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Iran's Missile Tests Highlight Internal Political Divisions

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Iran tests ballistic missiles, says they are not capable of carrying a nuclear warhead

CAITLIN MCLAREN
3T CHEMICAL

In recent weeks Iran has conducted two tests of medium-range ballistic missiles. These missiles were test-fired from northern Iran towards targets 1400 kilometres to the south. As these provocative actions took place weeks after the implementation of the controversial Joint Comprehensive Plan of Action (JCPOA) regarding Iran's nuclear program, there are many around the world who find this deeply worrying.

While the missile tests on their own are troubling enough, Iranian media reported that the missiles were painted with a message stating that "The Zionist regime should be wiped from the pages of history." This was originally a quotation from the Ayatollah Khomeini, the late leader of the Islamic Revolution, and was notoriously repeated by former President Ahmadinejad.

Brigadier General Amir Ali Hajizadeh was quoted by Iranian state media as saying that the missiles would have sufficient range to hit targets in Israel. However, Iranian news source Khabar Online quoted him later as clarifying that the missiles were for defensive purposes only. According to Iranian authorities, they are meant to show Iran's "deterrence power." Furthermore, the Iranian government emphasizes that these missiles were conventional weapons and not capable of carrying a nuclear warhead.

The distinction is indeed important. UN Resolution 2231 "calls upon Iran not to undertake any activity related to ballistic missiles designed to be capable of delivering nuclear weapons, including launches using such ballistic missile technology." If these missiles were capable of carrying nuclear warheads—and some say that they are "inherently capable" of doing so—then it would be considered a violation of the JCPOA. However, as Iranian Foreign Minister Zarif pointed out, "It doesn't call upon Iran not to test ballistic missiles, or ballistic missiles capable of delivering nuclear warheads ... it calls upon Iran not to test ballistic missiles that were 'designed' to be capable." Zarif argued that Iran has never used missiles offensively.

This blatant sabre-rattling, coming so soon after the monumental implementation of the JCPOA, underlines the rift between fundamentalists and moderates in Iran. There was great controversy over the deal in Iran, with some conservatives believing that Iran was capitulating to the West by agreeing to reduce the nuclear program drastically. However, the deal had widespread support in Iran, and moderate and reformist candidates made great gains in recent elections. Thus, it is likely that hardliners—who hold a great deal of power—are making these displays of strength and defiance in order to undermine the cautious and incremental improvements in Iran's relationship with the rest of the world. These people are highly skeptical of the West and are worried that Iran will be damaged by foreign influences. There have been open disagreements between these factions and President Rouhani's more moderate government.

At the end of February, Iran elected a new Parliament and Assembly of Experts (the body that chooses the Supreme Leader). While most of the more reformist candidates were disqualified, a coalition of moderates and reformists has performed much better than expected; in fact, in the capital city of Tehran, none of the 30 parliamentary seats went to conservative candidates. The conservative Islamic Revolutionary Guard, who carried out the missile tests, are under the control of the Supreme Leader and not the president. The current president is popular and likely to be re-elected. Meanwhile, the current leader Ayatollah Khomeini is old and himself says that he is unlikely to live many more years. Because of the success of moderate candidates in the elections, there is a possibility that his successor will be less conservative, and that these factions may lose some of their current status in the future.

While the responses from the West have been strongly worded, political consequences have been minimal. On the other hand, there have been many calls for increased sanctions from officials around the world. The situation is politically controversial, with many criticizing President Obama for the relatively mild response. There are suggestions, mainly from Republicans, that U.S. officials are afraid to jeopardize the recent nuclear agreement by being tough on Iran, and that Iran is testing the waters and may violate the JCPOA in the future. Thus far there have been no additional sanctions or other substantial consequences to Iran, either from the UN or from America.

The political situation in Iran is delicate, and Iran's relationship with the West, particularly the United States, is a highly partisan issue on both sides. In America the presidential elections are dominating the news; it is common knowledge that the result, which is impossible to predict at this time, will have a drastic effect in American official attitudes towards Iran. What is more, besides Iran's recent elections discussed above, there will be another presidential election next year. Plus there is likely to be a new Supreme Leader before long. Thus, in the near future, the political landscape of both countries is likely to change. Hopefully, saner heads will prevail.

Engineering Loves Arts!!

RAEESA ASHIQUE
EDITOR-IN-CHIEF

Hello readers! Welcome to issue four in this home stretch of the term. I know how busy school gets around this time, so thank you to all the IW staff who still made time to write articles and copy edit. Special shoutout to Cameron who wrote more than his quota of articles for this issue! (By the way, I don't actually give him a quota of articles. Regardless, he delivers above and beyond expectations, every time.) We had a fun time filling white space on Sunday night.

As always, if you have comments, questions, or concerns regarding anything you read here, feel free to send a letter to the editor at iwarrior@uwaterloo.ca. We would love to hear from you!

I have actually been planning this particular editorial for months: the topic I am about to address has bothered me since starting university, and I am so glad to have this opportunity to express my opinion. And of course, by "express my opinion" I really mean go off on a rant, although this is different than my previous ones in that it hits closer to home. Side note: I should change the header of this page to "Rant from the Editor" to maintain accuracy.

We hear so many interesting things in Waterloo Engineering: gg, get rekt, Darude Sandstorm, they don't want you to win, no respect for Arts. I do wish this last one wasn't included, but it's definitely a thing. Feel free to come to my class and ask anyone what they think of Arts. Or Math or Science or any other faculty, for that matter. You may be shocked by the responses you get.

I certainly was.

I lived in V1 in first year. In 1A, our building was slightly more diverse than 1B in the summer: some of the stream 8s living on the third floor were studying Math. But the first and second floors of stream 4s were almost exclusively home to Engineering girls. To be specific, there were three non-Engineers. Once, in the first floor lounge, I heard this comment by a student from an adjacent building: "I can't believe you have Arts kids living in your building! I feel so bad for you! I would kill myself if I had to deal with that."

This was a very extreme unnecessary "that escalated quickly" twist on the hate that is sadly so normal. I don't understand why it matters that a girl from the Arts faculty is sleeping in a room down the hall. To look at the bigger picture: I don't understand how we can completely lack appreciation for other areas of study. In frosh week, we are taught that "Engineering loves Arts", but do we actually?

This comment really bothered me, but when I was telling my friend in U of T pre-law that IB kids have nothing on engineering students' superiority complex, she responded with, "I know I'm smarter in my field, so let them think whatever helps them sleep at night." She obviously doesn't even find it worth caring about. If that isn't condescending to the engineers who think the world is in awe of them, I don't know what is.

I think the reason I can appreciate Arts is because I am very Arts-minded. Engineers have a very different way of thinking, which became so apparent it was laughable within the first two weeks of the term. I am taking a mandatory Ethics for ECEs course this semester, and the discussion of "if the most ethical decision satisfies the most stakeholders, then shouldn't we be able to determine the ethical decision by counting many people is benefited?" and "but aren't opinions based in fact more valid?" made it very clear that the participants were thinking like engineers.

There is nothing wrong with that: they think like engineers, they are engineers, they will be good at their job, and everything adds up. The problem arises because they do not realize that Arts kids can think in a way that we generally don't, but ignorance isn't an excuse.

Let's address some of the problematic phrases heard commonly amongst engineers.

"Arts don't get jobs."

First of all, who's guaranteeing you a job? We always talk about it's hard for Nanos or Chems to find relevant co-ops, or for Computers to get into hardware. Besides, every case and every area of study is different, and we can't generalize that they will all be unemployed.

"It's easier to get high marks in Arts."

This one makes me laugh. If Arts was so easy, then why aren't you in Arts? Let me tell you why: it's because most engineers are not good at Arts.

Like I said earlier, Engineering takes a certain way of thinking, but it isn't necessarily transferrable. Sure, we are supposed to be logical, analytical thinkers. But analytical in an Engineering context is different than analytical in an Arts context.

I still haven't taken an elective, but I suspect the attractiveness of a CSE depends primarily on a minimal writing component and the ease of receiving a high mark. So before you say that Arts are easier, I would like to see you take a legit Arts course and not just an easy CSE. Then let me know how stupid everyone is and how much fun you had (trying) to write a paper.

"No respect for Arts."

How is that a thing? How can you claim that an entire faculty is not worthy of respect? How can you judge when you have no idea what you're talking about?

Yes, Arts kids have less hours of class than we do. Maybe (some of them) can't code or solve differential equations. Again, we have to be careful not to generalize. Just as there are arts-minded Engineers, I'm sure there are mathematically-inclined Arts students. Besides, does a more flexible schedule imply that they are less intelligent than us, or unworthy of respect? Of course not.

In Engineering, everything is a competition. There is an outlook that we must be smarter if our life sucks more.

We like to complain about how we pay double the average tuition, we like to screenshot our schedules (not necessarily so we know when to go to class, because this is generally a matter of showing up to class at 8:30 and not moving for hours. I for one don't know my schedule), but so we can show it off to others. We like to complain about how many courses we're taking and how many labs and generally how much time we spend in class. We like to brag about how much our life sucks. And in ECE, we like to believe that our lives suck more than everyone else's. I'm just as guilty of this as the next person.

Yes, we do pay double the average tuition, and we do spend twice the average number of hours in class. But being busier doesn't mean that we are better.

We have a problem with making strong and grossly unfounded generalizations about all other programs when there are so many reasons why people enter a chosen field or attend a particular school. Every story takes more than a one word answer to fully appreciate.

I have had the "I don't know what I want to do with my life" conversation with so many Engineers. It may seem that being in a professional program guarantees a particular career path and smooth future, but considering we can enter any level of related or unrelated technical or non-technical work, the future looks more like a black box. So many of us have yet to discover our passion, so how can we hate on somehow who without a doubt knows what they want in life?

I want to use two of my highschool teachers as examples.

First of all, teachers get a lot of hate because "those who can't do, teach" (which I think is very unfair) and because of its minimum post-secondary schooling. But to be honest, this is true with engineering as well. I know a lot of people who went into engineering because it's five years—although the joke is on you if you thought it would be an "easy" five years—and you're out with a piece of paper proving you're employable. How can we hate on other people for doing this?

That wasn't supposed to be my point.

My high school Biology teacher was incredibly smart and super enthusiastic about the material he taught. I remember often sitting bored in class and wondering how he could be so excited, especially considering he was covering the exact same slides with several classes back to back. And on top of that, teaching the same material year after year must get old, no? Apparently not. I could not understand it, but points for passion.

My Grade 12 IB English teacher in Grade 12 had a different type of passion. She loved working with young adults, having discussions, and helping us learn and grow as writers and analytical thinkers. She is a teacher because she loves being a teacher. How can you hate on someone who so obviously loves their work?

Passion always deserves respect.

Note: 1. I realize that my pronoun use is very inconsistent. I am, in fact, in Engineering. I just don't always "think like an Engineer". 2. I don't like generalizing, but I have yet to find more than a couple Engineers who don't hate on Arts.

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Earth Hour: A History

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4B ENVIRONMENTAL

Earth Hour 2016 occurred this Saturday between 8:30 and 9:30 p.m., marking the 9th anniversary of the tradition. It began as an initiative from the World Wide Fund for Nature (WWF, formerly the World Wildlife Fund) in 2007, and has since spread across the world. That year, 2.2 million locations (businesses and homes) shut off non-essential lights in Sydney, Australia. With growing public interest in the issues of climate change and the preservation of the environment, it's become a widespread and tangible way to participate in awareness efforts.

By 2008 it had become a global movement, riding the momentum of the world 'going green' and becoming 'eco-friendly'. The events in following years would include major national landmarks around the world going dim for the hour in question, joining the millions of commercial and residential locations doing the same. While the event is meant to be a symbolic effort rather than an actually significant reduction in energy consumption, it has decreased the use of electricity by about 4% every time.

It has received much criticism over the years for being ineffective, pointless, and sometimes downright dangerous. Some argue that is symbolizes a regression away from human development (electricity being a huge victory for our species), others point out that the rapid shifts in electricity demand during the hour, as well as the candle-burning, might serve to actually increase carbon outputs. Furthermore, streetlights that were turned off in Finland may have contributed to a fatal accident in which a man was struck by a vehicle on a darkened street.

It's an event that, while more prominent years ago, seems to have lost some participation in the past years. This isn't necessarily a bad thing, however, as it reflects a general increase in energy conservation in everyday life. In 2011, WWF suggested that we extend such conservation efforts to our daily lives, and, based on the reported reductions in overall energy consumption, the public has taken it to heart.

While it's more likely that most of us didn't know it had happened, or otherwise chose not to observe (we have lives to live and work to do), it's not improbable that many of us have, at one point, turned out our lights for that hour. Whether it's going for a walk, or breaking out the candles, it can be used as break time away from our technologically-reliant work time. In any case, the photos and videos of nighttime scenes and sometimes entire skylines going dark are kind of cool to see.

