



CLIMATE CHANGE

WHY WE HAVEN'T
DONE ENOUGH

FOOD FOR A HOT EARTH

HOW CLIMATE CHANGE IS
ENDANGERING FOOD CROPS
ALL OVER THE WORLD

Twinkie,
the Everlasting

Raine Light:
Aspiring Martian

This Is Why
We Leave



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EDITOR'S NOTE



ETHAN LOU
Editor-in-Chief
Arbitrage Magazine

I'm originally from Singapore, the funny little island that bans chewing gum. Legend says that pranksters used to stick them on subway door sensors. The doors could not close. That caused delays when subway employees had to walk the entire train to find the offending door. And thus, the government banned it.

(Another legend says that the ban happened when it was discovered that Singaporean chewing gum was made from used condoms, but we shall not go there.)

Singapore is also famous for another thing: its blistering heat. It's a place where you can sweat from simply thinking too much; where suits are pretty much unheard of; and where air conditioning is so prevalent, its abbreviation, "air-con," is understandable in all four of its official languages.

Growing up there, I naturally feel that climate change and

global warming are immense concerns.

Singapore's temperature is about 32 degrees Celsius all year round. And it just keeps getting hotter. There are many days when a young I thought I was going to melt.

And by extension, I always found it ridiculous that some would actually deny that climate change is happening.

To the doubters: take a trip to a tropical country. You'll be amazed at how quickly sweat can change your mind.

This issue is about climate change and the rising temperatures that currently afflict us. And I can say "us" in the very literal sense. Climate change not only affects everyone, it also affects every thing.

It affects sea levels and biodiversity. It affects agriculture and businesses. It permeates every aspect of our lives.

And it may be a slow

process, but remember that it was the tortoise that won the fabled race.

Temperatures only increase a fraction of a degree each year, but if unchecked, those fractions will become a furnace. Sea levels may rise just millimetres, but one day, those millimetres will form floods.

We may not feel the brunt of climate change, but our children will. And if they won't, our children's children will.

There's a phrase well-known in Singapore: "eye power." It is both a verb and a noun and refers to the act of watching others work, using one's eyes instead of hands. (E.g.: "Eh, Johnny! Stop eye powering and help out!")

Please, let us eye power no more. We don't own the Earth; we merely take care of it for the next generation.

Sincerely,

A handwritten signature in black ink, appearing to read "Ethan Lou". The signature is stylized with a large, sweeping "L" and a cursive "Lou".



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ANYTIME, ONLINE

TWINKIE, THE EVERLASTING

HOW A
COMMON SNACK
CAKE TOOK ON
BANKRUPTCY AND WON



WRITTEN BY: MEGAN GARTRELL

What keeps the Twinkie freshest has more to do with the airtight packaging than what is inside.

The Twinkie is set to make a return this month after more than half a year off the shelves. Its disappearance in November — due to financial problems of its parent company, Hostess — took North America by surprise that it made headlines for days on end.

It's hard to image any snack cake rising to the status of iconic — which is what makes the Twinkie so intriguing. Despite grocery store shelves stocked high with organic, low-fat, gluten-free products and mass pushes towards health and wellness in our schools and homes, the Twinkie remains. Like a whispered legend among generations, its appeal has stood the test of time.

Nestled in their packaging at convenience stores, Twinkie's are a go-to snack for children and adults alike.

Love them or hate them, you've heard of them.

Twinkies also appear where you least expect them: murder and bribery trials, wedding cakes, blogs and numerous references in any movie or television show involving nuclear attack thanks to the urban legends surrounding their shelf life. So, how did these tiny confectionary cakes come to be? In order to uncover why they have had such lasting power one must travel back to the 1930s.

How The Twinkie Was Born

The Continental Baking Company in Indianapolis introduced Twinkies in 1933. James A. Dewar, a baking manager at Hostess' Chicago plant, is its credited inventor.

Some products were seasonal, which meant machines often sat idle for months on end. Dewar wanted a simple treat that could use that equipment, and so the Twinkie was born.

He came up with the name after driving past a billboard with an ad for shoes from the Twinkle Toe Shoe Company.

He first injected the little golden cakes with banana crème filling but the Second World War brought with it a banana shortage, so in the 1940s, the filling switched to vanilla crème.

The Twinkie itself measures four inches long and an inch and a half wide. The spongy yellow cake is moist and light and satisfies sugar lovers.

Today's Twinkie has a much longer shelf life than the ones made in 1930, but not as long as doomsdayers would hope. A Twinkie's shelf life is officially 25 days according to Snopes.com. Even though the list of ingredients is a mouthful, it is a misconception that Twinkies are chemically preserved. Replacing eggs, butter and fats with monoglycerides, hydrogenated shortening, and cellulose gum is what keeps Twinkies from going rancid, but they aren't strictly preservatives. What keeps the Twinkie freshest has more to do with the airtight packaging than what is inside.

Brand Power

One of the reasons the Twinkie has lasted all these years is persuasive advertising. Like all big companies, Hostess clearly understood how important it was to create a persona and personality that accompanied the Twinkie. This wasn't simply a dessert; this was a snack movement. It started in the 1950s when Hostess used live television ads. Nostalgia plays an important role in many Twinkie lovers' memories.

Curled up on the carpet in front of the television watching the Howdy Doody Show, cowboy hats tilted forward, big smiles as Mom waltzes in with a big glass of milk and two Twinkies resting on a plate.

In an old YouTube clip of the show you can watch Buffalo Bob Smith

whipping up a batch of Twinkies and telling kids to beg their Moms for some of their own. Even Howdy himself shows kids how to find Twinkies in the grocery store. Popular taglines rang out, "the snack with a snack in the middle," and "you get a big delight in every bite."

These ads led to the creation of Twinkie the Kid, the cylindrical wrangler in a cowboy hat, has been a mainstay mascot for the snack cakes' advertising for decades. The year 2005 brought a modernization of the kid. He's jazzed up a bit now, resembling more of a brighter, cartoonish version of the original sketch.

Twinkies became a household name. They were deep-fried at state fairs and made cameos in movies like "Ghost Busters" and "Die Hard." In 1996, ad agency Campbell Mithun helped develop "Critters," a television ad that features a bear who mistakes a gold-coloured mobile home for a Twinkie and when he rips into the roof is disappointed to find humans inside.

He asked, "Hey, where's the cream filling?"

Consumers flocked to stores to clean out stock and there was an outpouring of woe dominating online chats with #LongLiveThe - Twinkie! appearing on Twitter

Hostess also created effective tongue and cheek commercials during the London 2012 Olympic frenzy. In these clever ads they showed average athletes failing miserably at sport. A golden Twinkie appears after the words, "reach

for the gold," and the message, "not a sponsor" follows.

Even President Bill Clinton put a Twinkie in the White House Millennium Council's time capsule alongside a piece of the Berlin Wall, a WWII helmet and a pair of Ray Charles' sunglasses.

Not all the attention was positive. The term "Twinkie defense" came out of the 1979 murder trial of Dan White, whose lawyers included his obsession with junk food like Twinkies and Coca Cola among the evidence of his altered state of mind.

Even Bankruptcy Could Not Keep those Airy Treats Down

Twinkies were front-page news in the United States after Hostess Brands Inc. filed for bankruptcy in November after an extended standoff with the Bakery, Confectionery, Tobacco Workers and Grain Millers International Union.

Consumers flocked to stores to clean out stock and there was an outpouring of woe dominating online chats with #LongLiveTheTwinkie! appearing on Twitter and Twinkies being sold at the jaw-dropping price of thousands of dollars on Craigslist and Ebay. There was even a petition campaign to ask President Obama to help save the Twinkie.

But it wasn't long before the public's cry was heard and the problem rectified. A bankruptcy judge approved the sale of Twinkies and other Hostess brands to two investment firms, Apollo Global Management and Metropoulos & Co. for \$410 million. Dean Metropoulos, the 66-year-old founder of the firm will serve as CEO. But he is leaving the revitalizing of the Twinkie Empire to his two sons—Daren, 29, and Evan, 32.

These new bosses are excited for the future of Twinkies and promise to have the cakes back in consumers' hands by the summer.

Evan Metropoulos told the Wall Street Journal, "We have a million A-list celebrities and athletes and so forth that are dying to be associated with the Hostess brands like Twinkies."

He is hoping funny men Will Ferrell



and Zach Galifianakis might sign on with quirky, viral ad campaigns. By using celebrities, they hope to reach a larger, younger audience.

To Time magazine, Daren Metropoulos said, "I think a lot of it will be guerrilla marketing that we've done with many other brands in the past, building on the retro nostalgia of these brands. Certainly there will be an element of social media marketing, through Twitter, through Facebook, through Instagram, to really get some great viral buzz."

Despite the financial struggles of the Hostess Brands in the past, the Metropoulos' are confident that saving the Twinkie is a savvy business investment.

Amid all the Twinkie hoarding panic, Canadians had little to worry about. The bankruptcy and sale of the brand did not carry over into the North. Canadian brands that own the licenses for Hostess products in Canada, like George Weston Ltd. and Saputo Inc., continued with their normal production

levels of the tasty treat, and guarantee Twinkie snack time is not in jeopardy for Canucks.

Is The Twinkie Worth Saving?

Nutritionists wouldn't mind if the Twinkie took a well-deserved hiatus. Each one packs around 150 calories. Many local bakeries are taking creative twists when it comes to reinventing old favourites like Twinkies, Ho Hos, and Ding Dongs. But this means the use of fresh products, while delicious and healthier, are not as cost effective.

It begs the question should Apollo Global Management and Metropoulos & Co. try to produce a cake that harkens back to the 1930s original or stick to the old "If it ain't broke don't fix it" motto? Does the profit of nostalgia alone justify the continuation of something bad for consumers?

Changes to the iconic brand could destroy the nostalgia factor, something required at least for now if this brand wants to make a massive marketing push. Whatever direction these new

entrepreneurs decide to go one thing is certain, the Twinkie is here to stay. Whether that is a good thing all depends on your taste buds. ■

Megan is a freelance writer/editor living in Victoria B.C. whose passions include fiction, poetry, music and dance.



Who We Are

The National Finance Student Association is a non-profit, student-run initiative, which aims to enhance student leadership in finance by both motivating and providing our members with the resources they can use to be better equipped and competitive in the marketplace. These are goals we intend to achieve during our upcoming seminars, workshops networking sessions and competitions.

Commitment

We are committed to creating a nationwide network bringing together finance students and faculty from universities across Canada, with the aim of sharing knowledge, skills and resources. Currently, we have partnerships with finance clubs from the University of Toronto, McMaster, Ryerson and York, with plans to add many more by year-end.

Our Purpose

We are a base for bright, hard working and creative minds who wish to contribute their thoughts and share their ideas. As companies require such individuals for their long-term growth, the NFSA will strive to provide our membership with tools, insight and employment opportunities that they would not have received elsewhere.

