Hockey League (QMJHL), and the Ontario Hockey League (OHL). The league gives players aged 16 to 20 from around the world an opportunity to develop their skills against other players the same age as them, and produces many of the players taken in the NHL entry draft. In fact, 13 out of every 18 players in the 2012 entry draft came from the three leagues. In North America, the league is something of a natural stepping stone in a young player's development and the league also serves as an alternative for European born players who don't want to jump straight from minor hockey into one of the men's leagues that the region is famous for. However this is no longer an option for European goaltenders, since the CHL recently made a decision to ban the drafting of European goalies starting in 2014.

The new policy is intended to benefit both the North American goalie system as well as the European system. The CHL is hoping to give more opportunities to homegrown talent as opposed to bringing over teenage goaltenders from Europe to play in the league(s).

Since 2004 there have been 52 European goalies taken in the CHL draft; of those goalies just 11 of them have gone on to play in the NHL, three of which have gone on to become starting goaltenders (Jaroslav Halak, Michael Neuvirth and Ondrej Pavelec), none of whom have won a Stanley Cup or a Vezina Trophy. What does all of this mean? There seems to be evidence that while a number of European goaltenders are playing in the CHL, very few of them are going on to have successful professional careers in the NHL. Today's best European goaltenders (Rask, Rinne, Backstrom, Vokoun, Varlamov, Hiller, Fasth) all stayed home and played in a men's league until they were ready to come to the NHL. This indicates the CHL's policy change may have little effect.

On a related note the NHL draft took place two Fridays ago, and it will be interesting to see how the changes to the CHL's goalie policy will affect the goalie market in future drafts. Despite all of the free agent signing madness that went on last Friday, let's not forget that teams were making trades on draft day as they jostled for positions in an attempt to secure the futures of their franchises. The Winnipeg Jets acquired Michael Frolik from the Chicago Blackhawks in exchange for a third and a fifth round pick. The Vancouver Canucks shocked much of the hockey world when they sent Cory Schneider to the New Jersey Devils for the ninth pick in the first round. The Toronto Maple Leafs acquired David Bolland from the Blackhawks for second and fourth round picks in 2013 and a fourth round pick in 2014. The San Jose Sharks traded a second round pick to the Penguins for Tyler Kennedy. The Islanders traded Nino Niederreiter to the Minnesota Wild in exchange for Cal Clutterbuck and a third round pick.

It will be interesting to see if the goaltending landscape in the NHL will be affected by this new policy that the CHL has put in place. As things stand right now, it appears that European countries will benefit from more of their goalies training and developing in their home nations and the North American goalies will benefit from the increase in opportunity to develop alongside premier talent in the CHL.

Introducing Mickey Mouse in Steamboat Willie!

JOSHUA KALPIN
2B SOFTWARE

THE SHORT SHORT REVIEW

Hello readers and welcome back to the Short Short Review! Just as a refresher, in this column I attempt to review a short film or story in a really short number of words. This week, I'll be reviewing the short film that features the first appearance of Mickey Mouse ever, *Steamboat Willie*, in 420 words, the length of the film in seconds.

Steamboat Willie was originally released in 1928 and not only features the aforementioned Mickey Mouse, but Minnie Mouse as well. The film is in black and white and is presented with no dialogue, as was consistent with most films of the period.

The film primarily focuses on Mickey, who is working on a steamboat that appears to be transporting a number of animals. The first half of the film mainly focuses on Mickey steering the boat, moving animals, cleaning and other boating duties. In the second half of the film, Minnie arrives and an impromptu jam session occurs on the boat with the animals and boat supplies serving as instruments. This plot is fairly simple, but the emphasis on music throughout already shows the telltale signs of more modern Disney films.

Speaking of sounds, the music in the film is spot on and incredibly catchy. The film opens up with what is now known as the "Steamboat Willie theme." You probably have heard this before in any modern Disney film in which Mickey whistles it. The sound effects and other music are also perfectly crafted and really allow the film to have a certain level of nostalgia.

In terms of look, it is very difficult to review a film like this because of its age. However, the black and white hand-drawn graphics pop and really manage to portray the emotion of the characters. It also is important to note that Mickey and Minnie in this film look very similar to the modern versions of the characters. It really tells how well drawn the film is, considering the design has lasted almost a century.