Russia Withdraws Military Contingent from Syria

Putin Times Move with Reopening of Peace Talks in Geneva

RAEESA ASHIQUE
2A ELECTRICAL

Saturday marked the fifth anniversary of the Syrian conflict. What began as a peaceful protest demanding political reform in March 2011 led to a bloody conflict and subsequent civil war, killing over a quarter of a million civilians and creating Europe's biggest refugee crisis since World War II, displacing almost half of its population.

UN backed peace talks both began and were suspended in early February.

Bashar al-Jaafari is the UN ambassador leading the Syrian government's delegation. The opposition is represented by the High Negotiations Committee (HNC), a Saudi-backed coalition, and led by Mohammed Alloush. The Kurds in northern Syria are not formally represented, as the Kurdish political party PYD was not invited to participate, although the UN says they wish to expand the number of groups in attendance as negotiations proceed. The northern fighters are also not represented at all.

Peace talks reopened in Geneva last Monday, March 14, led by UN special envoy for Syria Staffan de Mistura. The topics of concern were forming a new government and constitution in Syria, conducting an election, and coming to a compromise on the status on President Bashar al-Assad.

Conflict arose by day three. The opposition was prepared to meet face to face, but Jaafari rejected the idea of direct communication, calling the opposing team a "terrorist Saudi delegation headed by a murderer". Senior negotiator Alloush has been deemed a terrorist by Russia and Iran.

It was always uncertain as to how productive these negotiations would be, as they have always failed in the past. However, Russia's surprise withdrawal may be a push in the right direction.

Russian President Vladimir Putin's announcement that, having largely achieved their objectives, Russia would be withdrawing most of its military contingent from Syria coincided with the reopening of negotiations. The first group of Russian planes left Hmeymin in Syria last Tuesday, March 15. Syrian representatives, including Jaafari, are adamant that this decision is of mutual agreement, as if to discourage the assumption that the allies are not getting along. "We were not surprised because the decision was made in coordination and consultation with us," says Bouthaina Shaaban, Assad's senior advisor. "We knew beforehand that this is what was going to be announced because the Russians came here to achieve certain jobs, and we and they agreed that most of the jobs have been achieved." Russia goal was namely fighting terrorism, although critics believe their real intention was to help Assad eliminate his opposition, especially considering there has been so much bombing of civilian areas.

However, Putin was very clear that Russia air forces would continue to carry out air strikes against ISIS and other terrorist groups, would retain a contingent of military bases in Syria, and will return if the need arose. "If necessary, literally within a few hours, Russia can build up its contingent in the region to a size proportionate to the situation developing there and use the entire arsenal of capabilities at our disposal," he said.

Russian air strikes began late last September, and to date have killed about 2000 rebel fighters, including seventeen rebel leaders. The number of Russian soldiers on the ground in Syria is not known, but American estimates suggest 3000-6000.

This political move is ambiguous is many ways.

What exactly does it mean that Russia is withdrawing its military contingent? In theory, air strikes should cease accordingly. However, just this Saturday, March 19, Russian air strikes occured near a national hospital, former army base, and other neighbourhoods in the ISIS-held city of Raqqa, and air strikes continued on Sunday. At the time of writing, the death toll has risen to 55, of which most are civilians. This may have been an anti-terror move, but the evidence that the air strikes hit residential areas in "one of Raqqa's most congested streets" suggests otherwise.

Mohammed Alloush has commented on Russia's withdrawal: "By saying they can return to Syria within four hours, it is clear it is not really even a partial withdrawl… They said they were targeting terrorists but really they were targeting civilians. Even when they target Raqqa, as they did this weekend, they target civilians. A war like this cannot be won from the air."

Other countries are also very uncertain as to what Putin is trying to achieve with this surprise maneuver, although Putin has said, "I hope today's decision will be a good signal for all conflicting parties. I hope it will sizeably increase trust of all participants in the process."

Donald Jensen, a former US diplomat who worked in Moscow, told Al Jazeera, "I think Russia is committed to keeping him in power. There are conceivably circumstances where they'd throw him under the bus. But in their own mind they are fighting for a principle, which is a sovereignty of nation states from outside intervention.

"However, I think this action is also sending a message to Assad that 'you still depend on us', and I don't think the Russians have been particularly happy with Assad's reluctance to talk to the opposition."

One can hope that this will put pressure on the Syrian government to reach some sort of agreement with its people. Opposition group spokesman Salim al-Muslet sounds optimistic, believing that a lack of Russian presence will decrease crime in the country, and says that Putin "should put pressure on Assad to accept [the] outcome" the peace talks.

Still, negotiations have been slow going for many reasons. As stated earlier, the parties are unwilling to speak face to face. The opposition delegation has says they will assess the effectiveness of indirect peace talks at the end of this week, and decide whether or not to continue with the current process. De Mistura has optimistically said that the system has allowed talks to continue "with no walk-outs, no excessive rhetoric, and no breakdowns."

But there is a very strong disconnect between each party's desired outcome. The current issue is the question of Assad's fate, and de Mistura will have to be very cautious to ensure that peace talks do not collapse. He has called political transition "the mother of all issues", but has not directly addressed the question of Assad.

The opposition believes that Assad can have no part in a new transitional body, but Jaafari says they are using talk of removing Assad to "sabotage this round" before it begins. He believes that political transition and Assad's fate are "two separate issues".

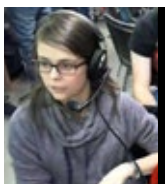
The US and other western countries have always agreed with the opposition that Assad must depart from power, while Russia and the Syrian government obviously believe otherwise.

This controversial question was the reason UN peace efforts failed in 2012 and 2014.

Reuters via Al Jazeera

UN special envoy for Syria Staffan de Mistura reopens peace talks in Geneva

A Brief Laydown on the US Elections



MEAGAN CARDNO
3T NANOTECHNOLOGY

For all of the hubbub and jokes about the United States election filling social media and all over the internet, it's somewhat expected that we too should discuss the recent political events going on with our neighbours to the south. Just a few weeks ago, we saw the passing of the so-called "Super Tuesday" of the election, which has some people worried for the poor United States's options in the upcoming presidential election, as the options (for some) appear to be choosing between the lesser of two scary candidates.

For those unfamiliar with the American election system, all parties (in particular the two forerunners in the Democratic and Republican Parties) must have their presidential candidate chosen in so-called "Primary" elections in each state. Super Tuesday represents the date when the largest number of states hold their primary elections simultaneously, thus representing one of the most significant days for presidential candidates to secure their party's nomination, as only one candidate gets support and funding from their respective party.

The Democratic Party (comparatively left-wing to the Republicans) currently has two candidates that are vying for the presidential candidacy, Hillary Clinton and Bernie Sanders, whereas the Republican Party has the options of Ted Cruz, John Kasich, and the nigh-on infamous Donald Trump. However, the relevancy of John Kasich and, to an extent, Ted Cruz and Bernie Sanders is dwindling each day, partially due to how the American system works.

In American politics, a "delegate" is the term used to refer to the persons in each of the National Conventions (Republican National Convention and Democratic National Convention) that vote upon their desired representative. They are voted for at a local or state level with the idea that they will support a given candidate at the time of the National Convention. However, they are not in fact bound to vote for this candidate at the time of the Convention, thus leading to some rather complicated interpretations of the numbers indicating the 'delegates' in support of each Presidential Candidate.

As of the writing of this article, of the 1237 Republican delegates needed for the Republican nomination, Trump currently has 678, while Ted Cruz has 423 and John Kasich sits at only 143. With 1049 delegates remaining to support a particular party member, it seems almost certain that Trump will be gaining the Republican candidacy unless there is some extremely incredible upsets and change of votes in the Republican delegatation. However, some political voices suggest that this is not as uncommon as one might think; the prospect of the wildly right-wing Trump could prove worrisome for the Republican Party come Presidential Election day, as he would not likely be winning over many of the swing-voters that they will need to persuade in order to win.

Even more of an upset would be if Clinton does not win the Democratic Candidacy, with 1614 delegates to Sanders' 856. Of course, this does not account for the fact that 467 of these delegates are so-called "super-delegates", not the traditional "pledged-delegates," meaning that in reality they are not even required to indicate their preference for one of the delegates. So good luck interpreting the numbers in actuality because technically speaking the nominations could go completely differently than these delegate numbers suggest.

The entire idea of looking at 'polls' as predictors of delegate choice and election results is heavily flawed. Looking at the results of current Primary Elections heavily favours more right-wing party members (in this case, Clinton and Trump) as it is primarily the right-wing southern states that have already conducted their primary elections. In addition, it does not account for the difference in results based on voter turnout; while a 100% turnout is never expected, abnormally high or low turnouts can skew the results of elections greatly. This goes hand-in-hand with the effects of media portrayal of polls in regards to voter action—predicting a landslide victory for one side can lead to a sense of defeat in the opposing side's supporters, thus resulting in low turnout rates for that side in what might have been a closer election than forecast.

With this in mind, while it seems very likely that Election Day 2016 will be Clinton vs Trump, it's not entirely set in stone just yet. With the right (or wrong) influences, the results of the Primaries may turn out entirely differently than expected.

The Canonization of Mother Teresa

SEAMUS BANNON
1B NANOTECHNOLOGY

Mother Teresa is a name that has become synonymous with goodwill and charity across the world in recent times, and while this association can be attributed mostly to popularity, its roots can be traced back to the nun's medical aid work in India. As of September 4th, Mother Teresa will be officially recognized as a saint in the eyes of the Holy Roman Catholic Church. This announcement came from Pope Francis after approval of the second miraculous intercession by the soon-to-be-saint in December, which is the last step to the road to sainthood.

An exhaustive and lengthy process, the canonization of a saint can only begin after the candidate has passed away, which in the case of Mother Teresa was in 1997. Once suggested to the local bishop, a review is conducted and the candidate will be ordained the title "Servant of God". If deemed holy enough, the cause for canonization will be sent to Rome and a more comprehensive review will be conducted, and with the approval of the Pope, the candidate will gain the title "Venerable".

If the candidate's cause has progressed thus far, there are only two more curious steps. The first of this is a documented and proven miracle that has occurred after the death of the candidate, and the second is another miracle after the recognition of the first. According to the Catholic Church, these miracles are evidence of the candidate being in heaven. While not necessarily required to be medical miracles, they almost always are. Each miracle is scrutinized by theologians, scientists, and skeptics under the conditions that the miracle be instantaneous, lasting, and unexplainable so as to prove without a reasonable doubt that they are a result of heavenly intercession.

Now that Mother Teresa has completed the process and will soon be canonized, her life will be appreciated as one marked by sanctity and loving—a life worthy of imitation. However, while the church has agreed on her holiness, a quick Google search will find some compelling evidence to suggest otherwise. The nun is most well known for her care of the poor and the sick in India and other third world countries, opening over 500 missions across. In reality however, the management and practicality of her work is much bleaker.

Mother Teresa accepted money from Haitian dictator Jean-Claude Duvalier and many other questionable characters, and while they were charitable donations, only small amounts went to funding her missions. Studies from the University of Montreal and the University of Ottawa found that patients under Mother Teresa's care were often subject to malnourishment, lack of hygiene, and inadequate medical care. Ironically, one could suppose it a miracle that anyone got healthy in one of her hospitals. These decidedly unholy facts put a stain on the nun's canonization.

Regardless of this problematic legacy, the message being conveyed should not be forgotten. The church is honouring an image of benevolence and care with the hope that others will be inspired to care for those less fortunate. Thus, with good intentions but more than likely damning practice, Mother Teresa will become the newest recognized saint of the Catholic Church.

By Manfredo Ferrari under CC BY-SA 4.0 via Wikipedia

Mother Teresa to be granted sainthood

The Hermit Kingdom Launches Ballistic Missile

DONOVAN MAUDSLEY
2T MECHANICAL

The Korean peninsula has been in the news a lot in recent years, tensions flaring up every few months between the government in the North, and the allied United States and South Korea. The Korean War, which originally divided the two nations, was halted in 1953 by an armistice agreement instead of a peace treaty so the two are still technically at war. Since the armistice there have been numerous clashes across the Korean Demilitarized Zone, many of which have been deadly.

The isolation of the Korean peninsula dates back to the 14th century, when most of the Eastern Asian countries had similar policies. Korea was even named "The Hermit Kingdom" after dominant Western Powers moved in during the 19th century for trade. Japan annexed Korea in 1910. When they were defeated during the Second World War Korea was temporarily split into Soviet and American territories similar to the arrangement in Germany.

Cold war tensions between the two eventually grew into the full scale Korean War, with both sides backed by their allies. After a crushing defeat the North Koreans fell back in on themselves. Their leader, Kim Il Sung, forged a theory of self reliance that still persists to this day. After China resumed relations with the West, and the fall of the Soviet Union, Korea stood even more alone than ever. Throughout the 90s relations with the South started to warm, but fell apart again when George W. Bush included them in his Axis of Evil. Around 2003 North Korea withdrew from the Treaty of Non-Proliferation of Nuclear Weapons.