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TO UPVOTE A BUSINESS

A RYERSON
UNIVERSITY
STUDENT IS SET TO
LAUNCH AN ONLINE
VIDEO HOSTING
AND AGGREGATING
STARTUP AKIN
TO THE POPULAR
IMGUR

WRITTEN BY: AZIM AHMED

Klipur will be like reddit — Social news website that is socially curated by users — but for videos

Nick Jessop has the entrepreneurial bug. At the age of 20, he is already embarking on his second business launch. Even before the launch of Klipur this month — a website that puts a different spin on community-based video sharing — Jessop has already started, developed and then subsequently sold a web-hosting startup.

Jessop, of Stratford, Ont., is going into his third year at Toronto's Ryerson University, studying graphics communications management.

"It's a mix of everything that interests me, and while it's not directly related to what I'm doing with Klipur, it helps," Jessop says on his program.

Digital media is clearly a hot market right now, and many startups are striving to capture some of that heat. While many are well-intentioned,

they too often neglect to differentiate themselves from an increasingly saturated market.

Jessop's Klipur, however, he said, is aiming to develop its own niche, and feed off of, rather than simply replicate, the success of behemoths such as Youtube and Vimeo.

Klipur essentially combines various traits from other social media outlets including Facebook, Youtube, and Reddit, before adding its own fresh take. It takes video-sharing — itself not a unique concept — and emphasizes the enticing elements of community and popularity.

Users can vote on videos, helping to bring them up and down to the 'top of the list'.

As Jessop describes it, Klipur will be like Reddit — social news



website that is socially curated by users — but for videos. Finally, utilizing social media staples such as profiles and postings adds the now essential social aspect to the mix.

While advertising will be used to some extent, its founder said he is focusing more on sponsored-videos to boost revenues.

“Having sponsors for the videos would be a better revenue stream I believe, because you pay to have your video at the top of a certain collection, so it appears that this video has to be pretty important if it’s with the other popular videos,” says Jessop.

Despite his young age, Nick Jessop says he will also use his past business experience to his advantage. While still in high school, he decided on a whim he wanted to create a website, despite having no formal training on web development.

After applying and getting a \$3,000 grant from the Ontario Summer Company program, and self-teaching himself on the area of web design, he started a web-hosting company.

Jessop says he will reap the lessons he learned from this first venture — namely, not to spread himself too thin.

“One big mistake I had made

was trying to do everything — and be everything,” he says. “I would see huge web-hosting sites, and think that I want to be like them, and have all these cool features they had.”

“But looking back on it now I should have just stuck to one little product, and tried to drive sales with something on the website like a big call to action, and one or two products on it,” he added. “Now, I know that I can always expand later, and try to cut down costs as much as you can right from the start.”

Jessop says he also learned that as an entrepreneur, it’s imperative to always keep growing. He continues to learn new programs and trends,

Emphasizes the enticing elements of community and popularity

relishing the concept of being self-taught.

While he is a one-man show with Klipur, doing everything from programming, to designing, to marketing, to social media, he says he recognizes part of the business goes beyond his skill-set. The more technical aspects of the website are

sub-contracted to a developer in the United Kingdom.

Meanwhile, Jessop continues to juggle student and work life with his business, which is he running alone. Recently completing his second year of studies at Ryerson, he continues to do web development work on the side.

Klipur has been in conception for years, but Jessop says he only put consistent work into it in January, signaling a rapid six-month timeframe from beginning to expected launch.

“Klipur’s been on the side with school and work for the most part, but I’m still trying to put a lot of hours into it because I believe it can be something special,” he says.

Despite its rapid ascent, Jessop says Klipur’s launch is already later than intended.

But it is one that will stay.

Though the young entrepreneur ran his previous business venture for about 18 months before passing it off in a private sale, Klipur will not be sold — or, at least, in the near future.

“I’d want to stick with Klipur as long as I can and help it expand, but it would be awesome if it got big enough to be bought,” he says. “I’m sure that would be a very attractive offer.” ■



WRITTEN BY: OCEAN-LEIGH PETERS

THIS IS WHY WE LEAVE

THE NEW BRUNSWICK TORIES ARE BREAKING ELECTION PROMISES TO NOT RAISE TAXES IN THE MIDST OF A SLUGGISH ECONOMY. INCREASINGLY, STUDENTS ARE SEEKING CAREERS ANYWHERE BUT NEW BRUNSWICK.

"The number of new graduate job openings is limited and gives a whole new definition to 'you need to know someone' to get a job"

New Brunswick students are fleeing the province with unwavering certainty in search of careers and cash in the western provinces as the economic and employment situation worsens in the Maritimes.

New Brunswick Premier, David Alward, assured Newbrunswickers in his 2010 election campaign that his Progressive Conservative government would lessen the deficit without raising taxes.

But it has effectively broken its promise as New Brunswick's deficit worsens while both personal and corporate taxes increase.

Combine the less than ideal fiscal situation in the province with increasing rates of unemployment, and you have a recipe for a steady outward migration of university graduates and young workers, who are looking westward for job

opportunities and a stable economic future.

In 2011, in an attempt to decrease the growing deficit in New Brunswick, the Alward government reneged on a promise to allow for the continuation of the four-stage tax cut plan set in motion by former Premier Shawn Graham.

Recently the Alward government has continued to break its original election promises with personal and corporate income tax set to increase this summer. New Brunswick's Finance Minister, Blaine Higgs, announced that on July 1 personal income tax will increase by up to 33 per cent, with corporate taxes being raised 20 per cent. Along with the income tax increases comes an increase in tobacco tax.

When combined, the tax increases will reach approximately \$200 million, which will surely be felt by New

Brunswickers including students and recent graduates.

Alward also assured the province that he would balance New Brunswick's budget before the 2014 elections; another promise he was unable to keep as the province's deficit increases from the estimated \$411 million to an expected high of \$478.7 million.

The province's net debt is expected to increase by \$594 million to \$11.6 billion by March 2014.

During these times of economic hardships, it is no surprise that unemployment has increased in New Brunswick. As the provincial deficit grows, so does the unemployment rate. Since mid 2012 the unemployment rate has risen above 10 per cent and has fluctuated between 10 and 11.5 per cent in the past 10 months.

The University of New Brunswick Saint John graduate Sanjeevan Thavaratnam says he is concerned for the economic situation in the province.

"I believe the current government may be stuck in trying to boost the province's economy," says Thavaratnam, "A large part is that they are trying to lower the deficit and cannot seem to create any new tools to get more revenue in."

Thavaratnam returned to his Ontario home after he graduated from university in New Brunswick to be closer to family, but not before he observed the difficult situation facing graduates who are seeking employment in a province with less and less opportunities.

"The number of new graduate job openings is limited and gives a whole new definition to 'you need to know someone' [to get a job]," says Thavaratnam.

University graduates and young New Brunswickers are among those who are leaving the province in search of better employment opportunities. The province has lost approximately 4,400 jobs since 2010, making it difficult for inexperienced, yet educated students to find jobs and potential careers at home.

Jenna Strang is a graduate from

Mount Allison University who moved to Alberta to find employment. She feels she was forced to leave her home province of New Brunswick due to the poor economic conditions and dwindling job opportunities.

"I would honestly love to live my entire life in New Brunswick, it's a beautiful place to live, but without sustainable work I cannot afford to stay," says Strang.

Strang says to applying to several hundred jobs all over Canada after graduating in 2012 with a degree in Environmental Studies.

"The first and only offer I got was a position in Alberta," says Strang, "I didn't want to leave home but I had no choice, I had to take the opportunity."

"There needs to be a larger focus on job creation; if New Brunswick wants a growing economy [the government has] to invest in it."

Strang is now an Aboriginal Engagement Facilitator in Calgary for the environmental consulting company, TERA Environmental.

Another student, Stephanie Totten is currently studying sciences at the University of New Brunswick Saint John and will be graduating in 2014 with a degree in Health Science and Radiography.

Totten, like Strang and many other New Brunswick students, intends to leave the province upon the completion of her degree.

"Even though I think I could get a job in my field," says Totten, "I feel like my earning power is limited in New Brunswick."

Despite planning to leave the

Maritimes for work, Totten says her university experience in New Brunswick has been beneficial.

"New Brunswick has a lot of great things to offer students, like small class sizes and great professors. I think [it's] a good place to go to school, I'm just not sure about the job prospects available." University graduates are among those who are feeling the strain of New Brunswick's financial problems. As the deficits grow and debt rises, jobs begin to disappear and so do the young educated students in the province.

Strang says that before leaving the province for employment in her field, she was forced to work two minimum wage jobs. During this time she seriously questioned her decision to attend university in the first place. Students all over New Brunswick are faced with a similar discouraging situation.

"You spend all this money trying to get ahead and then end up working a minimum wage job trying to pay off the student loans you compiled," says Strang.

With money and jobs becoming scarce in the Alward Government's New Brunswick, it's not surprising that students are continuing to take their educations, skills, and careers further west.

In order to rebuild a economically solid and sustainable province, the Alward Government needs to focus on keeping young new workers in the province with better job opportunities.

"There needs to be a larger focus on job creation; if New Brunswick wants a growing economy [the government has] to invest in it," says Strang, "A good economy is sustainable, it maintains itself by constant input and output." ■

Ocean-Leigh Peters is an aspiring journalist from Sussex, New Brunswick. She is a recent graduate from the University of New Brunswick Saint John with an English honours degree, and will be studying Journalism at the University of King's College in the fall.



RAINE LIGHT

ASPIRING MARTIAN

A MARS ONE APPLICANT EXPLAINS WHY SHE WANTS TO TAKE A ONE-WAY TRIP TO MARS

WRITTEN BY: VIVIANE FAIRBANK

"I don't know if I am any more of a good candidate than anyone else. But I would be giving it 110 percent."

"Only five words?" Raine Light asked, after being told to describe herself simply.

There was a long pause.

"Reliable, adventurous, trustworthy, honest, good friend, communicator," the Mars One applicant finally decided – seven words, none of which are specifically included in the list of characteristics that Mars One, an organization sending four humans to Mars by 2023, is looking for in its candidates.

Mars One says on its website the selection of future Martians is based on the following qualities: resiliency, adaptability, curiosity, the ability to trust, and creativity or resourcefulness. An advisor in charge of the selection process, Raye Kass, says "the key factor related to all these qualities is attitude."

And Light definitely has attitude — of the sweet but determined kind. Since Light's discovery of the Mars One mission April of this year, she has started a "Going to Mars" blog and has been interviewed by CBC's *The Current*, Hamilton's *Matt Holmes Show* and *The List*.

Light's enthusiasm is overwhelming.

And yet, Light's goal during her interviews appears not to be bringing attention to her own candidacy, but instead, to promote Mars One's overall campaign.

"One of the key questions that I've been asked is, 'What do you fear the most?'" says Light. "My honest response is that I fear that the project is not going to follow through. At some point it will get cancelled, or just won't get funding, or for whatever reason it just won't happen."

Light hopes that constant publicity for Mars One will help them to acquire the funding that they need – which, for now, is approximately \$6 billion for the first four Mars settlers, and \$4 billion for each group after that, according to *The List*. Not a small amount to be raised through campaigning.

Part of Mars One's funding will in fact come from the operation of the mission itself – the process will be filmed for the world to see, as a sort of reality television show.