Overall, *Steamboat Willie* is a classic example of why Disney was and still is a tour-de-force in animated films. The plot is playful and entertaining. Furthermore, the music and look of the film are timeless, even though it was made almost a century ago. *Steamboat Willie* gets five whistling mice out of five for being just plain amazing. That is all for this week, next week is the last issue of the term and I will be reviewing something completely different once again. Stay Tuned!

(Bunches of) Highly Variable Bacon Recipes

CAITLIN MCLAREN
1T CHEMICAL

A HIGHLY VARIABLE X RECIPE

Everybody loves them some bacon! Crispy, tasty, salty… it's the perfect food. There are tonnes of things you can do with it — sandwiches and salads are just the beginning.

If you don't eat pork or meat, I'll be giving some alternatives. You have no excuse!

1. Popcorn: Drizzle the bacon grease over popcorn. Instead of butter, not in addition, you fool. Break up the bacon itself into little pieces and mix it in with the popcorn. Add salt and cheese to taste.

Alternatively, you can make sweet popcorn, using dried or fried apple and cinnamon instead of bacon. Syrup can replace the bacon grease — maple, Aunt Jemima's, or cough.

2. Bacon Banana Bread: Mix bacon in with your banana bread — Use your own recipe. Half a cup or so of crumbled bacon will be good. It may sound odd, but think about it, there is salt in banana bread and there is oil or fat. It won't be that odd, just a little interesting (and bacony.)

Alternatively, fry some bananas in a little salt, chop them up, and use them the same way.

3. Bacon Brittle: Like peanut brittle, except with bacon. Boil one part water and two parts sugar in a saucepan for 8-10 minutes. Stir in one part peanuts and a spoonful of butter, with spices to taste. At the same time, add in a few chopped-up slices of bacon.

Alternatively, use chocolate or candy, with a bit of salt.

If you don't eat peanuts, see above, but replace the peanuts with either sweets or a snack cereal. you can also use your imagination, there are dozens of things you can put in brittle.

4. Bacon and Date Appetizers: Quite simple, actually. Slit the dates open, and stuff almonds outside, and wrap them in uncooked strips of bacon. Bake the appetizers until the bacon is crispy. Voila!

Alternatively, use thin strips of sweet dough; buttery dough, like that used in croissants.

5. Bacon as a garnish: You can add bacon to anything. Literally. Crumbled bacon makes an excellent topping for cookies and cupcakes. Use it on a cake or like peanuts on icing. Bacon works really well when paired with maple; sprinkling bacon bits on top of maple icing is positively delicious.

I can also suggest the good old standby: maple walnut. If you feel like being weirder, you can use fake bacon; obviously, that goes for all of the above recipes.

Good luck, and happy bacon-ing!

Kickoff the Night with Scotch Tasting

GRAEME SCOTT, ERIC EVENCHICK, DEREK THOMPSON
BRITTER 4TH YEARS

GETTING GOOD HEAD

Good evening loyal readers,

This week we will not be talking about what we are drinking at the moment, which happens to be the Ammarone which we wrote about in article two, but rather what we drank a couple weeks ago, which is Scotch!

On June 23, Derek and Graeme had a grand adventure and took Bill's Distillers Edition Scotch Class, and it was [Spoiler Alert] wonderful. This class was intended to be a follow up to Bill's Scotch 101 class, which Derek and I were both unable to attend, luckily we have Kayla here, who did attend and can fill us in on what we missed.

Well that's two paragraphs down, WINE BREAK... and we're back.

The Distillers Edition class covers four Distillers Edition Scotches and provides background information into how Scotch is distilled, the history of distillation in Scotland, how Scotch is tasted, how to properly serve Scotch, which was all covered very briefly, as much of this was taught in depth at the Scotch 101 class. The course also covered the flavours of each of the Scotches in depth and how those flavours were developed in the distilling process.. For the price of only $25 we were rewarded with four Scotches, and learned a lot too, but less than what we would have learned if we went to Scotch 101. The trade-off here is that we did get nicer Scotch. All in all it was a surprisingly educational, tasty and delightful afternoon with one Bill Thompson (no relation).