Moving into the present day of information technology, we don't really know much that goes on within the North Korean borders. Strict government monitoring and general lack of internet access means that normal citizens are unable to really interact with the outside world. Instead of the general internet, North Koreans have access to a government controlled intranet, with basic news and weather information as well as an email and wiki service. This lack of communication has led to multiple claims by the government that haven't been substantiated.

All of the recent issues with North Korea have been in relation to their nuclear weapons program. In late 2006 North Korea announced that they had conducted their first successful nuclear weapons test. Seismic evidence reports support this claim, and it has generally been accepted. Since then they have been constantly expanding their nuclear arsenal and have continued weapons and missile tests. Outside reports and evaluations have confirmed at least four successful warhead tests.

Most recently the North Koreans claimed that they successfully tested a hydrogen bomb. This is a concerning statement for the surrounding nations, as a hydrogen bomb remains the most powerful explosive weapon in history. The claims surrounding the weapon detonated don't fall in line with earlier reports of hydrogen weapons, producing only around 8% of the power of the Tsar-bomb (the largest hydrogen bomb ever detonated). The North Korean test took place in February of this year and since then tensions have been running higher than ever along the DMZ.

The UN Security Council has been very vocal with North Korea about their missile program. Along with insisting that they stop their warhead tests, the UN has also issued statements telling them to cease launching satellite tests, but the launches have continued. North Korean continues to issue statements that they have intercontinental ballistic missile capabilities, but this also hasn't been supported. Their space program is the most practical test that they have conduct with respect to intercontinental missiles. With respect to intercontinental ballistic missiles, the sensitive piece of hardware needed to successfully launch an attack is re-entry sensors and deployment capabilities. These systems ensure that the missiles will deploy when they need to. On February 7th of this year they successfully launched an observation satellite. Reports of the level of success have varied, with NASA stating that it is tumbling uncontrollably out of orbit, and the Korean Committee of Space Technology stating that it was operating perfectly. Just another case of North Korean secrecy.

So far most of my discussion has revolved things that the North Korean government has done, and why it acts this way.

The global community does not have many ties to North Korea, and as such the UN does not have many ways to influence the attitudes of their government. International relations can be a balancing act, with very little falling in between asking nicely and a fully fledged war. One of the methods commonly employed is the economic sanction, which is a restriction on trade or economic transactions placed on a country by one or more other countries. Sanctions can also be placed on organizations and companies, or individuals.

Economic sanctions are commonly employed by larger, more powerful countries on their less powerful trading partners. The UN also frequently uses them to get their way. The use of economic sanctions date back a long way through history. Their most prominent modern use is the United States Cuban embargo, started by President John Kennedy in the 60s. Sanctions have a wide array of uses, such as forcing governments to cease hostile actions or even improving living conditions for their citizens.

The North Korea government has a very long list of sanctions that have been placed against them, mostly for violating the UN treaties on nuclear weapons and their general lack of democracy. Countries and groups which have place sanctions against Pyongyang include the United Kingdom, Switzerland, Australia, New Zealand, Hong Kong, Japan, Singapore, China, the United States, the European Union, the United Nations, and even our home and native Canada.

The success rate of economic sanctions is a delicate topic. Any sanction placed has the chance of negatively affecting the imposing country's economy as well by limiting the available markets for investment. Through varying the definition of "success" by small amounts, the percent of successful sanctions can change as much as 30%. North Korea really shows no sign of slowing their research now, even though the United States and United Nations recently imposed even more sanctions. The nation has been isolated for so long that the recent sanctions must mean almost nothing to them.

I finished writing this article a few days early, but I needed to come back and continue it. Last Friday, March 18th, North Korea tested another ballistic missile. Firing into the sea, reports estimate that their latest attempt to reach the US mainland made it about 800 km into the sea, a lot less than the 9200 km between Pyongyang and Los Angeles. The recently imposed sanctions have not changed North Korea's stance on gaining the power to pre-emptively launch a nuclear strike.

While researching for this article I learned a few cool things about Korea. My favourite of these is that the DMZ between the North and South borders is the world's largest unofficial nature reserve. It is believe that many species which are endangered or extinct outside of the approximate 1000 km2 live on within the DMZ. The South Korean government recently filed a petition with the Man and the Biosphere Programme to have the area south of the demarcation line and a large section of private property declared a biosphere reserve, but this was opposed by Pyongyang and was eventually turned down. North Korea is also home to the world's fourth largest flagpole, which comes in it at an impressive 160 metres, and only 10 metres shy of the world record.

Awards and Volunteering Next Term

ADELLE VICKERY
PRESIDENT

Before I start my update, I would like to take the opportunity to congratulate this year's P&P award winners. The Paul and Paula Plummer Award is the most revered award of the Engineering Society. It is presented at GradBall, usually to fourth-year students who have demonstrated an outstanding level of commitment to the Engineering Society and engineering student life throughout their years at UW. Last weekend, I had the honour of presenting this award to amazing members of the Society who have had an immeasurable impact on the lives of Waterloo engineering students. Leila Meema-Coleman (past VP External and President), Kevin McNamara (past VP Finance x2), and David Birnbaum (past VP Finance, President, EngFOC, WEEF Director) received the award on A-Society, and Allyson Francis (past President and FedS Senator) and Kristina Lee (past VP External and CDE Chair) received it on B-Society. To the five of you, thank you for your hard work and dedication, and congratulations.

Now for my update:

This term is quickly coming to a close (much faster than I would like to admit) which means that the Society is already starting to prepare for the next term! This article is going to be about how to get involved in the Society and the opportunities available for the Fall term. There are multiple opportunities available at UW, from the Engineering Society, student teams, the Federation of Students, and many other student organizations. Getting involved on campus is a great way to gain skills and balance out the academic side of being a Waterloo Engineering student. Extracurriculars help to develop valuable skills that are transferable to both classes and co-op, such as leadership, communication, project and time management.

If you're interested in getting more involved in the Engineering Society, there are a lot of opportunities coming up for the Fall term! If you have any questions or want more information, please email me at *president.a@engsoc.uwaterloo.ca*.

Directorships

The Executive team recently selected our next commissioner team. I'm excited to have Peter Keiller, Celine O'Neil, Arianna Skirzynska, Calvin Kwok, Steven Jia, Jared Gour, and Mariko Shimoda as part of the team for the fall term!

Now that we have our commissioners, we are going to be looking for our next group of directors. Directors are the student volunteers that run all of the events and services for the Society. They work closely with the commissioners and the executive to organize every aspect of an event or service and to try to improve the Society.

Applications for directorships are open right now! A list of all available positions and their full descriptions can be found on the EngSoc website, *engsoc.uwaterloo.ca*.

Executive Positions

In the Fall term, A-Society will be running an election for the next executive team. There will be 5 positions available: President, VP Academic, VP Finance and Operations, VP Communications, and VP Student Life. Executive are responsible for their respective portfolios as well as the general vision and managing of the Society. The structure is going to be different from the one currently used; full descriptions of the positions can be found at engsoc.uwaterloo.ca/society/elections. Nominations will open in September and the Executive are always happy to answer any questions from potential candidates.

If you have any questions about available positions discussed in this article (or the many others that aren't!), please feel free to send me an email (*president.a@engsoc.uwaterloo.ca*) or stop by the Orifice in CPH 1327.

MARCH-ing Through the Term

SARBAJOY MAJUMDAR
VP INTERNAL

Hello A Soc, it is your friendly VP Internal Sarb here. We are halfway through March and we still have a few more events left in our calendar. Let's see what has been done so far, as well as what we have left for the term.

Past Events

Genius Bowl happened on March 9. We had a massive turnout of 20 teams, and the teams were a mix of engineering students from different years. It was one of the best advertised events from the term, and we have obtained a great event marketing strategy and checklist that I hope to implement in all my directorships starting next term from the director of the event, Yugue Chen (2020 Civil). We had some minor issues here and there, but all-in-all it was the largest Genius Bowl we have seen in recent times. In the meantime, we are thinking about changing the name of Genius Bowl for future terms, so if you have a name suggestion for the event (besides "Candy Toss") please do let me know.

Next, we had a great LAN party that was organized by Sameer Chitley (2018 Software) on March 11. The event was well-run and we had gaming enthusiasts from within the community show up for the event.

I am also hoping to look into other kind of events EngSoc may offer in the fall to help ensure we can provide events for everyone.

TalEng also happened on March 15. Credited with great marketing strategy, Daniel Harrold (2019 Chemical) stood juggling in the CPH Foyer in hopes of attracting people to come to TalEng. We had a good number of performers show up, and we had various talents such as jugglers, a band, musicians and a stand-up comedian who performed. We also had Jeff Gulbronson perform a stand-up routine (to which I made no contribution). Talking about TalEng would be incomplete without the mention of the wonderful MC of the night, Kevin McNamara (2016 Civil).

Future Events

We will have a coffeehouse, happening on Wednesday the 23rd after the last council meeting of the term. After that, we will have some arts events, EngProv and EngiQueers happening. Lastly there will be EngPlay and our EOT event happening in the last week of the term.

Find Me

If you have any ideas for events we should do, or would like to talk about what your favorite events were or just want somebody to talk to, email me at vpinternal.a@engsoc.uwaterloo.ca or visit me at the Orifice (CPH 1327) on Thursdays from 9am-11am or whenever you see me in the Orifice. Also feel free to stop me and say "Hi!" whenever you see me in campus or elsewhere. I don't bite! (Seriously...) All the best for the remainder of the term.

Yay Charity Things!

OLA SUCHON
WILL WILMOT
VP EXTERNAL

National Engineering Month (NEM) is all about promoting engineering as an exciting and rewarding discipline. As National Engineering Month progresses, we've been busy reaching out to the community in a variety of ways, one of which is by raising money for charity.

One of our NEM events that focused on outreach in the community was CANstruction, which took place two weeks ago. A group of dedicated volunteers built a UFO structure entirely out of cans and non-perishable food, which is being donated to the Waterloo Food Bank. This was on display, along with many other can structures, at Conestoga Mall. Unfortunately, the displays have since been taken down, but if you're interested in seeing any of the structures feel free to check out the CANstruction website!

Pi Day, which took place on March 14 of course, was one of our NEM events as well, and brought together a lot of different people over their mutual love of pi(e). The day consisted of free pie, the option to pie your friends in the face, as well as NEM patch sales. The NEM logo, aka the giant goose wearing a hard hat that is in CPH foyer, has been rather popular lately so we have gotten patches of it made! During the entirety of March, these patches will continue to be on sale in the Orifice, with all proceeds going to charity. After NEM, any remaining patches will be available in Novelties, so be sure to pick one up before they're all gone! Between donations for pie, and patch sales, Pi Day managed to raise $250 alone!

The charity we have been supporting since the beginning of September is water.org which works to provide clean water solutions in developing parts of the world. Our goal for the Winter 2016 term was to raise $1500 as a society to go towards this cause, on top of the $1500 raised by B-Society in the Fall term. Our directors have been working hard all term on a range of events from Charity Pancakes to Change for Change Week to Pi Day, and our current total is over $1700! Thank you to everyone for helping us surpass our goal! Stay tuned for an update on the final numbers at the end of the term, as there is still time to make our contribution even bigger!

As always, if you have any questions, don't hesitate to email *vpexternal.a@engsoc.uwaterloo.ca*

Matt Jones

The UFO structure for CANstruction and the team that built it

Insert Bad Programming Joke Here

JEFF GULBRONSON
VP EDUCATION

Hello again, and welcome to the second last issue of the Iron Warrior of the term! I'm sure everyone's busy wrapping up the term, so I'll keep this update short and sweet.

Career Fair

Two weeks ago, we held EngSoc's third ever career fair in E5. We had 9 employers, and about 250 students at the event. At the beginning of the term, I had set a goal of having twelve employers, and 250 students. While we didn't meet both goals, I'm happy with how many employers were interested in returning for our next career fair in the Fall. I'd like to give a shout out to Channa Potter and Eric Shi, who were two phenomenal directors, and helped make this term's career fair the best that EngSoc has run so far.

Services

As this term winds down, we're starting to look for our Fall 2016 directors. Like it was this term, the Student Services Commissioner (SSC) position will remain under the VP Education portfolio. If you have an idea for a workshop you'd like to see run, or want to run one yourself, just send me an email or stop by the Orifice. If it's something that other engineering students would find useful/interesting, I'll do my best to make it happen for the Fall term.

Course Critiques

By now, you should have completed your course critiques for the term. As you've hopefully noticed, the faculty moved them online while keeping the questions the same as past terms. Because it's a new system, both EngSoc and the Faculty would love to get student feedback. If you have any comments on how either the questions are worded, or how the critiques were sent out, please send me an email at *vpeducation.a@engsoc.uwaterloo.ca*

Wrap up

I'd like to take this opportunity to thank all of the directors and commissioners for the Society this term. Without you, we would not be able to offer the events and services that we do. To those of you who are looking to get further involved, I encourage you to apply for a directorship (and read Adelle's article). Good luck on exams, and I'll be back for one more issue before the term ends.