Bas Lansdorp, co-founder and CEO of Mars One, tells *The List*, "That sounds like a lot of money and of course it is a lot of money, but if you compare it to the

reviews of another major media event like the Olympic Games, it really is not so much. The International Olympic committee in the Olympic Games in London had revenues of... more than \$1 billion per week, just because the world is watching."

So travel to Mars may really happen, if we all watch it on TV, and Light says she's prepared.

Her life has certainly been full of travel already.

"My childhood was unique in that we were always moving, we never really stayed in one place longer than three to four years," says Light, who has moved with her family to France, the United States and Trinidad and Tobago, among other places.

"It really does have an effect on my dedication and my desire to go out and do this," says Light about her travel habits. "[My brother and I] learned to be very self-reliant and very open and tolerant of different cultures and people and experiences. Taking that experience and putting it into effect is one of the reasons I'm very keen on doing this."

Light has always been interested in astronomy, but quietly. It was only when she read about the Mars One project in a news article that she decided, "Why not?"

"I've said in the past that [my application] was kind of on a whim," says Light. "But it wasn't so much on a whim as it was a spontaneous 'Holy cow... I want to be a part of this.'"

Her application process, following a \$33 fee, included about five pages of essay questions about her past, different situations that she has found herself in and her reasons for applying to the program. Light also shot a one-minute video describing her candidacy, which is the only part of her application that can be seen on the Mars One website.

It took Light about a day and a half to complete her submission, a length that she blames on her own perfectionism. She rewrote her answers more than once before submission. This meticulous enthusiasm is what Light thinks will help her to stand out from the thousands of other Mars One

applicants. "I don't know if I am any more of a good candidate than anyone else. But I would be giving it 110 per cent," she affirms.

This extra 10 per cent of effort can already be seen on Light's Wordpress blog, "Going to Mars," which she started when she first found out about Mars One. Since the blog's start in mid-April, Light has been recording her reflections on Mars, while also posting links to relevant articles and websites.

Mars One's widely circulated introduction video, "Mars 2023: Inhabitants Wanted," was her fourth post.

It calls for people of all nationalities to apply for the one-way trip to Mars, set to take place in 2023. No scientific background is required for candidacy, simply good health, psychological stability, and the capacity for self-reflection, among other qualities, says the Mars One website.

Of the hundreds of thousands of applicants, some will be invited to meet with a Mars One committee to conduct an interview. The selection process after that will be centered on the basis of reality TV.

Those with successful interviews, about 20 to 40 people in every country, will participate in a series of challenges testing their abilities, which will be broadcast internationally, allowing the audience to select one winner per country. Mars One will also select its own winners to continue with the selection process.

The next stage sees participants showing their capacity to live in the harsh environment of Mars and to work under different likely circumstances. A replica of the Mars settlement will be built on earth, where once again, television crews will be broadcasting the events internationally.

In the end, six groups of four will be selected to train for a one-way trip to Mars, and four people will take the first trip, with two to follow every two years.

"The problem that I see with [this process] and reality TV is that it has a very short nature," says Light. "People's attention spans will be short; they'll

like a show for a couple seasons but then something bigger, more interesting comes along."

Nevertheless, the fact that the entire world is watching is one of the reasons that Mars One expects its endeavour to be a success. "The Mars One project

Mars One's website says that the organization's goal is to "unite humanity" in exploration, similar to the effect that Apollo 11 had in 1969.

is idealistically set on colonization," explains Light.

Light, who is currently studying to become a paramedic and working as a first aid and management operative in a construction site, is 29 this year. If she's accepted as a Mars One participant, the required 10 years of training for the program will make her 39 by the time she takes the expected seven-month one-way trip to the red planet.

And Light says she cannot imagine anything changing her mind during those years.

"I'm really excited and passionate about it right now, and if things start to pick up and become more of a reality, then obviously I will be on board," she says. "It will take something really big for me to change my mind."

Before departure, if Light does get accepted, she hopes to visit every country on this planet at least once – wanderlust cannot simply be abandoned for 10 years of astronaut training.

Yet, it does seem to be satisfied by a one-way trip to Mars. ■



ARBITRAGE

THE NIGHT OF NO SLEEP

IT SEEMS AS THOUGH THE PRODUCERS OF HIT MOVIE *LIMITLESS* MIGHT HAVE BEEN ON TO SOMETHING. AS IT TURNS OUT, A REAL LIFE VERSION OF THE DRUG NZT-48 MAY ACTUALLY EXIST.

A super drug exists that allows its users to sleep a mere two hours a day, while increasing attention to detail and an increase in daily productivity. What is this magical drug you might ask? It goes by the name of "Modafinil."

Modafinil, now more commonly sold as the US brand-name drug "Provigil," was originally created in France to treat people with sleeping disorders such as narcolepsy and extreme insomnia. It is believed to have been developed in 1986.

Later, it became a regular prescription drug under the name "Modiodal."

In theory, Modafinil is ideal for those with sleeping disorders, but it also has multiple uses in the professional and educational world.

Soldiers serving in the army, who must learn to grow accustomed to days or even weeks without sleep while performing with optimal concentration, strength and focus, would probably be first in line for a revolutionary drug like this.

Everyday people, blue- and white-collar workers, would also benefit from the drug.

But as superhero tales remind us time and time again, with great power comes great responsibility.

Because of it being relatively new on the market, there isn't much extensive research available on its long-term side effects.

In fact, according to the U.S. National Library of Medicine's Medline Plus, the only real side effects reported to have occurred involve things like nausea and headaches.

However, users are warned that it can also get a bit more serious. For women who take birth control pills, Modafinil can lower its effectiveness. In some cases, it can accelerate your heartbeat, make you hallucinate, or cause anxiety.

But why the craze now? After all, this drug was first created in the 1980s, so why are we now hearing about it?

Well, the answer might be able to be summed up in two words: modern society.

In our fast-paced, ever-changing society, it's becoming increasingly more difficult to keep up with our day-to-day demands. Couple that with rising bills, education fees, cost of living, healthcare etc., and you've got one heck of a chip on your shoulder.

For most post-secondary students, all of these factors are intertwined into one major headache. Students are only now starting to receive benefits from educational and government institutions, such as health and dental care, accommodations for people with disabilities, etc., for a somewhat balanced, manageable life.

In Canadian college and university life, where Modafinil is arguably more of a need for the average student,

the question isn't whether you should use Modafinil, but rather what happens when you do.

Though Modafinil recently became popularized in the United States, with the approval of the Food and Drug Association (FDA), a division of United States Department of Health and Human Services, Canada was not so adamant about its distribution.

Despite its commercial success in the U.S., the Canadian government has yet to add it as a controlled substance to the Controlled Drugs and Substance Act. This means that if you're travelling with it at the airport, the Canadian government reserves the right to seize and detain it for not being a recognized controlled drug.

For young students across Canada, this may seem like a huge tease, for Modafinil works exponentially better than most stimulants like nicotine and even caffeine, the most popular pick-me-up in the world.

For us desperate Eddie Morra's out there eager to get our lives out of the muck, this is an opportunity of limitless potential during a crucial time.

Infinite amounts of energy, focus and concentration not only augment grades, but add to overall social well-being. Not to mention Modafinil could possibly become the most sought-after party drug ever.

Let's do the math: If each

user spends 22 hours a day awake for seven days a week, that's roughly 154 hours spent awake each week.

In one year, the average user would spend more than 8,000 hours awake. Such a drastic shift in this demographic would undoubtedly change the way our society operates.

Less amount of sleep means more activity at virtually any time of the day. It means late or all-night cafes, pubs, and bars will become more and more normalized. It means commercial department stores that cater to young people will be open around the clock.

It also means that a shift in our society's view of lack of sleep will have to take place. Are we ready to accept that a change in sleeping patterns -- and consequentially a change in lifestyle -- is something we can no longer deem as «unhealthy»?

Professor Molly Cahill of the University of Pennsylvania writes in the BioEthics Journal that what makes Modafinil so defining is «its power», and that «the key to limitless productivity, energy, focus, and just plain feeling good every single day can now be found in 100-200 mg capsules».

One can only hope that this drug is not too good to be true. Only time will tell. ■

LINDSEY ADDAWOO



HOT POTATO

CLIMATE CHANGE IS AFFECTING THE GROWTH OF POTATOES, THE WORLD'S FOURTH LARGEST FOOD CROP

WRITTEN BY: GRACE KENNEDY

"The diet that we have is going to have to change even more to get what is essential for our bodies to be healthy."

It's a clash of the scientists when it comes to the future of sweet potatoes in a carbon saturated world. From Hawaii to Peru to the Annapolis Valley, the importance of change in the developing world's fourth largest food crop is of varying degrees.

Benjamin Czeck, a graduate student at the University of Hawaii, conducted a study in the fall of 2011 on the effects of CO₂ on sweet potatoes. He looked at four different concentrations of carbon dioxide, and found the sweet potato root could grow up to twice its normal size when there was nearly four times the current amount of carbon dioxide in the atmosphere.

Czeck also found decreases in several micro-minerals, such as iron, phosphorous and manganese. Iron, which is beneficial for bones, blood and protein fixation, decreased by as much as 45 per cent; phosphorous, important

for energy, protein, and bones as well, by 25 per cent; and manganese, which is an anti-oxidant to help with tissue health, by 75 per cent.

In addition to these, the protein content in sweet potatoes also decreased by 32 to 43 per cent, while the increased carbohydrates by 4 to 4.7 per cent. Although sweet potatoes are not a significant source of protein - there are only about 1.37 grams of protein in 100 grams of an orange-fleshed sweet potato, or about one paper clip in half a cup of water - this is still a substantial change.

"Because we have high obesity rate and we're not good at eating food with these sorts of minerals, eating vegetables and stuff like that, it's a negative thing," says Czeck on the nutrition changes.

"In the future, if this is a response - this decreased protein, increased carbohydrates and decreased minerals

– the diet that we have is going to have to change even more to get what is essential for our bodies to be healthy.”

The nitrogen levels in the soil remained the same for each level of carbon dioxide, and this is where other scientists begin to have issues. Nitrogen helps to change the sugars created by photosynthesis into protein for the plant’s long-term use; if there is more carbon dioxide, there will be more sugar, and less nitrogen to change it into protein.

Czeck doesn’t think that the sweet potato would be able to take up more nitrogen from the soil than it already able to do, but others such as David Burton, an agriculturalist at Dalhousie University, and Viliam Zvalo, a horticulturalist with the company Perennia, think that it will.

If sweet potatoes can take up more nitrogen, then there is a possibility that the protein content would remain stable.

“It’s not an issue for us here, because sweet potato is such a minor part of our diet,” says Zvalo from his office in Kentville.

“It would not really impact human health in any way, if we had a decreased percentage of those elements. But in the developing world where people’s diets are based on sweet potatoes, that could be a different issue all together.”

For people like Wolfgang Gruneburg, a sweet potato breeder and geneticist in Peru, the problem with Czeck’s study was its academic nature, neglecting the importance of other factors in the growth and nutrition of sweet potatoes.

“This article that sweet potato was producing twice as much – interesting study, but it is not so much on the ground at the moment,” Gruneburg said in a Skype interview from Lima.