The four Scotches which we tried were, in order: Lagavulin Distillers Edition, Caol Ila Distillers Edition, Oban Distillers Edition and Cragganmore Distillers Edition. All of these scotches were quite tasty, as we will get into later. A Distillers Edition is a Scotch which is taken aside by the distillery master after the standard aging time and modified for further aging as the distillery master sees fit. Of particular importance in this process are the cask, and environment in which the Scotch is finished, both of which can affect the flavour.

NOW, on to the Scotch!

The first Scotch we tasted was the Lagavulin Distillers Edition. The first thing to note about this Scotch is that "it hits you like a freight train." This Scotch has very strong smoky flavours which are very overpowering, however a nice underlying sweetness can be found as well, if you give it time. As we learned in class, the proper way to drink a Scotch is one drop at a time, and to allow it to sit in your mouth for ten seconds before swallowing, allowing all the flavours to fully develop. To properly drink two Scotch and smoke a cigar is supposed to take four hours. The Lagavulin in particular needs this to get the full flavour to come across. Also of note is a strong medicinal taste, which comes from the Lagavulin Distillery being on the south coast of the island of Islay, where the casks are aged in the sea breezes, which adds a considerable note of iodine flavour to the Scotch. All in all we give the Lagavulin 4.2 Surly Bartenders out of 5.

Next up is the Caol Ila, which was much lighter in colour than the three other scotches. The scotch itself was much less smokey and had some very nice milk chocolate flavours. While being somewhat bland in comparison, the Caol Ila was still quite nice, and would be particularly good for those who do not enjoy the smokier scotches. Derek pointed out that this would be a very nice scotch to enjoy on the deck of a cabin overlooking a lake, or a similar body of water. Overall the Caol Ila was very nice, but in comparison to the others we tasted it was somewhat less flavourful, particularly when it came to the earthier flavours. Overall, we give it 3.9 Surly Bartenders out of 5.

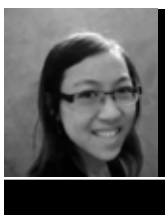
Now on to the Oban, by far the best of the bunch. This scotch had a very strong dark chocolate flavour with a nice hint of blackberry sweetness. Derek and I did not quite agree on the blackberry flavour, but Derek wasn't quite able to pinpoint a particular fruit flavour, and was more surprised at the "fruity flavour" of the scotch, so I'm sticking with blackberry. There was also a nice hint of smokiness to the finish of the Oban, but not nearly as overpowering as what we saw with the Lagavulin. This was by far our consensus favourite of the day both for it's rich flavours and it's mild finish, overall we give it 4.7 Surly Bartenders out of 5. Just great.

Last of all was the Cragganmore, which was far more complex than any of the other scotches we tried. It was definitely delicious, but it was difficult at times to pinpoint any particular flavours which contributed to its deliciousness. It was pointed out to us by Bill that several reviewers have found a "banana bacon" flavour to the scotch, which sounds ridiculous, but after tasting turns out to be somewhat true. There is a definitive banana taste to the scotch with a lighter smokey flavour, which the bacon, in banana bacon can be attributed to. Much of the scotches complexity comes from its finishing in Port casks. Overall, the Cragganmore was quite tasty, we just aren't completely sure why. We give it 4.2 Surly Bartenders out of 5.

Well gosh darn it, it looks like we're running out of space. Sadly, we cannot include everything we learned from the lesson in this article as we would run out of space. So we encourage you to, if you ever get the chance, attend a Scotch tasting at Kickoff, for $25 it is well worth the price for the Scotch alone. We give Scotch Tasting 5 Surly Bartenders out of 5.

Join us next time, where we will discuss the effect of our Fourth Year Design Projects on ourselves – Cheers.

R.I.P. Google Reader (2005 - 2013)



NANCY HUI
3N CIVIL

TAKE FIVE

On July 1, 2013, Google Reader died at the tender age of eight. It was a beloved RSS feed reader to millions, bringing light into their lives via personalized content pulled from all over the web. Best of all, you didn't have to share it with anyone else. It was the ADHD bibliophile's oasis.

Look, I know not a lot of people are going to mourn it, but I was devastated when Google announced that it was going to discontinue its reader. Even though I jumped ship to The Old Reader soon after, lest my beloved reader be wrenched from my fingers, Google Reader still holds a special place in my heart.

Anyways, here are five movies to watch in between your search for a new RSS reader.