Out With The Old, And In With The New

ABDULLAH BARAKAT
VP FINANCE

Hey Everyone! Hope you are all doing well! As things are ramping up with all the deliverables for the term, I thought I would deliver to you an update on how finances are going (super exciting, right?):

RidgidWare

As of now, RidgidWare officially has Square! The new Point of Sale system is now up and running in RidgidWare and things are getting exciting! Along with all the new inventory that we are getting, now keeping track of inventory will be made so much easier. Also, credit cards will now be accepted in RidgidWare, thus giving students another option for payment. RidgidWare as a whole has been on a roll this term, and will only get better moving forward. Definitely keep an eye out for any updates with regards to RidgidWare!

Novelties

As the title of this article states, out with the old, and in with the new! A big focus this term has been increasing sales in Novelties, and I would like to think it's been pretty successful! We have managed to sell out of a lot of our swag, and now with increased funds for Novelties, more new items can be pursued. It will be a big focus of mine moving forward, and with collaboration with B-Society over the summer, I believe that we should be able to get Novelties into great shape by the end of the year!

There will be a Fire Sale on Tuesday, March 29th to sell more of our swag before the term is over so that we can start from scratch! More will be sent out on that soon!

Student Deals

So now that our deal with Baba Chicken Grill has been confirmed, we are currently in talks with other potential sources of student deals! EngSoc has been in talks with a recent Waterloo startup company that has reached out to us about a potential deal; since no words have come about what the deal may entail, more information will be given once an agreement has been made. Furthermore, places like Pita Factory, Shawarma Plus, and Burrito Boyz have expressed interest in a deal, so we are currently in talks with them about it. More to come in my final IW article at the end of term!

Budget

As the term is wrapping up, the term's budget seems to be in a good state. I am expecting us to reach our approximate budgeted net total, which is fantastic! Things will be finalized once all events are over and once all expenses have been paid for, but things are looking good!

That is all for now, but do come visit me in the orifice during my office hours (Wednesdays 12:30pm - 2:30pm), or shoot me an message at *vpfinance.a@engsoc.uwaterloo.ca* if you have any questions, comments, or concerns about anything under my portfolio, EngSoc as a whole or if you just want to chat. Stay Awesome Waterloo!

WEEF Update

ERIC SHI
WEEF DIRECTOR

WEEF has officially reached a principle of $14,000,000. This is another big milestone for WEEF and it couldn't have happened without the support of its members. This term, WEEF will again be spending $60,000 towards improving undergraduate labs, getting state of the art educational resources to students, and funding several student teams. The final allocations will be announced later this week. To get the latest news about what WEEF is doing, visit our website at *www.weef.uwaterloo.ca* and follow us on Facebook here *http://bit.ly/25bUSdI*

Many aspects of such a well-established student endowment fund makes WEEF one of the best things going for the undergraduate engineering students here at the University of Waterloo. It would be difficult to say that WEEF is anything less than the best (and largest) endowment program for a Canadian engineering school. How many other programs provide $60,000 each term to improve the student experience? Between student teams and individual student initiatives, and the faculty and support staff projects, there are WEEF stickers going up across the engineering faculty and other engineering involved departments showing where WEEF has been able to make a difference to students. Student teams bear the mark of student supported equipment and tooling; labs contain institution and industry leading equipment for students to learn the hands on skills required to be a successful graduate. all with a WEEF sticker close bv.

Upcoming Events Calendar

Wednesday March 23	Thursday March 24	Friday March 25	Saturday March 26	Sunday March 27	Monday March 28	Tuesday March 29	
Potluck Council Meeting 5:30 PM - 8:00 PM Coffeehouse 8:00 PM - 10:00 PM, POETS	EngProv 5:00 PM - 6:30 PM, POETS	Good Friday			Charity Pancakes 8:30 AM - 10:30 AM, CPH Foyer NEM: Closing 5:00 PM - 7:00 PM	Director Appreciation Night 6:00 PM - 8:00 PM	**Check out up-to-the-day event postings on the EngSoc website at *engsoc.uwaterloo.ca/event-calendar/***
Wednesday March 30	**Thursday March 31**	**Friday April 1**	**Saturday April 2**	**Sunday April 3**	**Monday April 4**	**Tuesday April 5**	
EngPlay 7:00 PM - 9:00 PM	Emoji Pillow 11:30 AM - 1:30 PM, RCH 308 Spots are limited	EOT 6:00 - 10:00 EngPlay 7:00 PM - 9:00 PM	EngPlay 7:00 PM - 9:00 PM		Charity Pancakes 8:30 AM - 10:30 AM, CPH Foyer		

Point Vs. Counterpoint

Will Automation Replace All Jobs?

POINT

CAMERON SOLTYS
3A MECHANICAL

Since the start of the Industrial Revolution in the 18th century, technology has been advancing fast. It allowed, for instance, the textile industry, previously a labor-intensive task of manual weaving, to be automated by giant machines that would have taken an army of horses or humans to power. And with that came the first job losses, as thousands of home-based textile makers, particularly in England where the Industrial Revolution began, got priced out.

Of course, when the family-based textile industry disappeared, a new industry was created: factories needed workers and overseers and managers. That was the story everywhere. It has been the story for all time, too. As automation destroys jobs, new ones are created. But there is no guarantee that this will go on. There should be no expectation that this will go on. Instead, there should be worry that a job ceiling is coming, where almost all jobs can be automated and most people, through no fault of their own, cannot find work. In the near future even the creation of artisan products may be automated, displacing a currently-safe job refuge. And even though the potential outcome of this process is terrible, resulting in a Great Depression-era global economic slowdown, it is likely to continue unabated.

One of the continuing legacies of the Industrial Revolution is one of increasing education. In Canada between 2000 and 2013 the number of people with post-secondary degrees rose from 15.5% to 22.7%. This rise is in a demographic that might have gone into now-rare low-skill jobs, but chose to continue its education to enter industries where there are still plenty of jobs. But this also represents at least four more years of school for 7.2% of the population. Similarly, in 1900, 6% of Americans graduated high school. Just over a century later, almost every position requires a secondary-school diploma, or 18 years of education. Eventually the educational requirements to get a job will be too extreme for most people. Can you learn for 50 years, accruing huge amounts of student debt, then work so productively for the next 20 years that you can pay it off and retire? There is a ceiling on the amount of education we can have. As the criteria for a high-skill job rises, there will eventually just not be any jobs that automation cannot also do.

One industry that seems very strong right now, and not vulnerable to automation, is the artisan product industry. Be it free-range organic produce, handmade art, or a one-of-a-kind classic car restoration, people like things that are unique and original. Fortunately for the individuals who can make these products, the value of artisan products runs counter to the major automation tools of repeatability, uniformity, and mass production. Unfortunately, new techniques such as additive manufacturing are opening new opportunities in automation and the mass-production of unique items. For instance, one could imagine buying a car that had a unique hood ornament, a customized spoiler, and a steering wheel contoured to one's hands on top of a generic car frame. Such customization is happening already online. Not only do services like Gmail and Facebook give you a personalized webpage with your information on it, but both also serve you advertisements based on your personal interests. In a still-advertising, but perhaps more helpful way, every online store ever shows you products that go well with what you're currently looking at, what else you might like, and what other people like you have enjoyed. So the artisan job markets will soon be under threat, calling into question the safety of even safer-looking pursuits like art and design.

If all the jobs disappear it would be a huge problem, especially if we have not prepared for the eventuality. With no jobs, no one would have money to buy products, putting the few people still employed out of work. The global economic collapse that would result would be at least similar, if not more major, than the Great Depression. Of course, this would ruin the corporations that automated away all of the jobs, and since corporations want to make money, they will stop automation before it becomes unsustainable. Unfortunately, this is not the case; instead, the "tragedy of the commons" would do its ruinous work and actively steer the future towards one of unbounded automation.

The tragedy of the commons, as initially proposed, is the idea that a number of shepherds using a communal field for grazing will eventually destroy the field through overgrazing. It would be in the best interest of all the shepherds if they kept the number of sheep sustainable, such that it would support grazing every year. But it's also in the best interest of each individual shepherd to put a few more sheep in the field, slowly degrading the land but making a better profit this year. Once one shepherd does this, he is essentially profiting off of the future earning of all the other shepherds. Other shepherds recognize this, and put more sheep out to get a profit themselves before their livelihood is destroyed. As a result, the field is quickly overgrazed by all the shepherds, who all lose out.

Similarly to the tragedy of the commons, automation creates the tragedy of the labour commons: companies need to keep the workforce wealthy (i.e. employed) so that they will buy products. But at the same time, any individual company that embraces automation creates more profit in the short term. Eventually, all companies are almost entirely automated, not enough new jobs are created, and the entire economy suffers. Despite being a bad outcome, it can be brought about by innocent, intelligent decisions by the companies that lose out.

The job market may not be in imminent danger of collapse, but automation will eventually create a world where every job that a human can do, a robot will do better. Even industries that today seem secure, like artisans and makers of one-of-a-kind products, can and will be automated. While this could cause the collapse of the world economy if poorly managed, it is likely to come about despite anyone's efforts to stop it.

COUNTERPOINT

ALI AKRAM
2A SYSTEMS

The idea that jobs will ultimately be replaced with the notion of automation is a primitive one, making us wonder if we are no different than the 19th century textile workers, known as Luddites, who feared being replaced by the spinning frames and power looms introduced by the Industrial Revolution. Nowadays if you go to any Walmart you'll see self-serve checkout stations doing the job of cashiers, but you don't see cashiers complaining because these are boring remedial jobs that we would much rather not do. We will continue to see that new technologies will bring about a phase shift in lower level jobs, but that new, high-skill requirement jobs will be created in replacement.

The Luddites' job loss was mostly an outcome of their lack of adaptive and continuous learning skills that would have given them value in the labour market at that time. For example, there were jobs developed to maintain, create, and operate these new machines. We should learn from their mistakes, and take the alternate approach today. Continuous learning would bring about a new way of thinking, to replace the promise "If you get that degree you will be guaranteed a job," which was assured of Generation X. For example, Alberta isn't doing so well these days. These workers' livelihoods were solely based on a minimum number of skills required through some post-graduate program, and since they didn't seek to further enhance their skills, they are now faced with the choice of seeking other lower skilled jobs or learning new skills and acquiring a jobs with more educational background. If you look back over the last half century, you'll see not many people were pursuing any form of post-secondary education. However, there is now a larger percentage of our population attending university and even pursuing Master's degrees just to stay competitive in the job market. A continuum in education makes it possible for a person to be current with the job market and not be swallowed up by the monopoly which technology has on low skilled jobs these days.

You might disagree with the idea of continuous learning since you were sold on the promise that your parents told you, but this promise no longer holds. Technology is evolving rapidly according to Moore's Law, which predicts a doubling of the number of transistors on an integrated chip approximately every two years. Technological advancement won't wait on you. It has become more than just a tool in our lives which we can't live without: it has become a driving force of innovation, creation, and jobs. Some elementary school have even gone so far to implement coding courses for younger kids; they anticipate that knowing how to code will become as important as knowing English. Some business like Codecademy have even taken advantage of this opportunity, offering courses in programming with their pro account going for $60 a month, which is a lot cheaper than any engineering course. If you look on Jobmine you won't see a shortage of jobs demanding coding skills. Why? Because working as a developer requires continuous learning: you don't stop simply because you get older.

Studies have been done by Deloitte show that over the last 144 years technology has created more jobs than it has destroyed, eliminating dull, repetitive, and dangerous jobs which humans would much rather not do. This brought about mass production of goods and services, lowering the price of essentials and raising our disposable incomes with the creation of new jobs and increased demand. In the UK, 35% of jobs are at risk of being lost to automation in the next ten to twenty years, but it has been shown that technology replacing a human worker will actually produce a rise in employment overall. The Deloitte report stated 800,000 lower skilled jobs had been lost to automation, only to be replaced by roughly 35 million higher skilled jobs. The new jobs paid on average £10,000 more than the jobs lost, resulting in a £140 billion net boost for Britain's economy. Overall, technology has reduced the demand for jobs involving physical labour or dull repetitive strain, and replaced them with more knowledge-intensive jobs that pay more.

In conclusion, the loss of jobs is simply a shift towards a future of continuous learning, where we can truly call ourselves "homo sapiens" (the wise ones) like we claim we are. We see evidence of this if we look back in time, and are still seeing this continuous cycle of technology which eliminates less knowledge-intensive jobs. As a result of this, people are studying more to fill in the newer highly skilled jobs. I'm not saying to go learn coding (even though it won't hurt); my main purpose is just to show we have to re-evaluate the way we think about what it means to have a job so that we won't be at risk of having that job replaced by technology. Some people decided that there is an age limit on learning, which is not at all true: older people remember the news and learn plenty of other things without knowing they still have the ability to learn. So don't stop learning: I mean, when is the last time you said "I regret learning that"?