“It’s a little bit more – I don’t want to say this was a wrong study or the data is not okay, this is exactly not. It can be absolutely true, but this situation will not come tomorrow, and most likely not in twenty years.”

Czeck agrees. The highest level of carbon dioxide in his study was



If there is more carbon dioxide, there will be more sugar, and less nitrogen to change it into protein.

almost four times as much CO₂ than is currently in the atmosphere, and he thinks this could be a reality in 200 years, not 20.

“I think in going forward with these sorts of experiments temperature, drought conditions, water supplies, those sort of questions need to be approached because those are going to be a lot of the problems that we’re going to be facing, especially in developing countries.

“If we’re going to relate this to agricultural production, we’re also going to have to understand other sort of hurdles we’re going to be facing which are going to be high, extreme temperatures and drought issues.”

Increasing concentrations of CO₂, according Burton, would bring mixed benefits to Nova Scotia’s fledgling sweet

potato industry.

“In agriculture we have looked at some of the positive impacts of that,” Burton said about the increasing carbon dioxide from his office in Truro.

“In terms of regions like Nova Scotia, crops like sweet potatoes have been a challenge here because we don’t have a very warm or very long growing season. So there could be some positive impact in terms of the total number of heat units we’re exposed to and also the length of our growing season. But the potential for more extreme, intense weather events may offset that positive.

“So there’s concern that while we may have warmer, wetter future that would be more conducive to the production of crops like sweet potato in Nova Scotia, there’s equally a concern that this extreme weather may not



“...developing a greater diversity of products, like sweet potatoes... are probably really key to agriculture’s sustainability”

allow us to realize that.”

The current production of sweet potatoes in Nova Scotia is a recent development spurred on by Zvalo.

“It started about 10 years ago when I went to a conference in New England, and realized they were growing sweet potatoes,” he said in a phone interview.

“That made me wonder – if they can do it in Maine, why can’t we do it here? So, I talked to Agriculture Canada ... and we started a regional project that looked at 17 different varieties of sweet potatoes, and how they would be suitable to the region.”

Zvalo worked with Keddy Nursery, who is currently the only major producer of sweet potatoes in Nova Scotia. There are a number of smaller producers as well, but none of them are on the same scale as Keddy Nursery.

Exactly how Nova Scotia’s sweet potato industry will be expanding in the coming years is uncertain – Zvalo said that its growth would be tied to the ability to invest in processing and storage facilities.

Sweet potatoes need to be cured if they are to get their recognizable texture and taste – being saturated in heat and humidity for six to eight weeks helps increase their sugar content and reduce shrinkage in storage.

“Producing sweet potatoes is one thing, but storing, long-term storage is another thing all together,” Zvalo said.

“This one large producer [Keddy Nursery] has invested into a long-term storage last summer, so he’s involved and the quality of the product is excellent. But the future growth of the industry will depend on the ability of the growers to invest in storage. And that’s really hard to predict.

“We could grow the crop, there’s really no magic to it. There’s some expertise or knowledge, but that can all be learned. But the capital expenditure on the curing and storage facility is going to limit growth in the industry.” But how will the results of Czeck’s study, if they do become reality in the next 200 years, affect the Nova Scotia sweet potato market?

“I think one of the big movements in agriculture is a desire to move to more local food sources, and I think agriculture needs to diversify and sell more directly to the consumer,” Burton said.

“So I think developing a greater diversity of products, like sweet potatoes, those sorts of things, are probably really key to agriculture’s sustainability.”

Sweet potatoes come in many different varieties, and since the vegetable makes six different copies of its DNA, instead of two like humans, there could be a greater potential for adaption in adverse climates.

Czeck thought of the market in

global terms.

“Right now we consume a lot of wheat, corn, soybean, rice globally,” he said, “but a lot of these crops don’t respond to CO2 in the same way that root crops do.

“Globally it could change the way we approach our agricultural practices, maybe convert to more root crop-type diets while also figuring a way to do this transition in a sustainable, societally accepted way. I think if you were to say: everyone has to start eating sweet potatoes or carrots or whatever it may be – it’s going to have to be a way to transition that works for all.”

Gruneburg, however, thinks this is thinking too far ahead.

“200 years, wow,” he paused and laughed. “Sorry, I’m laughing because I was thinking about one of my professors, when I had such a discussion with him, and he said ‘right well, if humans will still exist in 200 years is also another question.’

“What is in 200 years is very difficult to say ... The animals we grow today are in a very protected environment, for chicken or for pigs it is a very industrial environment, but it is a very protected environment. There is no pig anymore which needs air to run around in the winter.

“In 200 years perhaps crops will be planted in factories in a nutrition solution without soil, I don’t know. But what is more important is what is in 20 years or 40 years or so.”

Or, as Zvalo put it more succinctly: “There’s so many things at play that I wouldn’t worry too much about that at this point.” ■

FOOD FOR A HOT EARTH

CROPS OF FOOD STAPLES COULD BE IN DANGER AROUND THE WORLD, LEADING TO INCREASED HUNGER IN DEVELOPING NATIONS.

On coffee plantations around the world, the temperatures are changing. The weather has become increasingly unpredictable; the heat of the tropical valleys is creeping up into the cool highlands. The delicate cycle of wet and dry seasons, essential for a healthy coffee tree, has been getting wetter and wetter. The long, green coffee leaves are turning brown, 'rusting,' as a fungus that has always died in the cool, dry weather survives to ruin plantation after plantation.

A study done in 2012 by the Royal Botanic Gardens in London, England warns that by 2080, Arabica coffee plants could be entirely extinct in the wild. We'd still be able to rely on domesticated varieties, but the study warns that prices would go up and quality would go down. And your morning pick-me-up isn't the only thing in danger.

As the world gets warmer, the foods we eat most often, including wheat, rice, and corn, will become more difficult to grow. The International Food Policy Research Institute, an independent American think tank, conducted a study in 2010 in which showed that while climate change will affect different regions of the world in different ways.

The study said, "Global cereal production will be between 3.2 and 8.2 per cent lower with climate change than in a perfect mitigation scenario, where all greenhouse gas emissions are halted and the inertia in the

climate system is overcome."

In an online analysis report, the IFPRI research fellow Nicholas Magnan writes that according to the report, wheat production worldwide could drop between five and 10 per cent, maize or corn production between two and 10.5 per cent, and rice four per cent, depending on the climate scenario. An earlier study by the same institute found that in Sub-Saharan Africa and South Asia, rice



"...genetically modified wheat has not been approved for use Canada."

production could drop by as much as 15 per cent.

While coffee farmers dread the increased rain, those growing wheat and corn are likely to suffer from hot, dry summers. Rice, often grown in low-lying regions like Vietnam's the Mekong River delta, is more likely to succumb to flooding.

Grains aren't the only staple food to feel the heat; soy plantations are also vulnerable to rising temperatures. The World Wildlife Fund estimates that by the year 2070, the

area of land suitable for soy production could drop by as much as 60 per cent if faced with drier, hotter summers. According to a 2009 research paper by Wolfram Schlenker and Michael J. Roberts, soybean plants have a temperature threshold of about 30 degrees Celsius. After that point, the plant's yield drops dramatically.

The U.S. government reports that soy is the second most-planted field crop in the United States, ranking just below corn, bringing in over US\$37 billion for farmers annually.

In order to salvage as much agricultural land as possible, studies suggest that adapting growing seasons to suit a hotter climate, as well as taking measures to avoid eroding soil could be useful. Solutions can also involve changing farming methods to be more conservative, saving as much water and energy as is possible.

One study, *Climate Change: Can Wheat Beat the Heat?*, published in *Agriculture, Ecosystems and Environment* in 2008, puts forth the conclusion that in addition to changing farming practices around the world, it could also be beneficial for scientists to focus on breeding strains of wheat that could withstand high temperatures and drought conditions, ensuring income and food for people around the world.

"Wheat breeders should start genetically enhancing the crop to maintain yield under higher temperatures

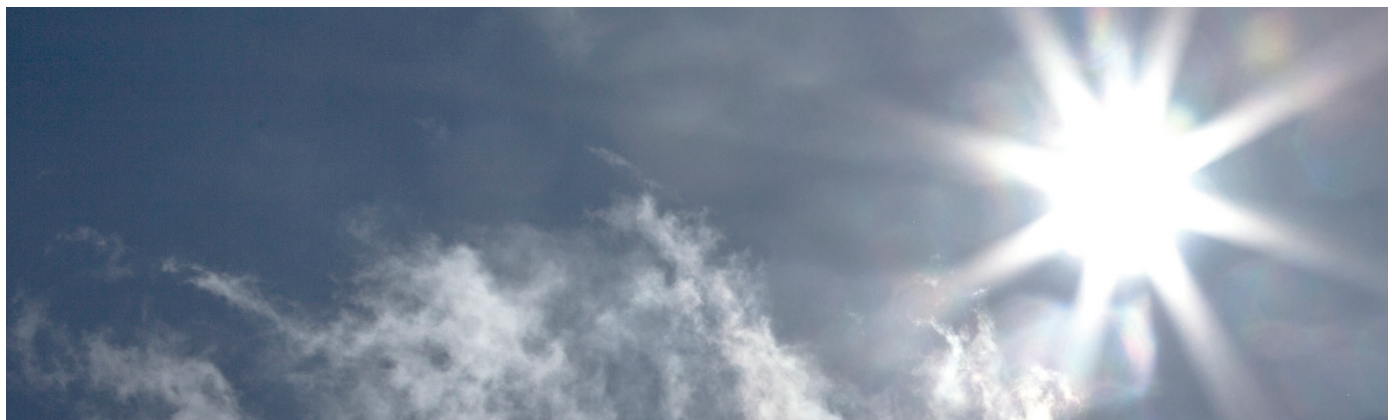
using all available means in the tool kit. In this way, they will assist in building cropping system resilience to the global warming hazards that could jeopardize the livelihoods of resource-poor farmers who depend on the wheat harvest," the study says.

Currently, genetically modified wheat has not been approved for use Canada. The issue has been enormously divisive in the U.S., where agricultural retailer Monsanto has developed wheat strains designed to the company's own weed-killing products.

New Foods

Forty years from now, according to the IFPRI report, people will most likely still eat the same kinds of grains they eat now – just less of them overall. People in developed countries will eat 6.8 to 12.2 per cent less cereal; in developing countries, people will likely eat 7.6 to 12.1 per cent less.

Magnan writes, "While it appears people will consume staples in the same proportions with climate change or with perfect mitigation, they will consume slightly less of them. For those who eat meat, it does not seem that the amount they eat alongside their staple of choice will be lower with climate change."



This, he points out, is despite the fact that in every studied climate scenario, grains are each more expensive than if climate change was completely halted.

Although the developed world might be able to pay the extra money to keep grains on the dinner plate, the prognosis for the developing world isn't so good. According to research published in 1996 by the Food and Agricultural Organization of the United Nations, although globally, grain production might not see a decrease beyond single digits, developing nations are likely to see a decrease of 10 per cent, on average.

"...cassava might be what fills in for other staple crops in the face of climate change."