The Internship (2013)

Vince Vaughn and Owen Wilson play two salesmen who are laid off from a wristwatch company when the company president realizes that people now check their cell phones for the time. They ambitiously apply to become Google interns to avoid having to work dead-end sales jobs at senior homes and mattress warehouses. Amazingly but expectedly, they are hired for the summer and compete with a bunch of bright-eyed, bushy-tailed students half their age to gain permanent positions.

Did you know that Google did NOT pay for the product placement in this movie? Director Shawn Levy just has a thing for the Silicon Valley giant, famed for its free food and creative floor plans. But if Google had known this would be the finished product, they might have paid to be removed from the movie. Not because *The Internship* is not a bad movie, but because of the lack of originality. In structure, it resembles an underdog sports movie: a group of misfits coming together as a team, overcoming inexplicable prejudice from the competition, finding the meaning of life, etc. It's *Dodgeball*, just with nerds instead of pirates. Be prepared for two hours of bootlicking.

The Social Network (2009)

Google killed Reader because of the spread of social networking. This wasn't entirely unexpected since Google had been coddling its own dear social network for ages: Google+. Remember the fuss and disappointment when that was opened? The problem was that Reader didn't fit into the social creature template that Google was trying to become to compete with Facebook, Twitter, and the like. Unfortunately, the way content is consumed in Reader doesn't lend itself well to sharing. I don't want anyone to know about all the makeup blogs and webcomics I read each day, and nobody cares about that either, so boo. Anyways, *The Social Network* is about how Mark Zuckerberg (Jesse Eisenberg) came to create and operate Facebook while screwing his best friend over, smoozing with the founder of Napster (Justin Timberlake), and becoming an asshole so not to get himself mistaken for Michael Cera all the time.

Supposedly, the factiousness of this film is limited to the accuracy of replication in Zuckerberg's sweatshirt wardrobe, but I still found *The Social Network* to be as arrogant and brilliant as Eisenberg's character. Make no mistake: none of the main characters come off in a good light here, especially after things get dirty and lawyers wade into the undergraduate chaos. Regardless, it is an excellent movie that allows you to look both up to and down upon the players that brought Facebook to life.

The Poseidon Adventure (1972)

Like rats on a sinking ship, Reader users fled in March 2013 when Google announced its imminent shutdown by exporting their feed data to different readers. Feedly, another RSS reader, had 4 million users before Google announced the shutdown. By the end of May, Feedly had 12 million users. My own alternative reader, The Old Reader, buckled under the influx of new users and had thousands-long queues of users trying to import their data for a week.

It's New Years Eve on a cruise ship, when a freak wave flips the ship after a round of "Auld Lang Syne". While the sheeple huddle in the inverted dining room, a small group of survivors slowly traverse the soggy ceilings to escape the sinking ship. Of course, the dining room finally bursts and the ballroom guests try scrambling up aluminum Christmas tree ladders, which collapse under their weight.

The survivors in *The Poseidon Adventure* are distinguished by their ethnicity or profession: the preacher, the retired prostitute, the Jewish couple, and so on. They invariably run into obstacles that thin their numbers. Heroic sacrifices are made. The plot pieces are extremely predictable and thus extremely relaxing.

The Pirates of Silicon Valley (1999)

In the seventies, Steve Jobs (Noah Wyle) and Steve Wozniak (Joey Slotnick) are at UC Berkeley. Jobs also has a beard. Bill Gates (Anthony Michael Hall) attends Harvard. They tinker with computers, frolic through psychedelic fields, and build empires. Naturally, some things and people are going to get overlooked in the technological revolution. The revolution is about pretty GUIs, shapely cases, and Ridley Scott's Apple commercial. Nobody cares about DOS or Google Reader.

In contrast to *The Social Network*, the persons portrayed in *Pirates of Silicon Valley* found their portrayals to be true beyond their wardrobe choices. Bill Gates found that his "portrayal was reasonably accurate" and Steve Jobs stated that Noah Wyle had done "a good job" of impersonating him. But this is no documentary. The movie plays out like a horror show: Gates and Jobs both exhibit ghastly manners throughout, ranging from frat boy antics to egomania, while Wozniak narrates as a tired spectator in a Hawaiian shirt. One never fully connects with any of the characters as the film jumps from amusing anecdote to amusing anecdote. Perhaps life is stranger than fiction, but with this movie, it's hard to believe.