Looking Foolish

CAITLIN MCLAREN
3T CHEMICAL

5 THINGS YOU DON'T WANT TO KNOW

Often, we think of our ancestors as dignified. Period pieces make everyone's clothes look gorgeous, and most ancient epics don't include the bathroom breaks. However, if we actually went back in time, we would find that our ancestors smelled horrible and looked ridiculous. Those pretty clothes, even at the royal courts, were badly washed and full of fleas; and often, the fashion trends of the day were stupid and impractical. Not that much has changed, really.

Here are some of the silly-looking things that our ancestors would do.

Mouse-Skin Eyebrows

In Georgian England, fashion standards were quite extreme. Many fashions were disgusting, bizarre, and would have made their wearers look like complete fools. Case in point: false eyebrows made of mouse skin, glued onto the face. While those have not been completely confirmed to exist, it is definitely the case that everyone (in the upper classes) wore massive (and by massive, I mean up to three feet tall) wigs shaped with animal fat. Of course, the animal fat would go rancid and attract vermin; they would also become infested with lice. Entrepreneurs then invented scratching sticks, which were used to scratch your itchy, buggy skull without messing up your hairstyle. Women would also stitch random things in their wigs, like flowers (ok, that's normal), fake birds (a bit much), and model ships (haven't you always wanted to wear a boat on your head?).

Also, it was thought that birthmarks on the face were extremely attractive. While there is nothing wrong with that, upper-class people began to put fake birthmarks on their face. Some people would overdo it and add a lot of them. Some women, feeling that that was not weird enough, started using the spots to denote their political affiliation.

Possibly the silliest fashion item were "plumpers", which were little cork balls that people would keep in their mouth if they felt that their cheeks were too thin.

Blackened Teeth

Because toothbrushes and fluoride are modern inventions, it isn't too surprising that ancient peoples suffered greatly from tooth decay. In most cases, they went for snake-oil treatments and, when teeth fell out, replaced them with false ones. However, in old-timey Japan, upper-class women went "what the heck, they'll end up that way anyway" and stained their teeth entirely black. This was done by drinking and washing your mouth with iron filings soaked in vinegar. Mmmmm.

Of course, this is probably better than what happened in Europe. There, false teeth were often made from real teeth. Where did they get so many real teeth? Sometimes they would buy them from poor people. But why would you do that, when there are so many perfectly good teeth on dead soldiers on battlefields? That was an actual job, back in the day: going around after a battle was over, pulling teeth out of dead soldiers.

Crossdressing at Weddings

Ancient Sparta is well known for their manliness. Their machoism even extended to brides. Instead of dressing nicely in a white gown, or whatever the women's fashion was at the time, brides would have their heads shaved and dress in mens' clothing for their wedding night. (Then their new husbands would break in and kidnap them.)

This may have been because male homosexuality was encouraged in Sparta, and therefore the young men would not have been used to femininity. In fact, it was illegal for a husband to live with his wife until he was 30 years old. Thus, a bride would try to be as manly as possible for her wedding night. Testosterone is all very well, but it seems that yes, one can have too much of a good thing.

Oiling Up

Remember the greasy, smelly wigs from Georgian England? At least those people used it as glue, so it wouldn't be smeared everywhere. The same could not be said for Ancient Egypt, where upper-class people decorated their heads in the following way:

Since it was hot and gross, everyone would shave their heads. However, since no one wanted to be bald, they would then wear wigs made of human hair, defeating the purpose. Then, because wigs are hot and smelly, they would perfume them.

Obviously, the best way to perfume yourself in hot weather is to wear a cone of scented fat on your head. In the hot temperatures, this would melt and drip all over your wig, and then your face, making everything greasy and smelling (hopefully) nice.

Codpieces: Because Subtlety is for the Weak

There is one area which gentlemen throughout the ages have liked to brag about and advertise the size of. Nowadays, that is mainly done through innuendo, private photography, and presidential debates, but in Renaissance Europe, upper-class men wanted to show their prowess off to the entire world.

Enter the codpiece, an item of clothing designed to "cover" the genitalia, which it did – nominally. However, it was also brightly coloured and highly decorated, and held the region in a prominent, erect position. Even armour sometimes contained a codpiece, because if there is one area you want a large, angry enemy knight with a weapon to see clearly, it's that one.

So far, so good, one might say. A little harmless bragging never hurt anyone, and it would allow you to judge men's, err, proficiencies without having to look at the size of their hands. However, behind the codpieces often lurked a dark secret, and it wasn't merely padding.

No, this was the age when syphilis was raging through Europe, striking people down right at left. Most noblemen kept numerous mistresses, and thus it was only a matter of time before their genitals started to rot off (serves them right). For this reason, the codpiece was often full of bandages and whatever passed for medication at the time, all surrounding a blistered, festering member.

Not content with their massive codpieces, men also would wear pointed shoes. Of course, the point on the shoes were also intended to represent their manhood, because at this point it had become a fixation.

Devil May Cry Over These Eggs

CAMERON SOLTYS
3A MECHANICAL

COOKING WITH CAM

If you're like me, you probably buy 72 eggs per week. And if you're like me, there are those odd days where between your two roommates and you, you don't quite eat 10 eggs per day. It happens to the best of us. But even though you rotate your eggs every week, putting the new ones at the back and the old ones at the front, eventually (i.e. before the term ends), you have a dozen eggs in your fridge that are getting to the one-month mark. So what are you to do?

The smart-asses among you might ask why we don't just buy 12 less eggs next week. Well Mr. Pain-in-my-Rear, you must be a moneybags as well as a kindred spirit. Have you ever tried buying half-a-dozen dozens of eggs? It's expensive. Not to mention that you then have to take home 6 separate fairly-fragile food items, along with all your other foodstuff. No. The only reasonable way to buy 72 eggs is in two 36-egg pallets from Costco. But seeing as you get a surplus of 12 eggs per month, by the time you can skip buying a pallet of eggs, the oldest eggs will be 3 months old.

Anyway, I digress. Through no fault of your own, nor mismanagement of your resources, nor failing to see an apparently obvious (though retrospectively idiotic) solution, you have a surplus of eggs. And in particular, you have old eggs. What are you to do with them? Never fear! I am here to help you out of this mess!

As always, no measuring, no buying new ingredients (except eggs, I suppose), and no giving up.

The first thing to know about eggs is that they are delicious. The second thing to know about eggs is that they peel most easily when they are older. So get some old eggs. What if you don't have any? Well get some and sit on them for a week like a proud mother hen. It's not like I've spent most of the first part of this article explaining how you might happen across eggs that are on the verge of spoiling.

So put your eggs in a pot and fill the pot with water until the eggs are more-or-less covered. The honest truth is that no one knows how to properly hard-boil an egg, and you just get good at it.

There is one cheat to know if your eggs are done. As you undoubtedly know if you've taken Fluids 2 (I think most people take it in 1B or something), fluids do not stop instantaneously. So if you were to, say, spin an egg like a top, the fluid inside would spin. And if you were then to momentarily stop the egg, the fluid would keep spinning. It's now just a simple application of the fluid-shear law to see that the egg will start to turn again when you release it. But if there's no fluid inside, the egg won't spin which means it's done.

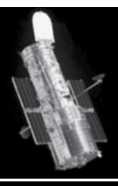
Once you've cooked your eggs, get to the task of peeling them all. I would highly recommend rinsing each egg as you finish to get rid of any small shrapnel of shell that you may have missed. (If only that worked so well with actual shells and shrapnel in post-war Europe.) Now cut each egg in half and scoop out the yoke. Put it into the bowl. If you seriously just dumped all your egg yokes into the garbage can, please send pictures. I will howl in laughter and start calling you a dumb-ass instead.

To the egg yokes add paprika, mayonnaise, diced red onion, other spices, cheese, or your favourite comfort food. Mix it all together. Then use a spoon to scoop large helpings of the yoke concoction back into the yoke-hole in the egg white, which I presume you were smart enough to not throw out.

Once you are done, sprinkle more paprika onto the eggs. I also like to add a garnish like parsley, ghost peppers, or crushed M&Ms. Refrigerate until cool, then eat! It's a great party dish, particularly for barbeques. I particularly like to have them as a morning snack after first class.

Author's note: In the pursuit of journalistic integrity, it should be noted that the idea that my roommates and I eat 72 eggs a week is hyperbole. In truth, it generally takes us nearly two weeks to go through that many.

Space Cam: ExoMars Probe off to Mars



CAMERON SOLTYS
3A MECHANICAL

SPACE CAM

On March 14, a Russian Proton Rocket launched from Baikonur, Kazakhstan. Around half a day later, anxious mission controllers, scientists, and space fans got confirmation that the package it had carried was healthy, and on its way to Mars.

The payload is the first of two missions to be launched by the European Space Agency (ESA) and its Russian equivalent, Roscosmos, as a part of the ExoMars program. This project, which is short for "Exobiology on Mars," is designed to look for traces of life on our near neighbour using a series of four probes. What launched this month were the first two probes: an orbiter named the Trace Gas Orbiter (TGO), and a lander named Schiaparelli that will piggy-back on the TGO until separation 900 000 km away from Mars.

The TGO will go into orbit around Mars in October of this year. It will start out on a very elliptical orbit and will spend about a year passing through Mars' thin atmosphere to reduce speed and circularize its orbit. Once it settles into a circular 400 km orbit, it will do as the name suggests: analyse trace gases found in Mars' atmosphere, particularly methane, and look for their origin. To do this, the TGO has two spectrometers that will observe the sun through Mars' atmosphere twice per orbit (at sunrise and sunset), looking for the faint effect that trace gases in the parts-per-billion range have on the light.

In addition to observing which gases are present, the TGO will also attempt to diagnose their source—particularly for methane. Methane has a relatively short life span on Mars, on the order of centuries, which means it must have a geological or, perhaps, biological origin. NASA's Curiosity rover and ESA's Mars Express orbiter have both detected methane, but were not sensitive enough to thoroughly investigate, hence the launch of TGO. Two likely sources for methane on Mars are volcanoes and underground water-ice, so the TGO has instruments to image volcanoes and detect the ice.

The Schiaparelli lander is a test bed for future ESA Mars missions, including the second half of ExoMars. It will, for instance, prove the technology used during its entry into the Martian atmosphere, descent, and landing. Once landed, it will have only a short time of activity. It will perform some very interesting science such as measuring the electrical fields at the surface of the planet. According to ESA's website, this will be the first time this measurement has been taken, and "…combined with measurements of the concentration of atmospheric dust, will provide new insights into the role of electric forces on dust lifting—the trigger for dust storms."

Schiaparelli gets its name from 19th century Italian astronomer Giovanni Schiaparelli, an astronomer who studied the surface of Mars through his telescope. His observations of thin lines on the planet's surface, which he called "canali," led to theories that Martians were digging large canals to look for water in their planet's interior. These lines were later shown to be an optical illusion, but Schiaparelli remains important for having mapped Mars' surface. The name also fits because ExoMars' largest European contributor is Italy.

The second half of the ExoMars Program will launch in 2018. This mission will contain a lander based on the Schiaparelli landing technology. Upon landing, the package will split in two, with a rover known as the ExoMars Rover emerging from the stationary ExoMars 2018 surface platform. The surface platform will make a number of readings of its local area over time to observe seasonal and other changes. It will also study the internal structure of Mars and changes in its angular velocity using Doppler frequency shifts of signals from Earth. The rover will set out in search of signs of life, potentially retrieving sub-surface samples from up to 2 metres underground.

The TGO and Schiaparelli are both critical first stages to the ExoMars project. Schiaparelli's landing will inform the design of the 2018 mission. The ice and methane-emissions data found by TGO will be used to decide on an appropriately interesting landing site for the 2018 mission. The TGO will then act as an intermediary between the 2018 landers and Earth. In addition, the TGO is outfitted with a receiver that will allow it to communicate with NASA rovers currently on Mars, increasing their ability to relay data to Earth.

The launch of this first part of the ExoMars mission went off spectacularly. Hopefully both existing probes, and the 2018 probes, will function perfectly so that the search for life on Mars can be pushed well past its current extent.