And according to the research report, "if climatic change were to retard economic development

beyond the direct effects on agriculture in the poorer regions, especially in Africa, then overall impacts could be sizeable.

"This loss of production in developing countries, together with rising agricultural prices, is likely to increase the number of people at risk of hunger, in the order of 5 to 15 % in the less severe climate scenarios, and [roughly] 50 per cent in [more severe scenarios]."

So what is the world going to eat when grain and soy production comes under threat? Research has revealed that the crops with the potential to prosper are those already grown in hot regions.

Plantains and certain species of banana, already popular staples in much of the world, grow well in the heat and could take a larger role in the future.

One food that's been lauded for its ability to not only beat the heat, but to thrive in it, is the cassava – a humble tuber most often grown in Southeast Asia, Africa, and Latin America. For these regions in particular, the cassava might be what fills in for other staple crops in the face of climate change. Scientists have dubbed it the "Rambo root" of agriculture,

for its resistance to climbing temperatures.

A 2012 study published in the scientific journal *Tropical Plant Biology* found that "cassava is potentially highly resilient to future climatic changes and could provide Africa with options for adaptation whilst other major food staples face challenges."

But even the cassava has a weak point in the face of global warming; although yields actually increase in hotter weather, the diseases that destroy the roots also like the heat. The Global Cassava Partnership estimates that each year, at least 50 million tons of cassava roots are lost to disease. Sharing research in the hopes of developing a disease-resistant and more nutritious cassava strain is one of the partnership's roles in the global community.

Andy Jarvis is a climate change scientist with the International Centre for Tropical Agriculture and one of the co-authors of the study on cassava. Speaking at a conference held by the Global Cassava Partnership, he said, "Research shows that [the cassava] will brush off the higher temperatures. Its potential is tremendously exciting. But now we have to act promptly on the research,

as more pests and diseases are manifesting themselves because of climate change."

Another crop that does well in warm weather and poor, dry soils is the cowpea, a nutritious legume grown most commonly in West Africa, India, and in the southern U.S., where they're known as black-eyed peas.

According to a report by science news website *phys.org*, scientists are already working on breeding cowpea plants to have both a high resistance to drought and a high yield. With soy poised to reach the precipice of ideal temperatures in the coming decades, the cowpea could provide a viable, protein-rich replacement.

And alongside cassava chips and fried plantains, cowpeas might soon have a special place at the global dinner table. ■

WRITTEN BY SARAH HARTWICK

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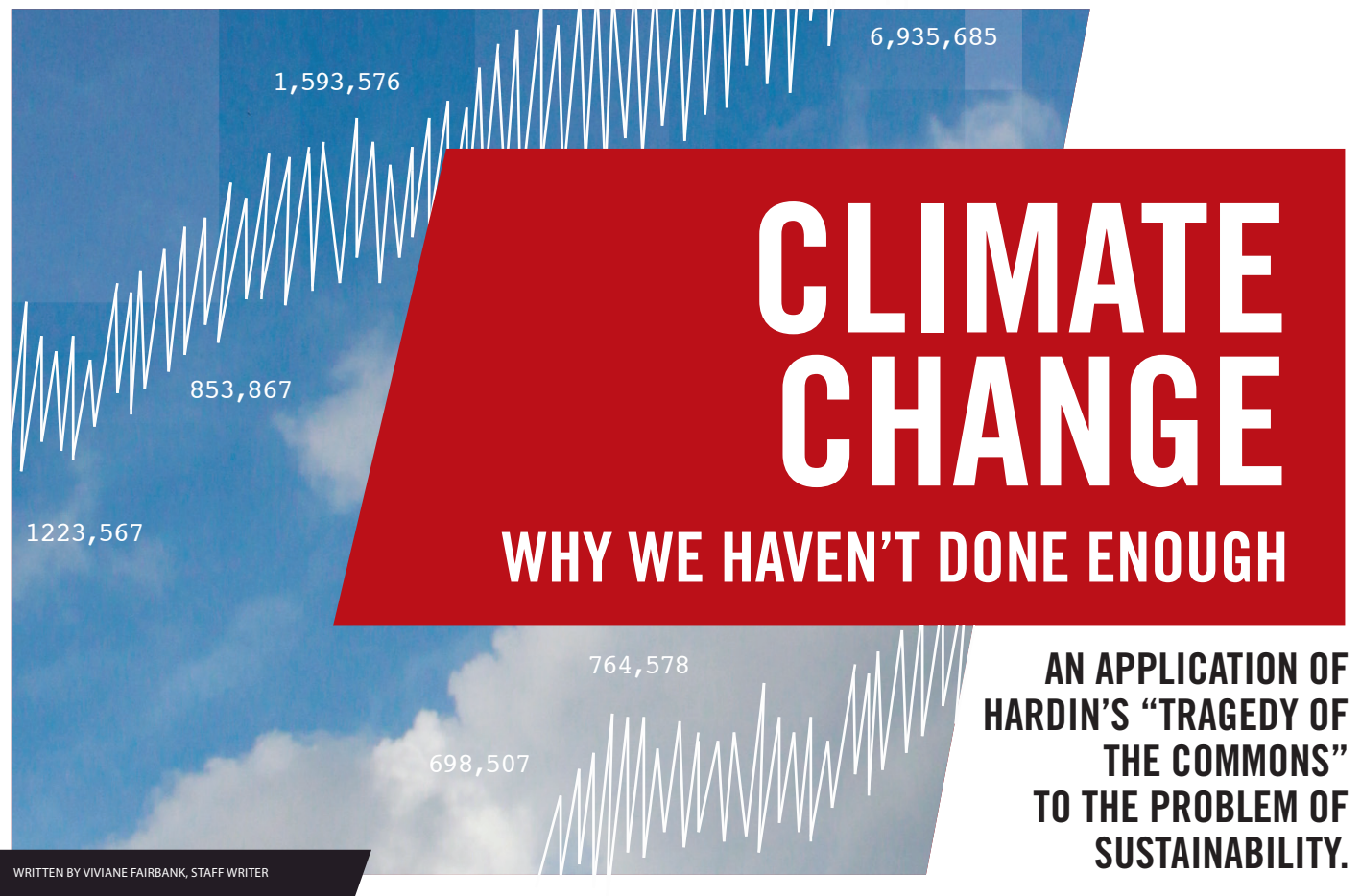
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When first told about the burden my generation will inherit, I was about 10. It was a playful comment made by the adults at the dinner table, mentioned on the fly to include young children in the conversation.

But after that, I began to hear the same remark at increasingly shorter intervals; I heard less and less humour in the announcers' voices and more serious concern as years went by.

It was explained to me that I would find myself paying for the previous generation's retirement, while my own was lost to a lack of funding. And the horror stories continued to grow: overpopulation, an inevitable loss of resources and even a third world war.

But the climate change crisis that would ultimately take effect in my lifetime has been steadily avoided in those conversations, perhaps because, unlike other problems, there is no direction to point one's finger.

Or maybe it was also because those

Climate change can easily be blamed on both everyone and at the same time, no one. A single person's action — whether in the name of good or bad — is negligible in the grand scheme of things; climate change is a collective responsibility. But when everyone is responsible, no one is.

adults didn't want to lose face in front of their children at the dinner table.

But regardless, the answer might just lie in an age-old theory by an ecologist who long preceded the current climate change debate.

The Situation

Struggles in Canadian politics are not always between politicians of rival parties, but also between what the government thinks is best and what the people want — an inevitable problem in a

large democracy. This results in another gap: the one between what politicians say they want and what politicians do.

In the case of climate change, according to a poll that was released in April, 60 per cent of Canadians support protecting the environment, even at the risk of hampering economic growth. The majority of Canadians acknowledges that global warming is real and caused by man-made emissions.

The Canadian government, however, is more focused on the country's economy, whether centered on money or on oil.

Canada dropped out of the Kyoto Protocol in 2011. Peter Kent, environment minister, said that the decision would save the government approximately \$14 billion.

But according to NDP environment critic Megan Leslie, quoted in CBC News, the government relinquished its involvement not just because of a budget, which she found to be inaccurate, but instead because Canada is "the kid who's failing the class" when it comes to climate change responsibility.

Indeed, Canada has been unable to meet its targets when it comes to pollution reduction in the past decades.

In August of 2012, Kent released an Environment Canada report stating that Canada was halfway to its Copenhagen emission targets for 2020. The Copenhagen Accord, adopted after Harper rejected the Kyoto emission targets in 2006, committed Canada to reducing its emissions by 17 per cent from 2005.

Elizabeth May, leader of Canada's Green Party, remarks in her blog, however, that certain aspects of the Copenhagen Target, such as its start in 2005, as opposed to 2006, and its politically binding – as opposed to legally binding – nature, made it "little, weak and inadequate."

She proceeds to show through calculation that Canada is in fact not close to halfway to reaching its targets. Either way, May points out, "by the deadline year of 2020, we will have failed to achieve the [Copenhagen] goal."

Although Canada did reduce its

greenhouse gas emissions in 2010, the decrease can primarily be explained by the world-wide recession, according to May.

Josh Laughren, director of the World Wildlife Fund's climate change and energy program, confirms the urgency of action when it comes to global warming.

Emitted greenhouse gases, accumulating in the atmosphere at an increasing rate around the world, are changing our planet's heat-balance, leading to an overall greater temperature, he says.

While "greenhouse gases are a good thing and a warmed climate is a good thing, it's the rate and degree of change that are of concern," Laughren says, adding that climate change could produce "potentially devastating consequences for all life on the planet, including our own."

And yet, it seems that the rate and degree of interest in climate change is slowly passing us.

While polls and global activity show cognizance of a need for change, not nearly enough action is being taken to stop a global temperature rise of 2 degrees Celsius, according to Laughren.

Laughren addresses this apparent human apathy when it comes to climate change. He explains that part of the reason for inaction is the distance between the present and the visible effects of such a present, 50 years from now.

"Our brains as a species have not evolved to deal with problems far into the future... it is a genuinely new challenge for our species," Laughren says.

But this explanation does not account for the hundreds, thousands even, of advocacy groups around the world who have seen a fuzzy but frightening future, and who are fighting climate change.

When it comes to a lack of effectiveness of those groups, "there's also a huge lot of people making a lot of money under the current system who are very loath to change," Laughren says.

"An entire economic system has been built up on the burning of fossil fuels...

it's a hell of a ship to turn around. There is an incredible amount of inertia in the system."

Nevertheless, if apathy and inefficiency do not loosen their grip and allow for us to take the bull by its horns, then we may soon enough not be in a position to care about our economic systems.

The Northwest Passage has been passable in the summer for several years already, and arctic communities are relocating because of melting permafrost. We're seeing storms, droughts and flooding being exacerbated by climate change.

Even today, if over-pollution were to stop this very second, we would find ourselves with a 0.8 degree change, says Laughren. In a more realistic tone, if we were to massively decrease our pollution starting today, we would still be locking ourselves into well over one degree of increase – and we're very close to two.

Though this may not seem like much of a change, Laughren says that a change of 6 degrees makes it hard "to even imagine a stable, well-functioning society as there is now."