The Red Planet (2000)

What happens when a planet is no longer able to support human life? You look for a new one, terraform it, and inhabit it. The same applies to RSS readers; you test as many as possible and tweak them to be as close to Google Reader as possible... but if it doesn't live up to your standards, discard it. Unfortunately, planets aren't as easily accessible as readers.

In 2056, humanity has pushed a dying Earth to its ecological limit, so the nations of the world have been terraforming Mars by seeding it with oxygen-producing algae. When the oxygen levels drop inexplicably, a team of scientists, including two played by Carrie-Anne Moss and Val Kilmer, are sent to the Red Planet so that they can rectify the situation.

NASA was asked to serve as the science advisor for this movie but, after reading the script, concluded that there was nothing they could do to ensure scientific accuracy. This allowed the director to do things like call beetles "nematodes", which aren't even part of the insect family. However, that is my biggest complaint about this movie. It's formulaic, yes, but there are a few interesting setpieces: an astronaut when his oxygen is about to run out, and an astronaut devoured by the ravenous indigenous life on Mars. The Red Planet is a solid, if unmemorable, B-movie.

Top Colours — Six Summer Classics

WADE WILSON & EDWARD BLAKE
4Z HANDSOMENESS
TOPZ (WITH A Z)

With the dread of midterms finally ending, the dread of getting back marks... wait, we already did this one last week. It is obvious what this week's topic should be then: A physicist will tell you colour is the representation of the visible spectrum of wavelengths between 400nm and 750nm. A biologist will tell you colour is a perception of sensory information from the cones in our eyes interacting with photons. An American will tell you "they have no idea, do you mean 'color?'" Also something about gun rights, football, and bald eagles. This week, we at Topz (With a Zed, that means "Zee," to you 'Murkans) are taking a look at the best colours which will have you changing your wardrobe faster than you can see "Synesthesia!"

6: How eyes glimmer at just the sight, having us lusting for more with every glance. When we are home alone, we don't wear pants.

5: Even without cleaning the wax from your eyes, this colour will have you stop and fantasize. Under the right weather conditions, we like eating pies.

4: Planting a seed in your cornea that flourishes into your mind, relaxing your body like a gentle breeze is what you'll find. Also, likely causing brain tumours, did you think it would be more kind?

3: Under your skin and slowly sliding across your body, causing many goosebumps in a lifetime. I fear choking with no reception of aid, when I dress as a mime.

2: Sitting at the edge of your seat at this point, you may pause out of confusion. This is likely a result of your eyes being too ignant to comprehend the complexity of such a colour, something that rhymes with "confusion."

1: Through the process of elimination, intelligence such as yours has probably figured out what colour is numero uno (that is "number one" for our 'Murkan readers). Many don't realize that door hinge rhymes with orange.

The beauty of colour is one we cannot represent well (if you disregard CIELAB colour space specified by the International Commission on Illumination and focus on the CIE 1936 standard instead). Even without a good representation, colour has a great deal of influence, inspiring many poets throughout time. Roses are red, violets are blue, drinking too much coffee, makes us want to poo.

1

2

3

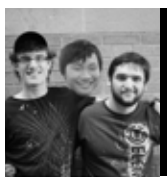
4

5

6

Bands, Brews, and Bad-Asses

White Paint, ...Like Clockwork, Yoshimi Battles the Pink Robots, Back in Black



DYLAN, DODGE & CODY
2B CIVIL
3A ENVIRONMENTAL
2B NANOTECHNOLOGY

Let this stand as a testament of a most ambitious quest: to gain the opinion of three engineering students on music and BEvERageS.

First up, Golden Pheasant. An exceptionally smooth Slovakian Lager, Dodge describes the sensation as "a rich feeling of rich barley butts exploding in your oral cavities." Dylan took a different approach, "rich with the feeling of separation, with just a hint of hops." Everyone agrees there is almost no after taste, and it is of such good quality that no one wants to finish it quickly.