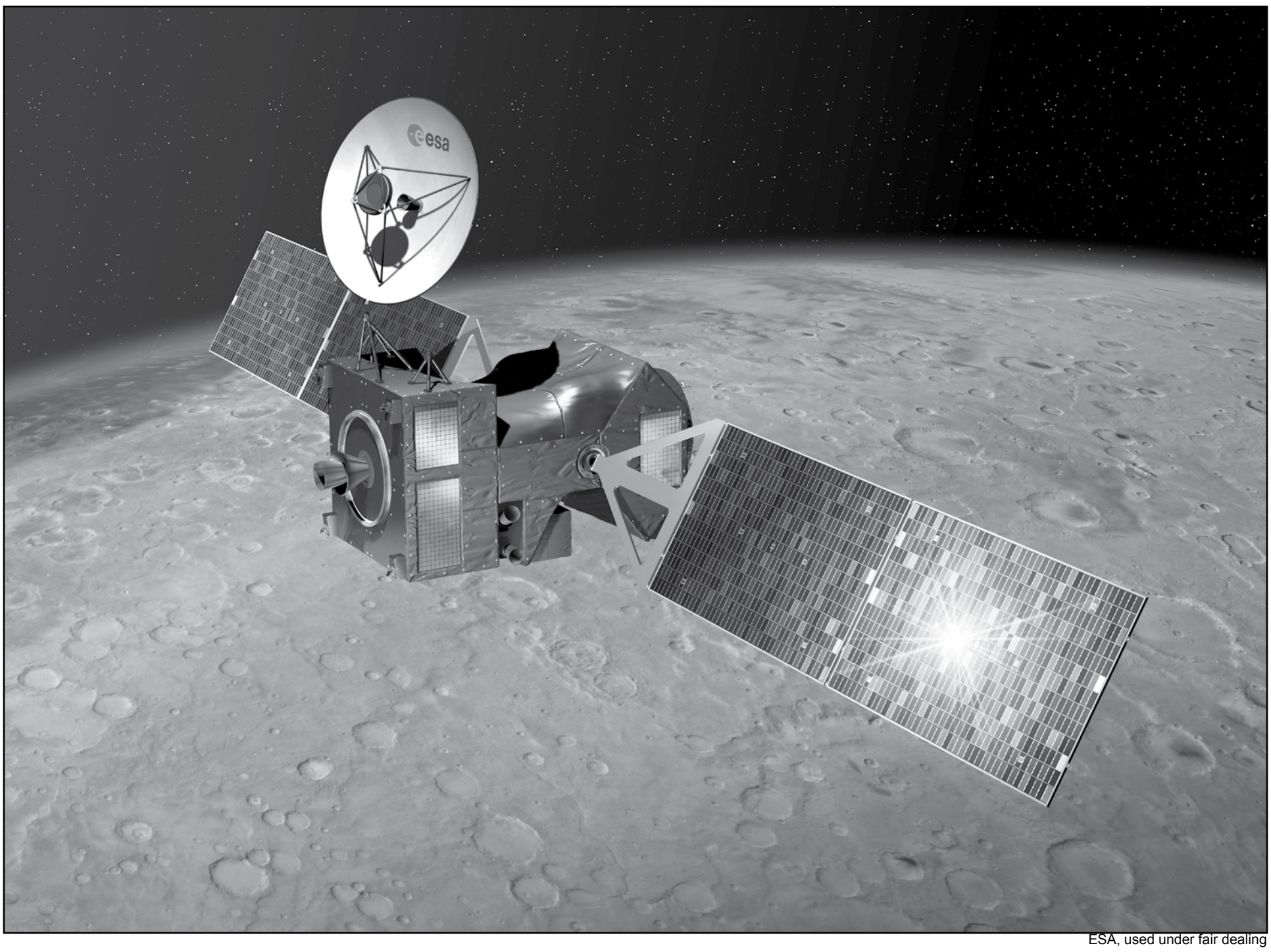
Tesla

DONOVAN MAUDSLEY
2T MECHANICAL

Earlier this month a man in Singapore was fined for his new high-emission vehicle. He was not expecting this at all since his new car is a Tesla Model S, considered by most standards to be a zero emission car. The owner, Joe Nyguen, spent a long time trying to import the car from Hong Kong, and was planning on qualifying for a low-emission tax rebate. Singapore's Land Transit Authority (LTA) has a tier-based rebate and fine system to encourage consumers to buy low emission vehicles. The maximum fine is S$15 000, with the possible rebate being S$30 000. Mr Nyguen thought he would have qualified for the maximum rebate, but was fined the maximum value.

Singapore looks at auto emissions from a wheel-to-wheel perspective rather than tank-to-wheel. Singapore generates the majority of their electricity by burning oil, so in order for Mr. Nyguen to charge his new Tesla a certain amount of oil is still being burned for his energy. The emissions are just being generated at a different location than before. Even in Canada, where we consider most of our energy to be clean, I feel that this is a standard that we ought adopt. I'm a huge fan of the electric car, but perspective is needed. People need to account for all of the emissions that they create, not just those that they directly generate.

Elon Musk, Tesla's founder and figurehead, has been alerted of Mr. Nyguen's situation and has thrown his hat into the ring. Always the champion of his designs, Mr. Musk is engaging in talks with the Singapore LTA to try and resolve the issue.



ESA, used under fair dealing

ESA launches first of two missions in their "Exobiology on Mars" program

Liberal Government to Explore Basic Income

NINA FENG
4B ENVIRONMENTAL

Trudeau's government has called for an exploration into the concept of basic income for Canadians, as a part of a pre-budget report they presented on March 11. While it's not guaranteed to be included in the actual budget, slated for release on March 22, the news has been received with some excitement from those who would benefit from such an initiative.

At a glance, there are several benefits to such an idea. One in eleven Canadians currently lives in poverty. Welfare programs can trap people in a constant state of being in need of assistance, due to the difficulty of re-entering the job market and still supporting oneself without it (known as the "welfare wall"). The introduction of a basic income supplement would not only help to secure the livelihoods of working-age adults, but also help children in low-income households, and seniors with low pension-security. General public health is also expected to improve.

The idea is not a new one, but it's been a hard one to implement in the past. Issues may arise, for example, as the initiative would firstly be extremely expensive. Studies have shown that just bringing all Canadians up to the poverty line would cost tens of billions of dollars, and all three main levels of government (federal, provincial, and municipal) would have to coordinate the efforts. Furthermore, the details are still unknown and are yet to be determined. Factors such as how much the income would be, what programs and services would be provided, and who would be eligible are still up in the air. Also, people who are eligible to receive the basic income pay may then be rendered ineligible for other supplements they rely on, including funding for war vets, for those with disabilities, and for aboriginals. The system may also be subject to abuse and result in a decreased incentive for citizens to work.

The flipside is that the money put into the system may be offset by the resulting benefits, such as a reduction in healthcare costs (which may also be in the billions). The amount of people who wouldn't work in order to take advantage of the money may be reduced by not lowering their assistance proportionately with the added income of a job.

In the past, there have been efforts in Canada to try for a guaranteed minimum income. An experiment was even conducted in the 70's in Dauphin, Manitoba in order to assess the impact and success of such a program elsewhere. There was no final report, but a small reduction in average working hours was noted, and was only significant for new mothers and teenagers. The result of this was more time and resources being put into education for children and family time, increasing test scores in students. The recent push, which began in 2014, suggested a pilot trial be done in Prince Edward Island. While it's unclear what Trudeau's investigations will involve, an exploration into basic income may be good for Canada's progression.

Suicide Bombing in Ankara

CAITLIN MCLAREN
3T CHEMICAL

On Sunday, March 13, a car bomb exploded in the heart of Ankara, Turkey's capital city. Nearly forty people were killed and 125 were injured by the explosion and subsequent fires, which took place at a busy transit hub. The suicide bomber was identified as Seher Çağla Demir, a Kurdish student and radical. She, along with four other students, were already on trial for alleged membership in the outlawed Kurdistan Workers' Party (PKK). There are unconfirmed reports of a second bomber.

It seems that Demir spent time in Syria in 2013, training with the People's Protection Units (YPG) Kurdish rebel group. This group is not designated as a terrorist group by America or the UN; they are engaged in the fight against IS and the United States considers them allies. However, the Turkish government, with their longstanding conflicts with various Kurdish factions, does consider them to be terrorists.

However, the group that claimed responsibility was a different group, the Kurdish Freedom Falcons (TAK); they are a splinter of the more well-known PKK. This group also claimed responsibility for a similar bombing in February, which killed 28 and injured 61. As in that case, the group claimed that the attack was not targeted at civilians, but at a nearby police station. Given the activity in the area and the huge number of civilian casualties, this claim is suspect.

The PKK had had a ceasefire with the government of Turkey until July last year, when the relative peace of two years collapsed. While TAK is not officially part of the PKK, they are closely associated with them and tend to follow their lead; they are also somewhat more radical and more violent.

In a statement on their website, TAK said: "a suicide attack was carried out ... in the streets of the capital of the fascist Turkish republic. We claim this attack." The bombing, they said, was in revenge for Turkish military operations in Cizre, a Kurdish city in southeastern Turkey. They also threatened more such attacks in the future. After the attack, Germany closed its embassy in Ankara, as well as its consulate and a school, citing "concrete indications" that they were to be the target of another attack in the near future.

Turkish authorities arrested eleven people in connection with the attacks. Turkey also performed air attacks on Kurdish rebel groups in northern Iraq. There were widespread reports of social media being blocked in Turkey, on the grounds that they might be used to disseminate graphic images of the attack. There were also heavy media restrictions. Turkish President Erdoğan stated: "Our citizens should not fear, for the fight against terrorism all our national institutions are carrying out in solidarity with the nation will indubitably end in success."

This Saturday, there was yet another suicide bombing in Turkey, this time in Istanbul. The bomb detonated in a largely diverse area, killing and injuring many foreigners in Turkey. At the time of writing, this incident was very recent and there is little information currently available.

The growing unrest in Turkey is, sadly, only one of the many facets of the complicated situation in the region. The ongoing issues between Turkey and its Kurdish people has a profound effect on neighbouring Syria, and greatly hampers the ability of the west to deal with IS. There is no easy solution in sight.

Obama Visits Cuba in Historic Trip

CAMERON SOLTYS
3A MECHANICAL

US president Barak Obama has made global news with his three-day visit to Cuba. This is the first time that a US president has visited Cuba in 88 years, despite the fact that the island is less than 150 km off the American coast. The visit comes after the unexpected relaxation of tensions between the two countries as they opened embassies last year.

On the first day of Obama's visit, Sunday, March 20, he and his family toured "Old Havana," the downtown section of Cuba's capital. This walk, designed to let him meet some locals, was somewhat unsuccessful due to heavy rains. Obama also met the staff at the American embassy and ate dinner at a private restaurant.

Monday and Tuesday promise to be the more important days of Obama's visit. At the time of this writing, he is slated to meet with the Cuban President Raul Castro on Monday, and meet dissidents and give a public speech on Tuesday. The White House has specifically ruled out a formal meeting between Obama and Raul's brother Fidel Castro, the long-time leader of island who lead the communist revolution that initially destroyed US-Cuban relations.

The US presidential visit to Cuba is a symbol for the new economic cooperation that has already begun between the two countries. While the embargo put in place after the 1959 revolution remains in place, there has already been some increase in economic cooperation. For instance, tourism in Cuba is at an all-time high, even though Americans remain under a now slightly-lightened travel ban. Furthermore, the US hotel company Starwood just announced a large deal in which it will renovate and then run three Havana hotels.

The relaxing of tensions will also create economic benefits for the American economy. The embargo, which is still in place since a vote from congress is needed to remove it, is estimated to be costing the US economy $1.2 billion per year.

Cuban-American relations still have a long way to go. The Cuban regime is still seen as repressive; they arrested protestors calling for the release of political prisoners on the day of Obama's arrival. And the economic boycott has yet to be lifted. But thanks to the secret talks that took place in Canada and the Vatican to initiate this period of increasing cooperation, relations are closer than they have been in almost 60 years.

State of Emergency Declared in Manitoba First Nations Community as Suicide Rates Increase

RAEESA ASHIQUE
2A ELECTRICAL

Acting Chief Shirley Robinson of the Cross Lake First Nations community declared a state of emergency two weeks ago on Wednesday, March 9 because of the rising number of suicides, formally asking Health Canada to send in a crisis team. There have been six suicides since December 12: four were high school students, one was a young person visiting the community for a funeral, and one a mother of three. 140 people have come forward and asked for help since the first, admitting to attempting or seriously contemplating taking their own lives.

Pimicikamak Cree Nation, also known as Cross Lake, is a community of 8300 members. Their proximity to a hydro generating station located 500 kilometres north of Winnipeg causes regular grief. Hydro development has led to regular flooding for the last forty years, forcing people from their homes, impacting wildlife, and affecting transportation routes. Last year, Manitoba Premier Greg Selinger personally apologized for the hydro development's damage to their traditional lands, recognizing that it "can affect the cultural identities of aboriginal peoples because of the close relationship of aboriginal peoples to the land and resources."

Pimicikamak first approached federal officials in early January after the second suicide, but continued to cope on their own. However, by this point they are desperate and their resources are insufficient. Chief Robinson says, "The way it's been is that while we're in the middle of dealing with one person, we get a call to go to another." She says they need a serious intervention, and hopes the federal and provincial governments will deliver. "Our school counsellors, our teachers, chief and council, our clergy, elders, our doctors and nurses, we've all come together and we've tried. We're tired. We need that support, we need that assistance … this is too much for me."

Most of the six suicide victims were youth. The youngest was Finola Muswaggon, who was buried on what would have been her fifteenth birthday. Another was 21-year-old Anita Scatch. Her grandfather told CBC how "My life has never been the same since she's gone. It has been very lonely. I cry all the time, visit her grave. My heart goes out to youths of Cross Lake." A third victim was first cousin to Chief Robinson and mother of three, Lucille Blacksmith. The other three victims were high school student, the oldest being only 18 years old.