The Atmosphere as a Public Good

Sumeet Gulati, an associate professor at University of British Columbia, provides a reason for slow action regarding climate change that is very similar to Garrett Hardin's "The Tragedy of the Commons."

Hardin, an American ecologist born in 1915, published several articles about the inability to sustain a public resource. In a 1968 article for *Science* magazine entitled "The Tragedy of the Commons," he addressed the relevance of public ownership when it comes to pollution.

"The rational man finds that his share of the cost of the wastes he discharges into the commons is less than the cost of purifying his wastes before releasing them," he wrote. "Since this is true for everyone, we are locked into a system of 'fouling our own nest,' so long as we behave only as independent, rational, free-enterprisers."

This is exactly how the countries of the world are behaving with regard to greenhouse gases.

As Gulati explains, there is an idea that any action against climate change provides benefits not only to the acting country but to the rest of the world as well. No country wants to find itself spending money that benefits the world while other countries remain on the cheaper, more pollutant path.

"They want a free ride; let someone bear the costs and you get the benefits," says Gulati, who specializes in agricultural economics.

As Hardin would argue, Gulati blames this problem primarily on the fact that the atmosphere is a common good; no specific person is responsible for it, and yet all stand to lose from it.

The tragedy of the commons in the atmosphere sees all countries continuing to pollute excessively in expectation that other countries will stop doing so first; but no country has stopped yet.

The problem is accentuated by the fact that not all countries suffer from global warming to the same degree at the same time. Though every country, every city, emits greenhouse gases separately, they all mix together once they are in the atmosphere.

"The atmosphere doesn't care where the carbon molecule was emitted," explains Laughren. "Arctic countries are hit first and hardest."

He added that the territories following that would be the Maldivian nations and coastal nations such as Bangladesh.

Though much of global warming is unpredictable and droughts and storms reach the entire world, the afflictions of climate change will reach many other countries later than others.

This lessens those countries' "negative utilities," as Hardin would call it, and make them more likely to pollute for their own economic benefit.

Thus, the tragedy of the commons persists. What Canada ejects into the air will affect other countries much more before it affects us, and so we wrongly persist as well.

What Would Hardin Advise?

Hardin suggests several applicable solutions in his articles.

"Freedom in a common brings ruin to all," and consequently, regulation and moderation are necessary for progress, he says.

"Prohibition is easy to legislate," Hardin writes, "but how do we legislate temperance?" He answers his own question by turning to administrative law and coercion, "agreed upon by the majority of the people affected."

These suggestions include the use of taxes, private property and the allocation of rights based on wealth, auction, merit, or lottery.

A couple of these concepts have already been applied to climate change, with varied response. The most popular form of regulation when it comes to pollution is the idea of carbon taxing.

"Carbon is the last source of pollution that we can freely dump," says

Laughren. "Internalizing the cost by pricing carbon is certainly a necessary precursor to solving climate change."

Many are of the same opinion. A revenue-neutral carbon tax was implemented in British Columbia in the late 2000s, putting a price on carbon emissions in a hope to "encourage individuals, businesses, industry and others to use less fossil fuel and reduce their greenhouse gas emissions," according to a report by the Ministry of Finance.

This tax, which is currently at 6.67 cents a litre, was legislated by Gordon Campbell in 2008, making it North America's first and only carbon tax, according to CBC News.

The Huffington Post writes in an article about the expected long life of British Columbia's carbon tax that experts and the provincial government have found it to effectively reduce greenhouse gas emissions in the province.

In light of the approaching elections in British Columbia this summer, the carbon tax is a prominent subject of debate. Many criticize the revenue-neutral aspect of the tax, meaning that all income made from the tax is used up by cuts in other taxes.

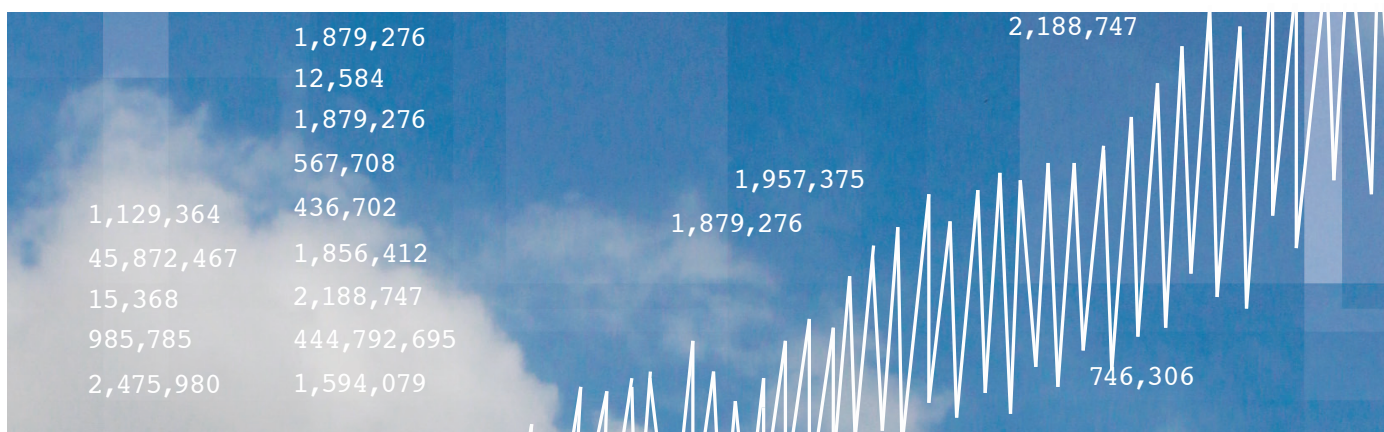
Adrian Dix, provincial leader of the NDP, is quoted by CBC News: "None of the money from the carbon tax goes to the environment or to pay for transit, and we think it should, so we've proposed that."

Dix's platform includes a \$30-, \$40- and \$50-million investment plan from carbon tax revenue that will go towards supporting transit models and other green initiatives across the province.

While Gulati recognizes the potential of carbon taxes, he adds that we must still take into account the idea of the public good.

"The common [of climate change] is not just within our nation... global warming is in the world," Gulati says.

"If I put a carbon tax and the rest of the world doesn't, I can't tax people's exports coming into my country from the rest of the world. Then it's a fairly straightforward argument that if my



competitors don't [put a carbon tax], I would be worse off."

The tragedy of the commons comes back to bite us once again.

The only way to sidestep this problem is to have worldwide acceptance of policies, says Gulati, who has written several articles on international trade and sustainability.

He refers to the Montreal protocol, an agreement signed under the United Nations Environment Programme in 1987 pledging to eliminate global consumption and production of "ozone-depleting substances."

Gulati says he sees this pact as hope that countries want to resolve climate change together.

"Unless everyone agrees to a carbon tax or a similar policy, there is a big concern," says Gulati. "But because a lot of our economies aren't purely reliant on our energy and electricity isn't easy to trade, it may not be so hard."

Hardin's suggestion of private ownership as opposed to taxing becomes a bit more complicated; what can people own when it comes to climate change?

One interpretation of Hardin's theory envisions a partial divvying up of sections of the atmosphere, to be owned by countries or industrial companies. But the fact that countries are not directly and proportionally affected by their own pollution calls for a different kind of action.

The state of California has implemented a cap-and-trade program similar to Hardin's idea of right allocation. The program, which covers emissions from major sources such as

refineries, power plants, industrial facilities and transportation fuels, distributes tradable allowances that are equal to the emission limited under an official gap, which will lessen over time.

Basically, Gulati explains, the state is "assigning property rights to emissions."

"According to economics at the very basic level, [carbon taxing and the cap-and-trade system] should be equivalent," he says, and emissions should then be regulated.

Gulati says a cap-and-trade method of regulation has its flaws, however. "Cap-and-trade is subject to lobbying and people end up getting these permits for free" and then selling them, says Gulati. "Administratively this is a problem."

Very recently, the California Air Resources Board has combined its cap-and-trade program with a similar one in Quebec, helping the allocation system to spread across North America.

Philosophy and Public Policy

Whether criticized or embraced, Hardin's solutions to the problem of public good have started to be applied across the world. We have found that the tragedy of the commons is a convincing way to look at the climate change situation with no bias, whether political or economic.

Nevertheless, while Hardin's theory may be valid academically, many can dispute the application of philosophy to current public policy. It can be argued that philosophers, working with theory and not action (at times), are not able to account for the economical, social, or

political aspects of the situation at hand, whether minute or substantial.

It is indeed hard to argue that philosophy can be applied to public policy without interference; while philosophical theories are (ideally) intelligent and logical, it may be that those who apply those theories are not. Details may be overlooked, greater issues misunderstood, or affected people disregarded.

Ingrid Stefanovic of the University of Toronto's philosophy department admits to the complications that real life can add to a concrete issue.

"My own view is that we must do a better job of understanding peoples' values, attitudes and perceptions and design multiple policy strategies in order to advance the goals of sustainability," says Stefanovic, who specializes in environmental philosophy.

Stefanovic adds that there is a responsibility for philosophers to do more than "simply talk among themselves about abstract issues" and to help the transition from theory to action, stating that they must move "beyond the comfort of their own discipline" to advance solutions.

Stefanovic views environmental problems not only as an issue of public policy, but as a reflection of society's value systems, and how they may need to be evaluated.

"Philosophers are well placed to take a leading role in helping us to understand and analyze values, attitudes and perceptions that underlie our current sustainable practices." ■

CONTINUING THE WORKS OF FIRE

WITH FIREWORKS SALES RECLINING AFTER THE FOURTH OF JULY, ARBITRAGE MAGAZINE TAKES A LOOK AT THE RESILIENT INDUSTRY THAT IS STILL BOOMING DESPITE THE NUMEROUS RESTRICTIONS

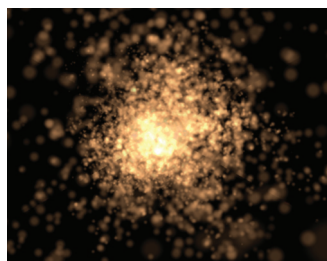
In high school, I had a neighbor who loved fireworks, and on a particular July evening he set some up for us to light. We oohed and ahed — until one of us put a small mortar into a tube too large and lit the fuse. I remember watching in a mix of horror and detached amusement as the small fireball just hung there ten feet above the ground. It was a perfect moment, when all of us standing in the backyard realized at once we were in serious trouble. The firework exploded in a shower of sparks and a concussion of sound, all of us diving for cover, but no one was hurt — although I can probably attribute some of my hearing loss to that incident directly.

In the United States, the Fourth of July means more than commemorating a bunch of slave-owners announcing their secession from the United Kingdom because they didn't want to pay taxes. It's about picnics with our families and stringing up the national colors to prove our collective patriotism. For a lucky few, we get to sit and contemplate who we are as a country and how we can become better to each other and to the world.

Mostly, though, the Fourth of July is a build-up to the evening festivities, where we sit on our lawns or in the open hatchbacks of our cars and watch the night sky as it's lit up with fireworks. In 2002, the fireworks industry in the U.S. reported a record-high revenue of \$725 billion, a number attributed mostly to

“consumer class” fireworks. Consumer class fireworks are classified in the States under the supervision of the Consumer Product Safety Commission (CPSC), which designates fireworks according to their composition, quantity of pyrotechnic material, and their stability under heat and pressure.