After seeing Hollerado on Monday and picking up their newish album for cheap (it's also signed, be jealous), we figured it would be perfect for a review. It starts off with a very low-fi, Bon Iver feel, but gradually changed pace to a more rhythm centered indie-pop sound, much akin to Foster the People. The tracks "Desire 126" and "Too Much to Handle" are perfect examples of this sensation. Also, the song "So it Goes" was inspired by the decency of a German soldier who spared Menno's grandfather's life during the Second World War. While discussing this, the argument changed to formatting and citing sources. I personally hate formatting, so my stance was ignoring all of the above. Continuing on with the album, Hollerado's tune changes once again to a more progressive feel, but never veers far from its alternative/indie-pop center. The final track is "Pick Me Up," a beautiful song that is the perfect way to end the album, with up-beat guitar riffs and a wonderfully lyrical vocal line.

As cliché as this may sound, the drink of choice perfectly matched the music, providing a nice, light atmosphere perfect for relaxing and discussing. But this article isn't about relaxing, so moving on.

Oh god, now we're onto politics. All I know is that I'm not under the influence enough to really care about this, so I'm staying out.

...Like Clockwork by Queens of the Stoneage starts off with a dark, somber song that is driven by the bass. This song has a very experimental feel to it, different from classic Queens of the Stone Age. The album overall follows the experimental trend, with the band trying out different sounds and feels in different songs. Now we reach Cody's favourite song, "Kalopsia." "Kalopsia" is defined as the delusion of things being more beautiful than they are. I'm not sure whether it's the BEvERages or the music, but this song does seem quite beautiful. The song is initially a slow ballad, before growing into a strong grunge sound. It fades back though, and very much enjoys changing its tone. Dodge isn't a big fan of this song. Cody enjoys the contrast compared to the classic Queens of the Stone Age sound, since this entire album feels much more melodic and emotional than the old style grunge, riff powered music. Upon reflection, we noticed that the title of the song is too perfect, as the lyrics are so disjointed and strange, that they show a different light of the song when analyzed. Dodge is, however, a fan of "Smooth Sailing," a very riffy tune with a rhythmic groove, drawing you in immediately. Dylan now has a favourite on the album as well, the song "I Appear Missing," a slow-moving, bass-driven ballad with extremely memorable lyrics sang in Josh Homme haunting falsetto. The ending of the album cannot be explained, as it is one of the most heart-wrenching pieces of music ever experienced. Just listen to this album – we somehow sat through the entire thing, saying nothing.

Just Hollerado being gorgeous

The second beer is Pure Gold. Like actually, it is called Pure Gold, by Tuborg. Imported from Turkey, it is encapsulated in a can of gold. And by that, I mean that it is a normal aluminum can with gold paint. Anyways, this beer has a very soft taste to it. It starts out with a sweet, light taste, and then fades. It has a classic lager smell, so the obvious expectation is to have a fair aftertaste. This beer doesn't though. Rather, it has a very slight sweetness to it, very similar to the initial taste. Cody is looking forward to the next one, and I do not disagree. While not bad, this experience is nothing special. Later on... "Holy mother of Thea & Freyja, this beer doesn't end!!! I just want this madness over!!"

A life lesson for everyone: don't mention quantum mechanics to Nanos. Even now, this is making rather little sense. I'm not alone however, for Dodge is also confused by what Cody is saying. When it comes down to it, quantum mechanics to non-Nanos looks like this: fgbalidhfldiufhlia (this should actually be about 500 pages longer – Cody.)

Alright, new BEvERage, new album, new writer. The Dortmound native DAB is our new contender, and this is the first time we all agree: this drink has almost absolutely no taste in the beginning. However, it also has a slightly stronger aftertaste compared to the previous two contenders. This "fact" was further validated by Peter, who makes his first guest appearance as someone who is not blinded by the common substance contained in these drinks. Oh, in terms of the album, it's alright. *Yoshimi Battles the Pink Robots* by The Flaming Lips, according to Cody, it's a typical Flaming Lips album: very experimental, and very melodic. Another description includes mellow, but uplifting, at certain sections of songs. As the album progresses, the melodic nature of the band really starts to appear before the listeners' ear. We are only on the first half on the album, and there already have been four instrumental interludes, which goes to show the focus of this band on melody. Also, half way through the drink: this "mound" of something still tasted the same, which is nothing at all.

So we've hit the point where everyone feels the need to show mathematic proofs. This is the reason why engineers under the influence are hilarious.