It is impossible to know their motivation: "There's so many unanswered questions … because they took the answers with them."

Poverty, lack of opportunity, unemployment, and history are some of the many factors playing into this tragedy. For example, Pimicikamak has a ridiculously high unemployment rate of 80%. Homelessness and overcrowding are becoming growing problems with the current housing crisis. There are also so many issues making the youth feel that suicide is the only way out. Cora Morgan, Manitoba First Nations family advocate, has commented that "The quality of life for our young people is so low."

There are currently 170 students on suicide watch at the local high school. "It's happening faster than we can deal with," said Principal Gordon Hum, who has been working with counsellors to speak with at-risk students. Some of the common responses they are hearing include: Nobody is listening to me. There's nothing for me in the community. I'm lonely. I'm grieving the loss of someone who ended their life.

Chief Robinson has commented on the level of despair she feels in her community: "There's so much hurt, there's so much pain. You can feel it in every direction of our nation."

Historic injustices is another huge factor. Although this is one that many Canadians like to ignore, the trauma of residential schools is a real problem. Gabor Maté is a retired physician and author specializing in addiction, stress, and childhood development. He has said, "The average Canadian citizen has got not the faintest sense of what it is like to be a native person in this country… On the one hand, suicide is traumatic, but on the other hand, suicide is also an outcome of trauma. It's just one more link in the chain of trauma." Abuse-triggered PTSD or addiction are some of the effects that survivors—and even children of survivors—face today.

Eric Robinson is the Provincial Aboriginal Affairs Minister and a residential-school survivor himself. He said, "People can brush this aside and say: 'They're Indians. They're the responsibility of the federal government' … But these are Manitobans. They're fellow citizens."

This is also not an isolated problem. For one thing, Pimicikamak has declared a state of emergency for youth suicide in the past. Other First Nations communities are facing similar tragedies: Cree leaders are calling the suicide crisis a pandemic. For example, a Northwestern Ontario community called for emergency relief in January after several suicides by young people, the youngest only ten years old, within the span of a couple weeks. And Nunavut's Premier declared a suicide crisis in October 2015. Sheila North Wilson, grand chief of an organization representing First Nations of Northern Manitoba, said "We're seeing evidence of despair and poverty in our communities…Opportunities and resources that are afforded to the rest of Canadians are not being afforded to our people." Chief Robinson made a similar comment: "I don't want to put any more of my people six feet under. We deserve the same standard of health care as any other Canadian."

The statistics paint the same bleak picture. Suicide and injuries from self-harm are the leading cause of death for Aboriginals in this country up to 44 years old. Suicide rates among Inuit youth are eleven times the national average, which is among the highest in the world. Overall, First Nations youth are six times more likely to commit suicide than non-aboriginal Canadian youth. Finally, a 2010 report found that suicide rates for children younger than fifteen among Ontario First Nations is over 50 times the national average. These numbers are tragic.

They are also meaningful: there is only so long we can continue to brush Aboriginal issues under the rug.

Eric Robinson, along with Premier Selinger and other provincial leader, met with Pimicikamak leaders to discuss the situation, and are waiting on the community to send specific requests. He also has plans to pay a personal visit to the community and discuss the youth's needs with the youth themselves.

At the time of writing, Health Canada has sent in four more mental health therapists, and the Northern Health Region Authority is sending in four crisis counsellors. The number of health care professionals is also increasing such that nurses are regularly available.

Canada's Minister of Indigenous and Northern Affairs Carolyn Bennet and Health Minister Jane Philpott believe that while the immediate crisis must be addressed, we cannot ignore the root of the problem. They cite a poor child welfare system and a lack of youth recreational facilities as some of the factors causing despair among the youth. Bennett is working in conjunction with the Assembly of First Nations on a plan to improve child and family services, as half of the victims had a connection to this program: two of the teenagers had been in foster care, and the mother had children in the CFS program. She also believes that cultural identity is key to both mental and physical health: "We need people to feel good about who they are as indigenous youth."

CBC

1000 people participated in a suicide-prevention walk

$2million
in funding available for student entrepreneurial ventures

Waterloo Engineering has partnered with Spectrum 28, a Silicon Valley venture capital firm to establish a student venture program for **engineering** undergraduate and graduates students who are seeking ideas or have an idea for an entrepreneurial venture and need cash, mentoring and resources to make it happen.

Pop Up Classes
May & June 2016

Pitch Event
June 2016

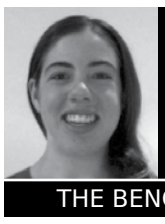
Demo Day
April 2017

If you're a winning team at the Pitch Event you move on to further idea development with mentoring opportunities until Demo Day in April 2017. At that time successful companies are awarded funding by Spectrum 28, founded by Waterloo alumnus Lyon Wong, Systems Design Engineering '03.

WATERLOO ENGINEERING | SPECTRUM 28 STUDENT VENTURE PROGRAM

For more information and deadlines visit:
https://uwat.ca/ZZA

Raptors Must Continue Winning Ways



ELIZABETH SALSBERG
3T NANOTECHNOLOGY

THE BENCHWARMER REPORT

Basketball fans—and non-basketball fans! Welcome to the home stretch. But what comes after the home stretch… playoff time! With only 13 games remaining in the regular season, the Raptors have a comfortable grasp on second place in the Eastern Conference. Third place Atlanta sits 7.5 games back.

With a win-loss record of 47-21, these Raptors are set to make franchise history in what will be the organization's first ever 50-win season. They trail the LeBron Cavs by a mere 2 games, and could even catch them before the season's end. Having won 8 of their last 10 games, this is the kind of momentum they need to keep up as we approach playoff time.

This is a much better team than the one that flopped in four games to John Wall and the Washington Wizards in the first round one year ago. Sloppy defense ultimately led to the sad end of that series. With that memory fresh in their heads, the returning Raptors appear to have tuned in to head coach Dwane Casey's defense-first mantra. New faces Bismack Biyombo, Cory Joseph, and Luis Scola have also been instrumental in this year's improved defense. Case in point: Biyombo snagged a franchise-record 25 rebounds in last week's game against the Indiana Pacers, a potential first-round opponent.

The addition of Biyombo has also pushed starting centre Jonas Valančiūnas to new heights while giving the Lithuanian big man a break when he needs it. Jonas had been productive with 17 double-doubles so far. For those who may not be familiar with basketball jargon, a double-double means scoring double digits in points and in rebounds (typical for centres and forwards) or assists (typical for guards). For Jonas, the rebounding has come a long way as he appears to have taken a page or two out of Biyombo's book.

Nevertheless, one cannot overlook the source of the defensive improvement. The players are more serious about buying what head coach Dwane Casey is selling and it shows; this past week, Casey (by far the best coach in Raptors history) became the first head coach to reach 200+ victories during his tenure in Toronto. Coach Casey is also the only Raptors head coach to sport a winning record (201-179, .529).

While it's great to see the Raptors winning so many games and taking defense more seriously then they ever have before, there are still some nagging problems. Anyone who watches the majority of their games will tell you it's a similar pattern night in, night out, especially in the second half.

The Raptors can be pretty lousy to start the third quarter, particularly when they have more than a 5-point lead at the half. Instead of squashing their opponent and putting them to bed, they let them make a game of it by the time the fourth quarter rolls around. Suddenly (due to sloppy defense) the lead they had has evaporated and they are scrambling.

Though they have been successful in these fourth-quarter scrambles of late, they have demanded huge performances from their all-star guard duo DeRozan and Lowry. It is a long season and the big guns will need a break. If there's one thing they should have learned from last season's upset, it's that the entire team must play 48 minutes of defense. This is particularly important on the road, where baskets might not fall as easily (Toronto home record is 27-8 vs. 20-13 on the road). To let a playoff team, even the seventh seed, back into the game in such a way will make for a much more difficult series. It could even cost them a trip to the second round.

Realistically, there is no reason why the Raptors shouldn't get past the first round… unless they end up playing the Bulls and don't smarten up (Toronto has lost all four games against Chicago thus far). For the sake of argument, suppose that they do make it to the second round or even the conference final. The road to playoff glory goes through Cleveland, and you can bet LeBron isn't going to fall asleep in the third quarter. Between him and point guard Kyrie Irving, the Raptors will have their hands full trying to control a potent Cavs offense. Not to mention that the Cavs are also sound defensively, so offense will likely not come all that easily either.

At the end of the day, the Raptors need to keep up their winning ways over these last 13 games with renewed focus on defense. They need to treat each game like a playoff game, regardless of their opponent. Hopefully Casey will be able to rest Lowry, DeRozan and the other major players as the season comes to a close—because it's going to be one hell of a playoff series!

Parasols: The Accessory of Victorians and Vampires

VINCENT MAGAS
3A MANAGEMENT

HIT REPLAY

Is your skin prone to sunburns? Are you bored of using plain umbrellas? Are you a vampire? There's a single accessory to solve all of these problems! The parasol is like the attention-craving sibling to the umbrella. While umbrellas are primarily made of a waterproof fabric canvas stretched over a metal frame, meant to protect the user from precipitation, parasols come in a surprising variety of styles and materials, and are basically just there to be fabulous.

Umbrellas, used to shade from the sun, (or even just to add a touch of luxury to an ensemble) have been seen to be recorded and depicted in scripts and images from all over the world, at many different points in history.

Parasols can actually be dated back as far as ancient Egypt. Like the large fans that slaves used on their pharaohs to stave off the desert heat, the parasols of the time were also constructed from palm-tree leaves and sometimes large feathers. They were even painted in scenes on temple walls, shown being held over ancient gods.

In the 5th century BC in Greece, they were carried by slaves for a lady of status, as an essential accessory, and could even open and close. The trend caught on in Rome, where the men started to use leather parasols to protect them from the heat of the sun.

Later, in 21 AD ancient China (and perhaps farther back than that, but since a word for them hadn't be invented yet, it's difficult to tell), they were used on carriages for emperors and by high-ranking people, due to their connection to banners of war and status. They were made of wood frames, or even cast bronze, with a canvas of silk, paper, and other materials. Wood-frame and paper parasols became easily accessible by common folk sometime after this, where the paper could have simple to elaborate paintings as embellishment. Embroidered and painted silk parasols also became popular.

Possibly the most memorable use of parasols in history came as late as the Victorian era. Upper and middle class ladies would use elaborate parasols of ruffled silks, detail-laden cottons, and Battenberg lace, with handles of simple or carved wood, or metal molded into figures or scrollwork. These accessories and useful tools were taken out on every occasion, from looking fancy on a day out in the city to protecting their user's pale complexions during a relaxing country stroll.

Since the 80s, parasols have been making a comeback in a variety of ways, continuing to find new uses as new fashion styles and alternative lifestyles emerge.

The ladies of goth fashion have almost always held their dark, pagoda-style parasols with pride. They add a touch of romanticism to this otherwise grim and macabre subculture.

From the gothic style emerged Elegant Gothic Lolita (a fashion of Japanese origin that draws off of Victorian and Rococo fashion, with signature knee-length bell-shaped skirts and luxurious frills, lace, and bows) and with it, all the different off-shoots and branches of the Lolita style. The delicate yet ornate accessory has found its way into every such wardrobe, from the black lace parasols of the goth, to the pastel-frilled parasols of the sweet style that are simply drenched in cute ribbons and bows, and demure, muted-toned and simply-adorned parasols of the classic Lolita style.

Shortly after that came steampunk, tomorrow's fashion of yesterday that till today has never been. As it draws heavily off of the styles of the Victorian era, steampunk women often have a Battenberg lace parasol on hand just like in the good old days of steam-power. They match them to their leather corset and bustled dress outfits, sometimes paired with a matching lace Victorian-styled fan.

However, it doesn't take dressing in a wildly different fashion to be able to use these chic and useful accessories. Parasols can also be part of an ensemble for a special occasion. They are elegant accessories for the spring or summer bride on her special day, especially for outdoor weddings (those millions of layers of skirt can get pretty warm). Aside from the odd event, parasols are also often used as everyday necessities by those who have had or have a family history of skin cancer, people on medications which restrict their exposure to sunlight, and for the especially pallid-skinned, to prevent turning tomato-red as soon as they step outside.

As alternative fashions and subcultures continue to sprout and grow, parasols find their niche in modern times. Although not usually sold by the most common clothing labels, they're easily (and quite affordably) found online on sites such as Etsy and Amazon. For around $20-40, parasols are available in a large range of styles and colours. With spring…springing as it has, consider adding a touch of class to your own look with a delicate parasol of your own.

Google Wins at Go and We're All Go-ing to Die

JOSH LI
1B MECHANICAL

DeepMind, the British based, Google owned artificial intelligence company made headlines this past week by defeating highest "9-dan ranked" Go master Lee Sedol in 4 out of 5 games. Go is a very complicated game to explain and even more so to master; there are more possible board positions than atoms in the universe. AlphaGo, the program by Google Deepmind, uses advanced Monte Carlo tree search (ask a computer scientist) and a neural network to select the best possible move for victory.