If the CPSC finds a firework too volatile, it will be



In 2002, the fireworks industry in the U.S. reported a record-high revenue of \$725 billion

classified as “professional grade”, which requires a federal license to purchase and operate. A look at the numbers shows that this particular corner of the fireworks market has almost doubled in size over the past decade.

And yet the U.S., like most

developed nations around the world, sets limits even on the types of consumer class fireworks which can be used, and those laws can differ from state to state. For those of you unaware, the U.S. operates within different levels of government, the most primary being the federal level, or the complete and unifying law of the land. But there is also state law, which can be different from the federal level.

Even if the federal government declares consumer fireworks legal, the individual 50 states have a say in what's allowed or not. As early as 2012, four states outright ban all consumer fireworks and another four allow only sparklers and other novelty products. This makes all of the restrictions and laws regarding the use and distribution of fireworks in the U.S. almost too much to innumerate.

The ultimate testament to that point may come from Angus Loten at Inc.com: “In general, the legal amount of explosive material in retail fireworks is no more than 50 milligrams, about half the size of an aspirin, according to the APA.” Which raises the question: How can people still make a business out of selling consumer fireworks in the U.S.? How can you make a profit at selling a product that is legal in some states but not in others?

For many fireworks retailers, it's pretty simple: Sell where it's legal and use the Fourth of July — and the U.S.

legal system — as an advantage. Phantom Fireworks, one of the largest retail stores for consumer fireworks in the U.S., sets up no shops in states where fireworks are illegal. A search on their website for fireworks in New York brings a warning, “New York law prohibits the transportation, sale, possession, or use of fireworks in New York without a valid permit.”

Other retailers will set up independent operators in tents where consumer fireworks are legal, during the weeks before and after the big patriotic holiday, where apparently most of the fireworks will sell out. Still, regulations don't prevent residents of New York from receiving Phantom Fireworks's “bonus chart” in the mail, and with a store just over the border in Pennsylvania, it's up to the law to keep up with what citizens do with their spare time and money.

I've lived in New York over half of my life now, and despite all of the regulations, you can still hear the pops and zings of consumer fireworks coming from backyards come Fourth of July. Still, those responsible members of society should be able to have their fun, and fireworks retailers will be there to see them through to good combustible times for the foreseeable future. Learn about how to be safe with fireworks here, and have a great Fourth of July! ■

WRITTEN BY: JARON SERVEN

DESIGN: DORVANI DAVOUDI

THE PAPER EMPEROR OF THE NORTH

THE NORTH KOREAN THREAT SEEMS TO BE RISING, BUT HOW MUCH OF IT IS TRUE, AND HOW MUCH OF IT IS BASED IN KIM JONG-UN'S URGE TO CREATE MILITARY CONFIDENCE IN HIS BUDDING REGIME?

In April, North Korea raised a missile toward American bases in the Pacific Ocean. In May, the hermit kingdom launched projectiles off the country's east coast in a muscle-flexing display to the south. Talk is rife about the rising North Korean threat. There are even calls for war.

But the North Korean threat is exactly that — a mere threat. A closer examination of the country indicates that it is not nearly as powerful of war-hungry as many would think.

It is no secret that North Korea is a family-run business — father-son succession has been the norm ever since the country's founding in 1948. And like all family run businesses, those denied the top job by simple virtue of birth are not pleased.

Kim Jong-un's rise to power after his father Kim Jong-il's death, seemingly inevitable, was met with skepticism. Wized generals who rose arduously through the ranks are now under the command of someone young and inexperienced — not a recipe for stable rule.

Very little is known about the actual distribution of power within the North Korean government, and what is known is very basic. Historically, the military has been the elite in the North Korean government; both Jong-un's father and grandfather had its support.

But the same is difficult to say for Jong-un.

In 2010, Kim Jong-il,



Jong-un needs to gain favor from the military and prove that he is able to lead as his father did

made his son a four-star general even though the younger Kim never served in the military at all.

Jong-un needs to gain favor from the military and prove that he is able to lead as his father did.

The generals need a distraction — and some convincing.

The Peninsula, a blog dedicated to following the foreign and economic policies in the Korean Peninsula, tracked the number of times the words “war,” “nuclear,” and other aggressive words were used in North Korean rhetoric.

The usage of negative words used in 2012 under Kim Jong-un was a 350 per cent rise from Kim Jong-il's regime in 1998.

It's always difficult to infer what North Korea's plans are; the country's borders are closed to most travelers, but one thing is certain — it's poor and backward.

Analysts have shown that North Korea's missiles cannot even reach India. In the event of an actual war, there is little chance it will prevail against even a lone South Korea, an economically strong country with advanced technology and a decades-old conscription system.

Kim Jong-un's brazen war-mongering can only be interpreted as an attempted to gain the military's confidence in his regime. ■

WRITTEN BY: KATIE SMITH



DESIGN ILLUSTRATIONS: MARK QUIMBYOG

9 CAREER TIPS TO MAKE YOU MORE EMPLOYABLE

HERE'S 9 TO STAND OUT IN THE JOB MARKET

With the number of people entering the job market each year, the stacks of electronic resumes and traffic on web job hunting portals keep reaching new heights. Standing out in that e-population is difficult but not impossible.

Lauren Friese, founder of Talent Egg, and Diana YK Chan, founder of Magnify Your Marketability and former Google Canada recruiter, shared a few tips to help university students and recent graduates to prepare for and stand out in today's job market.

Discovery

"The ideal situation to be in is that in 1st year you are engaged enough that you start taking those amazing four month vacation times to experiment," says Friese. "During these 'experimentation' periods, take internships in fields you are interested in and analyze what the experience is like. This will help you figure out what you are good or bad at. If you haven't done that already, then do it now."

Connect

If you have an idea of what you want to do but the plan is still fuzzy, then put yourself out there and connect.

"LinkedIn makes it ridiculously easy to find people who are like you but five years ahead," Friese says. "Email them and try to set up a meeting. If you can't experience the job, then you find out about it through people who can give you honest answers about the profession."

Research

"Understand what the market needs: What do organizations want? What is in demand right now?" says Chan. "You will be able to approach your job search better when you know what the job scene is like in terms of requirements, qualifications, experience and other such criteria. Doing that research



"Students need to get clear - who they are, what they want and what they have to offer."

will help you understand how to rework your resume or your elevator pitch."

Passion

"Employers want to know that people are passionate about the industry and company," says Friese.

"Employers are looking for the best of the best in talent because they need to be more efficient and productive. So they want people to have that confidence in themselves. There is a difference between saying 'I want to join a company and learn' versus 'I want to join a company and make a difference,'" says Chan.

Elevator Speech

This is essentially a two-minute pitch for the standard tell us about yourself or why do you want to work here interview questions.

"Start with passion - what impact you want to make - as it resonates and connects with people. Discuss your past experience i.e. how you followed your passion, what impact you've made to organization or people. Mention your qualifications to back up to credibility," says Chan.

Patience

"The biggest mistake is that students go right into the application process, thinking 'whoever wants me.' They think they'll work anywhere versus thinking 'this is what I have to offer and this is how I can help you,'" says Chan.

"The worst thing that you can do is jump into a career that you are not good at or one that you don't love," says Friese.

Clarity

"Students need to get clear - who they are, what they want and what they have to offer. Go through a self-discovery process. When people unlock

their potential, they become more clear, confident and it accelerates their results in getting a job," says Chan. "It also helps get a job with a bigger pay and it'll probably ensure they'll stay with their company longer."

Venture Out

"Start a blog and comment on field related things and if you don't want to start your blog, comment on other's blogs. Attend networking events," says Friese. "It'll allow you to have something to refer to during an interview to back up your passion and interest in the industry itself."

Personal Branding

Chan says, "Personal branding is your identity, your reputation - what are you known for - and it's your promise on what is your unique value as well. You need a clear tagline of what you offer: Include your values, strengths and interests. It is so competitive these days that if you know what you stand for and what you offer, people can quickly go to you for help in that area." ■

WRITTEN BY: SUCHETA SANKAR

Six months after forty-eight hours of intensive labour, Sucheta Shankar (@suchetashankar) started to communicate and haven't stopped since. Sucheta enjoys channeling that passion towards writing, whether it is the creative or journalistic kind. If she's got you curious, feel free to check her out at www.suchetashankar.com



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Good thing I found TYD. They help me keep off the street. They provide me and my family with help in Math and English, my character formation, and my athletic development. They even mentor me and take me on different trips. This year we went to see the Toronto Raptors, where I saw my idol Jose Calderon play!

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HOW TO FLY

THE GUIDE TO BECOMING THE ULTIMATE AIRPLANE CONNOISSEUR

WRITTEN BY: REBECCA FERGUSON

"Additionally, lowest fares are often found for flights scheduled on Tuesdays, Wednesdays and Saturdays."

Flying to Bermuda for spring break? Prague to study abroad? Or jetting home to Sault St. Marie to visit dear, old, Mom and Dad? Regardless of your destination, you've decided that you want to travel and that you're going to travel on an airplane.

Sure, it sounds easy enough but lately flying has become a complicated and nuanced art form. Millions of people take flight every day and all of them wish to be the most efficient, expert passengers. Luckily for you, this article unlocks the secrets of how to become the ultimate airplane connoisseur.

1. Booking Your Flight

So, you know where you want to go and now you're scouring the web for tickets. Yet, the day old Kraft Dinner you're eating and over due hydro bill beside your laptop remind you that life as a student ain't easy and you should be looking for a deal. In order to get the best price, timing for your purchase is essential.

It is always smart to start looking as far in advance as possible, as airline ticket prices typically increase in the last two weeks before a flight. Additionally, lowest fares are often found for flights scheduled on Tuesdays, Wednesdays and Saturdays.

However, never buy your ticket on a Monday as airlines typically launch fare sales on Tuesdays. Yet, never been afraid to shop around! Perhaps compare several websites such as Travelocity.com, CheapTickets.com and Airfarewatchdog.com. Another helpful website is Kayak.com. This website offers fare history graphs for domestic and international flights, allowing you to see whether your fare

is headed in an upward or downward direction. However, you may not want to pick outrageously cheap tickets for transatlantic journeys.

If your flight is 30 hours long and an extra hundred and fifty dollars, that works out to be only an extra five dollars an hour for better seating, food, movies and general service. One airline to keep an eye out for is JetBlue. This airline ranks top in customer service satisfaction for a North American low-cost carrier. Additionally, they provide unlimited drinks, snacks and free checked bags. So, hurry! Start looking for your ticket immediately!

2. Documents

Now it is time to start packing and prepping for your flight. There are a few items that are important to organize long before your trip. First, if you are leaving the country it is essential that you have a valid passport. However, for domestic flights any type of photo id is acceptable.

Next, check which vaccines are required for your travel destination

and head to a clinic to get them taken care of. It is also important to look into travel visas. Depending on where you are going and why you are going, the host country may require that you to obtain a visa. Visa information can be found on the official websites for all countries.