I've always had an opinion about German / Eastern European BEvERages: I believe the reason they all taste really light is to allow the consumer to drink a lot more and have the reputation as a "drink drinker," as they have now. The others are saying sure, but I seriously doubt their belief in my impaired intellect. That being said, even though it has a very light taste, the kick is well-hidden and full on, so when you do try them, do not be fooled, you will feel heavy-headed very quickly with their 5% - 5.5% content.

Here we go. Big finish.

For all you haters out there, we're ending it off with *Back in Black* by AC/DC and Czechvar. First song, boom. One of the most influential guitar riffs ever, "Back in Black," smacks you like a big, wet fish. Yeah, my vinyl is a little off, so the next track is "You Shook Me All Night Long," but whatever. It starts, we all air guitar and start singing. We look like complete idiots, but honestly, you would look like an idiot here if you didn't. It might be the BEvERageS talking (I just decided this joke was funny again), but I [redacted] love this band. "Have a Drink on Me" and "Shake a Leg," two more awesome tunes that are just pure rock in your nuts which are just generic AC/DC and pure awesome. Nevermind, apparently I'm just an idiot and didn't realize how the album is actually set up. So what?? THE BELLS!! It's like the Tool is entering my apartment!! Also, side note, this is the second best-selling album worldwide, over 50 million copies. Yeah. What up. "Hells Bells" is just phenomenal. 'Nuff said. Now, "Shoot to Thrill," that tune off *Iron Man* which is just pure rock and roll. Don't really have much to say about the rest, as it's just more balls to the wall, straight in your face, rock. Love it.

Arguing about *Hancock* and *Now You See Me*, they apparently have the same ending, Hollywood really needs to rethink its stuff. Also, Dylan has officially lost all my respect. Ask him why.

Now to the Czechvar. "It has a nice aftertaste that slowly fades, but retains the flavor through the entire experience." I'm going to assume that means Dylan likes it. "Flavourful and memorable," or so says Dodge. Overall, it's just a really nice taste that isn't at all overpowering, with a sweet aftertaste. Delicious.

In conclusion, this quest has appeared too large for just one article, and thus shall be continued in subsequent issues. Hope you all have had fun, and maybe learned something along the way. I know we sure have.

The Iron Wordsearch

Waterloo This Week

FARZI YUSUFALI
3T NANOTECHNOLOGY

P Z A P O Y A G I M M I C K E Y M O U S E A M O U W R S L E Z H G O M
F T T M K J N X P X H W I K I P E D I A Z A K A B E N N E L A J O X Z
Y R C C X U M I E C X H S S D Q Y X V U U W C G D S C Q U M U L A R I
Z B O M A X R V T Z K A K Z A N O Z H O B X G I A X V D R A U I L A A
C A P O P U I N R E P U B L I C A N B S G B R I V E B B O Y M K T C H
X V Y V O N E S A I N T A W J C S M R N P P Z W G O Y Y P E W Y E Z U
F H W S M D Z B E T T F T C I P S W A O O B S R U A S B E M P W N A R
A G S U U J I Z Y X U T Q R K U M M Z W A Q C N R T B I A H W M D E F
S I L T C K A L M F K C U Q R Y R E I D H R O L D A S I N T Z X E R N
M A S S P T N V O K Y M P I A B P E L E J M T D U O O H T X D L R G Q
M M C D D R R L D R F J V J X P Y J D N I F C P I R A T E S D H S L C
K H O H O E O I O S E A V S U I A S L D Y R H C U N O G E Y O Y P P V
C L R B D L B T T P M Y A A J N T I R A I Z Y E A I L D K G R B O V H
B L L A E F L J E O D A C P H T E G N I T T O H G G A R I O H H M L K
O D E Z O A Y A L S B M C B N E Y Y S T P W G J M Y D V C S S C W R G
J R M G S A T L R E T U I X C R X F Y Y B M L X M S P D O P E O F I E
M M B V M I I I L S Y S N Y E N X L P N P A F S T O I T O E N A G Y N
Y K G G S P R N F H Q J E J W S W Q P K Q T L C V V B H H Z K I S V I
B D R U A M N X F I R E X D H H H G I K P M O L A Y C H H Z F L F E T
I Q E P Q P N Q T P C X B L I I P S P C V A U D Z P E N G U I N S R A
C C Y E Q U O B A W W A L I N P X O S T F S A D N E S S Z Y P N R Q L
Y U P Q G R T M V S B V T C Y D G O N F M U N E M P L O Y M E N T B W
C K H X X P D H C M K Z L I W K K E V Q B B N H D J E F F S H L N R A
L I P J B L V O U H O K S I O S M M D T I Y G O O H I I D Y S V B A R
E D W L H E B A J P Y D A P J N U J A R W Y A L W D D E Y M E J J N T
X T E F Z P A L Q O Z D A X L T E O X H K T P L Q P F T A G X U D D S
O X K O G A C J E R A W G L N U B U E W O L F E H S X X T O Q Z Y I P
N C S S W L O T V N G J O A I M Y M X K V M F R N U E Q W L J R W N I
H K E L E O N U A T B O U R A T X L I G R E Z A B L V Q R F M D K G W
P F B N A O N C A Z Z Q O E D T Y D L H Z S P D J V T I W L G F V M P
K R X U D Z W P G Q G U T G Q M U K J Z C S X O B M I C U J V J B W H
C E T K M A X Z X G Q S Q L L B A M K E A E C F I L L I B U S T E R J
M A S K X T Z O Q E C G V I C E M R J R I K O R R Z Y A N Z S Q U Z C
Y W P V S E X M C V P K K D N M S U K J P O L I T I C S A P G G K L D
E N G P L A Y C G G Q M K K O N J V D G M P K S W Y Y W K Q G A K N M