Experts in AI have always cited Go as a great challenge for computers, saying that mastering this field could be decades away. The rate of how AlphaGo, conceived in 2014, managed to decipher one of the most ancient, challenging games is absolutely astonishing.

So how did it succeed?

According to DeepMind, the company secret is in the neural network and so called "deep learning". AlphaGo Got Good in a process of, simply put, "playing against itself". It played against older versions of itself over millions of iterations and improved with each game.

A human would require two decades to learn and master Go; AlphaGo managed to achieve such success in 18 months. Our species have come a long way, but are limited by the effects of evolution. Although technology has not yet reached our level of intelligence, AI has only progressed over the last 50 years. Its greatest and most frightening strength is the ability to continuously improve. Until very recently this has been a result of direct human intervention; however, AlphaGo was able to improve mostly by itself. If such a machine managed to improve completely autonomously, this would become very, very dangerous.

Imagine an AI device designed to complete a specific task as efficiently as possible: a side effect of this Goal would be to avoid anything that may prevent it from succeeding at its task. Humans suddenly realize that the device has become too powerful, and wish to make changes or deactivate this device; meanwhile the device, focused solely on its objective, will make every effort to avoid these changes and as a result, we have just lost control of the machine.

The above example is taken from an open letter, signed in early 2015 by Stephen Hawking, Elon Musk and many others warning of the dangers of artificial intelligence. Elon Musk has even described AI as "summoning the demon." Of course, the letter mentions the great potential of artificial intelligence, with the possibility of eradicating disease and poverty, but more importantly it states the critical long term research required to maintain control of these devices. According to the letter and research from Stanford, losing control of these AI systems is a serious issue, and research to avoid these catastrophes must be done in congruence with current AI developments. So while we are busy creating amazing machines like AlphaGo, we must also create a way to disable them or a way for us to intervene.

In the Future, We Will Buy Friends

CYNIC
2A OPTIMISM

No matter how much we discuss the ethics or philosophy of Artificial Intelligence, this future is an inevitability: AI research will not cease, and machines will eventually be smarter than us. All we can do at this point is look ahead.

I foresee a future featuring extreme class divisions, in which the rich are flamboyant and spend-easy. The work they pay for would seem silly to us, but they are actually stimulating the economy. In a world where machines can perform all meaningful work, we must find new avenues of "work".

Take the example of a rich woman with no worries or responsibilities, who possesses the resources to pay out another's livelihood. This woman has her nails, hair, and makeup done (by a machine) every morning, because this obviously makes her more productive while doing nothing afterwards. That is the extent of the excitement in her day. Since she gets bored just sitting around looking attractive all day, she would like someone to talk to, and uses her unlimited credit to pay for this service.

In theory, this woman is paying for a servant. The servant can also help the woman get ready in the morning, and talk with her during the day. This is an interesting arrangement, because the woman is, in fact, paying primarily for companionship. Yes, machines may be capable of human-like interaction, but there is a lesser appeal of associating only with machines.

In a future world in which machines surpass us in all levels, there is only one thing humans can succeed in: being human.

Google Hires 4Chan Creator

CAMERON SOLTYS
3A MECHANICAL

On March 7, Google announced that it had hired Chris Poole, a well-known and controversial internet figure, to help them advance their social media endeavours. Poole, better known as "moot" is most famous for the similarly well-known and controversial website known as 4chan. Google's social media efforts—primarily Google+—on the other hand, are infamous for being ineffective, unpopulated, and generally unsuccessful.

In Poole's announcement on his blog, he states that he "…can't wait to contribute [his] own experience from a dozen years of building online communities…," a probably sign that he will be working on Google+ or some other venture designed to make Google more of a social media powerhouse. While it will be interesting to see how this will manifest itself, and if Poole's experience will be helpful, the real news story here is that a globally-recognized publically-traded company hired a person whose website brings together everyone from animal-protection advocates to neo-Nazis.

The website, of course, is 4chan. Poole created 4chan in 2003 as an image board for anime fans; someone could post a picture, along with some text, and others could respond with pictures or text of their own. Before long, the anonymity of 4chan attracted all sorts of people who were looking for free speech. In September 2015, Poole sold 4chan to 2channel, the anime and Japanese culture board that had originally inspired Poole to make 4chan.

While Poole may no longer be the owner of 4chan, his name (or more specifically, moot) is still strongly associated with it. This also means that he is associated with the tremendous amount of good and bad things 4chan has done over the years. This includes bullying, harassment, practical jokes, and supporting good causes, sometimes both at the same time.

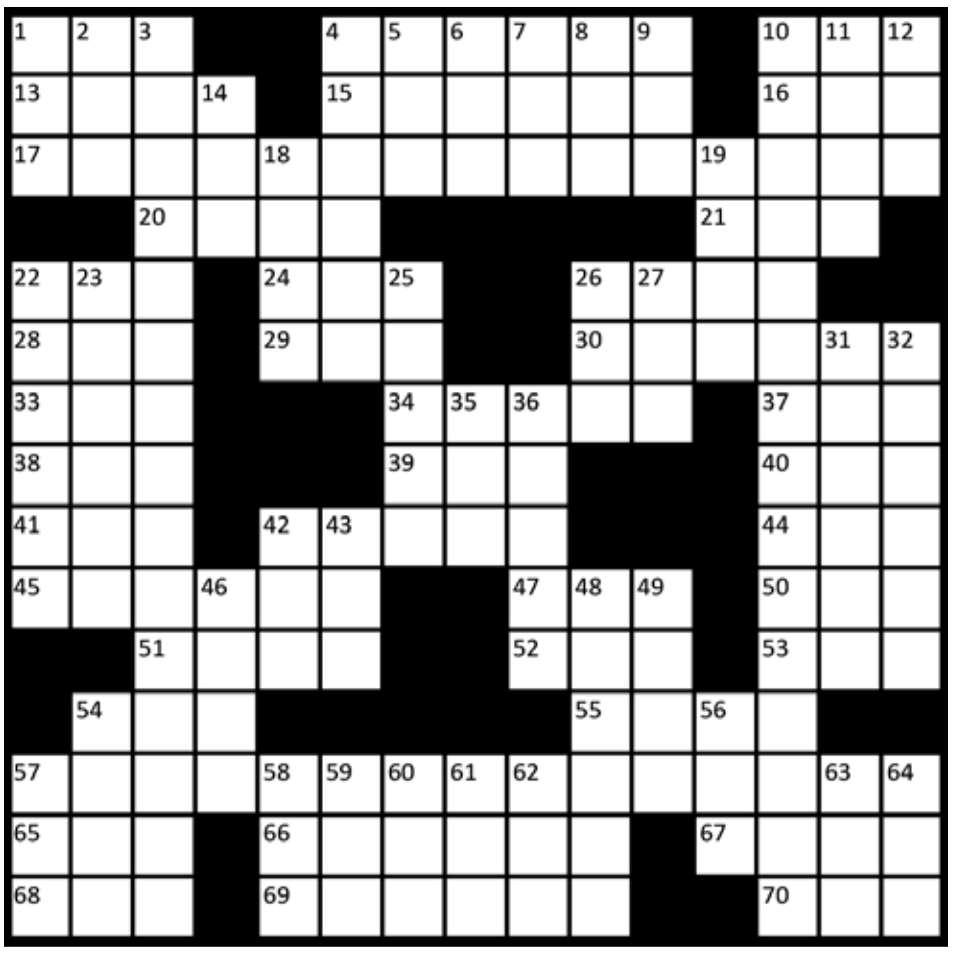
For instance, in 2009, Kenny Glenn posted two youtube videos showing him abusing a cat named Dusty. Members of 4chan and Anonymous, the 4chan-based hacktivist network, managed to get enough identifying information out of the videos to identify Glenn, passing his details on to the police. At the same time, Glenn's personal information was widely distributed, leading to numerous personal threats being made to him or posted online.

In a similarly high-profile, but less honourable case, the iCloud photos of celebrities that were leaked in 2014 were originally posted to 4chan. Other less-savoury aspects of 4chan also taint Poole's reputation: one board is famously anti-Semetic, racist, antifeminist, and popular with neo-Nazis. Another has been known to share, among other things, child pornography.

Poole's joining Google is definitely a surprise, given all the good and bad baggage he brings from 4chan. If he can save the long-doomed Google+, that too will be a surprise.

The Iron Crossword: Product Placement

CAMERON SOLTYS
3A MECHANICAL



ACROSS
1: Plane that is powered by the Brayton cycle
4: Large bird popular from Oct to Dec
10: Mathematical equation that has derivates in terms of multiple other terms (abbr)
13: A mental disorder in which there are problems paying attention
15: Citrus fruit that is also a colour
16: Done with an ointment or balm
17: A race done in teams of two where two arms and two feet are used
20: ___ Major and Minor, two constellations
21: Three months after 22 Across
22: Three months before 21 Across
24: A long time ___, in a galaxy far, far away
26: Used to wipe you shoes, perhaps (2 wd)
28: Hollywood studio of "Jurassic Park" and "E.T." (abbr)
29: SOH CAH ___
30: Italian word for "twelve"
33: ___ your Is and cross your Ts
34: ___ Arabia, oil capital of the world
37: AI being made by US firm Cycorp
38: Beer brewed without hops
39: LRT system being implemented in Waterloo Region
40: Gorilla or Human, for instance
41: Disease that affects the areas around cells in the lungs
42: Hip-hop, rock and roll, or folk, for instance
44: Guerrilla group lead by Joseph Kony that uses child soldiers (abbr)
45: Carl Sagan's 1980s TV show
47: Louisiana Public Broadcasting (abbr)
50: Used to hold water, wine, etc.
51: "___ is an illusion. Lunchtime doubly so." Hitchhikers Guide to the Galaxy quote
52: Encyclopedia previously known as the "Encyclopedia of Life Sciences"
53: suffix used to form the names of sugars
54: Greek god of shepherds and the wild
55: uncontrollable and destructive, "run ___"
57: "Oh Canada" for instance
65: Rock containing high-concentrations of a particular element or mineral
66: How much a feature can vary relative to a datum
67: Increases with the square of the size
68: Engineering-specific school in Montreal
69: Nation currently governed by Justin Trudeau
70: Health problem spread by intimate contact

DOWN
1: Bone used in talking and eating
2: Variant on Magic: The Gathering that uses 100 cards
3: Country with largest economy in the world
4: Republic of Trinidad and ___
5: Uwaterloo program that lets undergrads gain research experience (abbr)
6: Compressed file format that can famously be opened by WinRAR
7: The national railroad of South Korea (abbr)
8: One of Sigmund Freud's parts of the psyche
9: Type of wood often burned at Christmas
10: A trick or prank
11: Used to carry air, for instance
12: X-Files episode that introduced The Lone Gunman character
14: Possible pronunciation of ∂, the partial derivate
18: Standard exam required to get into law school
19: Used for driving, walking, or biking
22: Related to the Jewish faith or culture
23: Famous space program of the 60s and 70s
25: A spot of sanctuary in a desert
26: As opposed to subtract
27: French for "me"
31: Island off of Syria and Turkey
32: Movie staring a mammoth with a heart
35: The angle from straight-on (abbr)
36: The brother of your mother or father
42: The one who birthed you
43: Deploy or otherwise take advantage of
46: Small British car of the 1960s to 2000s
48: Springer Science Journal of botany
49: Below-ground level of a building (abbr)
54: Piece or subset
56: Governing body junior hockey in Ontario (abbr)
57: Olden-time spelling of the biblical Noah
58: Tolkien evil derived from elves and men
59: Net unrealized appreciation tax strategy (abbr)
60: American political commentator that claimed Canada fought in Vietnam
61: Spirits in Haitian Vodou
62: Currency used by "the land down under"
63: Most visited art museum in the world
64: As opposed to happy

Sudoku

#2016-04

CAMERON SOLTYS
3A MECHANICAL

Easy

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

Medium

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

Hard

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

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

THE IRON INQUISITION

Vince Magas, 3A Management

"How did you Celebrate St. Patricks Day?"

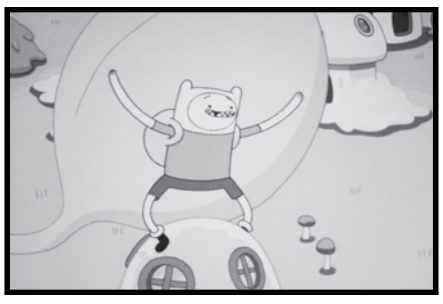
"At Laurier"
Anonymous

"Getting plus point in class"
Sarbajoy Majumdar, 3A VP Internal

"FYDP :("
Melissa Ferguson & Channa Potter,
4B Mech & Chem

"What did I even do yesterday?"
Josh Kaplin, 4B Software

"I overfed a strange dog"
David Birnbaum, 4B Civil



"I searched for leprechauns"
Finn the Dog King, 5B Adventure