Disease
Sadness
Vaccine
Branding
Beatification
Reader
Penguins
European
Chop shop
Scotch
Golf
Quantum
Reddit
Purplepalooza
Papillomavirus
Protests
Unemployment
Gigabit
Alumni
Bacon
Goaltenders
Mickey Mouse
Mask
Engplay
Genital Warts
Exams
Student
Fillibuster
Whiny
Bicycle
Missouri
Modality
Snowden
David Cory
Steamboat
Dollars
Saint
FedS
Wordmark
Pride
Grey
Politics
Canada
Google
Internship
Brazil
Murica
Pirates
Ghana
Republican
Hollerado
Paintball
Egypt
Wikipedia

Sudoku

#2013-09

FARZI YUSUFALI
3T NANOTECHNOLOGY

Easy

		4			7			
1		6			9			
9			5	4	6	7		
	9	7		3				5
			2		4			
6				7		8	4	
		9	8	1	3			7
			7			3		2
			4			9		

Medium

9				2		1		4
		4	6	3				
	1							6
7			1		9		4	
1			8		4			2
	4		3		2			9
8							9	
				1	7	5		
5		2		8				1

Hard

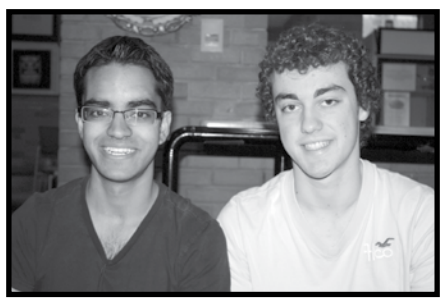
9								
1		5		6		2	3	
	8		3	4	5			7
	9	3			6			
		1				3		
			1			6	7	
3			7	5	2		6	
	5	9		1		7		8
								3

Solutions for previous crosswords can be found on *The Iron Warrior*'s website at *iwarrior.uwaterloo.ca/distractions*.

THE IRON INQUISITION
Lucas Hudson, 3A Mechatronics

"You must flee the country; where do you go and why?"

"England, back to my roots"
Mary B., EngSoc Business Manager

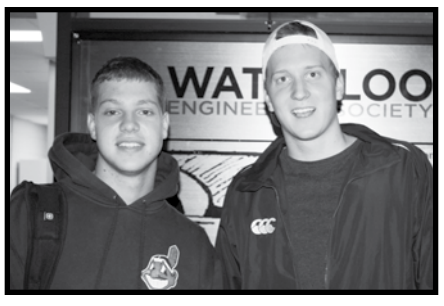


"Madagascar, hardest to infect with a pandemic"
Ali V. & Graham B., 1B Systems Design

"Tanzania, can't be extradited, chill with lions"
Peter M., 1A 'Q' Engineering

"Hide myself in a colony of giraffes"
Alex W., 3A Mechanical

"Greenland, because if Canada falls, the world is ending"
John C., 3A Chemical



"Under da sea"
Derek S. & Matthew M., 4A Electrical