If one fails to get the correct visa and attempts to enter a country, places like the United States will not only refuse you entry but they will also finger print, photograph and log you into their permanent database. Even if you cry at the border and promise you're not a terrorist they still won't let you through!

3. Packing

Finally, the last thing to do before your trip is the most obvious preparation step – pack. Items must be divided into carry on and checked baggage. For carry on, remember that you cannot bring more than 100ml of liquid or jell, sharp objects or lighters.

If you plan on bringing prescription medication keep it in the original labeled containers. When bringing checked baggage, it is important not to over pack. Many airlines have weight limits and if your bag is selected for inspection over packing will lead to wrinkles or lost items. A way to avoid over packing is to write down a realistic list of clothing for every day you will be away.

Consider if you really will need three sweaters for your Caribbean cruise. Once you've picked what you want to bring, rolling clothes or folding things like pants together are good ways to save space. Now all you have to do is leave out clothes for the day of the big flight! Try to plan comfortable layers and footwear that can be easily slipped on and off. Wearing socks is important, as you must take off your shoes before going through security. Dressing like a fashion model sadly won't get you through the airport lines any faster and will ultimately just lead to discomfort.

4. Pre-Flight

Finally, the day of your flight! As airports are notorious for their long

lines and wait times, be sure to arrive at least two hours before your scheduled departure. It can cost hundreds of dollars to reschedule a missed flight and after you worked so hard to book a cheap one this would be an unfortunate waste of money.

However, if for some reason you find you will not make your flight, call the airline before your departure time. Often this saves you money and they are willing to reschedule your flight. Once at the airport you must face the reality of endless lines. Flying with persons either in wheelchairs or strollers often allows you to bypass the lines and ride on the special airport trolleys.

But typically there is no free pass through the lines – only tricks to make them faster. Checking FlightStats.com before even going to the airport updates you with useful information such as security wait times and flight delays.

Additionally, it is helpful to check in online and have all the documents you need close at hand. There is nothing slower than getting to the front of the line and having to dig through a backpack for your passport. Also, familiarize yourself with your airline's checked bag fees and be prepared to pay accordingly.

5. Security

Post 9-11, airport security became a lot stricter. And now, due to the fact that the Boston Bombers were students, the scrutiny of students in particular has increased. Never say the words terrorist, bomb or hijack while in the security line. Don't forget to take your laptop out of your bag while putting it through the scanner and take everything out of your pockets.

Never argue with the security guards and truthfully answer all questions and comply with all requests. It is within their rights to demand a thorough pat down, but remember it is within your rights to request it be done in private. Once through security there may be a lengthy wait time at your gate. A good book, nap or laptop may make this wait more bearable.

6. Everything Else

As far as Internet goes, most major airports now have free Wi-Fi. Unfortunately for visitors going to Fairbanks Alaska or Kauai's Lihue Airport, Internet is not yet offered at all.

Other alternatives include eating at an overpriced airport restaurant, browsing airport gift shops or some peaceful time alone with your thoughts. As long as you leave yourself enough time and calmly accept that lines are a part of life, your experience at the airport could even be enjoyable. Just be sure to listen for the announcement that your plane is boarding!

Patience is necessary while boarding the plane. There is need to rush on or get frustrated at slow moving passengers. You've already waited in several lines and you're going to have to sit through several hours of flying - so just take your time!

Once you arrive at your seat, try to be courteous and stow your carry on quickly before sitting down. If the people sitting in your row are strangers, why not strike up a polite conversation? You never know – you could be sitting beside your future employer or one, true soul mate! Take off is always exciting however air pressure and boredom may soon become problems. As the plane increases in altitude you may find it helpful to drink water or chew gum to deal with the change in air pressure.

Solutions to boredom include listening to music, reading and watching shows and movies on the entertainment system. Window seats have benefits (like something to rest your head on) however there is always a person between you and the aisle.

If you need to use the restroom or feel like stretching your legs, be courteous and do so before the person on the aisle falls asleep or starts using their tray table. Finally, never forget to be polite to the crewmembers. You are more likely to get better service and passenger perks if they like you! Other than that, all you can do is sit back, relax, and enjoy your flight. Bon Voyage! ■



WRITTEN BY: TOM DINARDO

RESTRICTING RIGHTS TAKING NAMES

SHOULD CANADA ENFORCE RESTRICTIONS ON EX-CONVICTS?

"There is nothing they or local authorities can do about it. It's up to the Parole Board of Canada (PBC) as to where to send ex-convicts."

In April, two sex offenders were released in New Brunswick to much uproar by the surrounding community. While local communities are nervous about the increased danger in their area, there is nothing they or local authorities can do about it. It's up to the Parole Board of Canada (PBC) as to where to send ex-convicts upon release.

Restrictions On Ex-convicts

In the United States, these men would be subject to a number of restrictions upon release such as discrimination in housing, employment, and social welfare services. In most states, convicts are forbidden from voting while in jail and in Florida, Iowa, Kentucky, and Virginia, voting rights are only restored to ex-convicts upon individual petition

or application to the government.

Ex-felons in Canada on the other hand don't face similar restrictions upon release. Rather, offenders participate in a mixture of institution-based, surveillance-based, and assistance based transition programs meant to help reintegrate them into society.

Nevertheless, this method seems rather effective. In a study published by Public Safety Canada, researchers found that only 3.7 per cent of sex offenders in Canada under community supervision were incarcerated for sexual reoffending after participating in reintegration programs for three years.

A Correctional Services Canada spokeswoman, Sara Parkes, said, "Research shows that society is best protected when an offender is gradually

reintegrated into the community under supervision, and subject to strict monitoring and control.”

“When offenders are granted release to the community, there are conditions for that release,” she added. “Standard conditions are set out in the [Corrections and Conditional Release Act], as well as any additional special conditions that the PBC deems necessary to impose to ensure public safety.”

Social Reintegration

Without restrictions, social reintegration is hard enough. According to Public Safety Canada, ex-felons face multiple challenges when they are released from jail. It’s possible that offenders had previously experienced social isolation and marginalization as well as physical and emotion abuse or a poor lifestyle prior to jail.

Once they are released from jail, other challenges pile up. Once they leave jail, offenders have to find housing and employment, sometimes with limited financial means. To make matters worse, an offender’s time in jail has “collateral effects.” Essentially that amounts to one’s loss of livelihood, loss of important personal relationships, and loss of personal belongings.

What’s more, any sort of discrimination, whether in housing, employment, or voting, violates a citizen’s basic rights.

Michelle Alexander, in her new book *The New Jim Crow*, points out that having a job is a key to whether one is pushed to commit a crime. In the book, Alexander mainly discusses the practice of mass incarceration by the US judicial system.

She points to “joblessness” as the reason for high crime rate among African American communities. While the book refers to African-American cases specifically, the message is universal. Employment is a crucial component to non-offense. If someone has no money and no job, they will do whatever is necessary to get by.

Lawmakers in the United States are recognizing the weight of hardships for ex-convicts upon release and the importance of employment and are

trying to take action to lighten the load. In April of this year the state of Minnesota Senate passed a bill known as “ban the box.”

The bill essentially eliminated a criminal-history box on most job applications. The move is meant to allow those who have committed crimes a fighting chance of rebuilding their lives once they are released from prison.

Employers are still allowed to ask about one’s criminal record in an interview, but it gives the applicant a chance to explain himself.

Public Awareness

Public awareness is an issue in some communities. Bradford County, Florida, now posts red warning signs outside sex-offenders homes.

Much like the scarlet letter worn by Nathaniel Hawthorne’s fictitious character Hester Prynne, these warning signs are meant to “name and shame” offenders. They are meant to alert residents to potential dangers, which is the right of any resident in their neighborhood. This allows them to take extra precautions and lets them know that the ex-offender has the potential to reoffend.

In 2004, the Sex Offender Information Registration Act established the National Sex Offender Registry. This supplies law enforcement agents with a national database that contains information on convicted sex offenders. It provides police with access to information on current sex offenders such as personal information, photos, and descriptions.

However, this information can only be “used to investigate a specific crime that is suspected to be of a sexual nature only as authorized by the law.” In other words, the door is closed to the public for general awareness.

In the U.S., on the other hand, sex offender registries are available for all 50 states, the District of Columbia, Puerto Rico, Guam, and several Indian tribes online. The registry gives the identity and location of known sex offenders. Most importantly in contrast to Canada, the United States Sex Offender Registry is available to

the public.

Last year in Canada, the Christian group Canada Family Action launched a website that provided the names and photos of convicted sex offenders for the public. Some of the offenders are still in prison while others have been released into the community. Canada Family Action believes that the public has a right to know where the offenders are in order to protect their children from any potential danger.

The American War on Drugs has spawned many restrictions on ex-convicts in the United States, struggling to get back on their feet when they are released from jail. Luckily in Canada, the federal government, the CSC, and the PBC work to successfully reintegrate ex-felons into Canadian society in a way that allows for a rewarding future. ■

THIS IS THE AMERICAN DREAM

THE FOURTH OF JULY IS A CELEBRATION OF HOTDOGS, FIREWORKS, BEER — ALL THINGS AMERICAN — AND, OF COURSE, THE AMERICAN DREAM. BUT IN RECENT YEARS, MANY HAVE ASKED, “IS THE DREAM STILL THERE?”

The historian James Truslow Adams defines the American Dream as a “social order in which each man and each woman shall be able to attain to the fullest stature of which they are innately capable, and be recognized by others for what they are.”

I would like to think of this definition as the quintessential one; it is the original, by the person who is generally considered to have coined the phrase, and it is without the colloquial amendments that we now so frequently associate it with.

Yet most Americans still associate the American Dream with monetary value. The recent recession has withered this particular aspect of the Dream, and Americans are discontent.

Yet we continue to squander our potential: our schools are some of the worst in the developed world and our government can't get anything done.

Plus, that version of the American Dream was never really available for everybody anyway—just ask women and minorities how it's worked out for them.

It's time to return to a different value of the Dream, Adams's value—the value of fighting hard, achieving potential, and savoring the minor victories.

I used to be an artist when I was a kid, and I was good. One of my 8th Grade projects that will always stay with me was a small model of the remains of the World Trade Center that I created out of paper mache and cardboard. Instead of being the color of grey cement, however, I painted all the pieces of the building as the American flag.

To be able to create art in that manner, to follow what I was passionate about and innately drawn to—I started drawing from memory at age three—is the very definition of the Dream.



A HOPE FOR MYSELF, FOR MY FAMILY, FOR MY COUNTRY AND FOR YOU

My mother in particular, and my father to an extent, were fond of my abilities, and I know that they wanted my school and education to reflect a similar passion, to provide not the tools and teachers necessary to refine

my skills—although they were a help—but to provide the foundational environment for such activity to occur in the first place.

Of course, it's easy to forget the secondary part of Adams's definition, “[To be] recognized by others for what they are.”

While I moved on from drawing and sculpture, the New York State Art Teachers Award I earned for the piece hangs in my living room to this day.

This built the expectation within me that I should follow what I love to do, so I was brave enough later on to switch mediums and become a writer—and despite all of the troubles that decision has presented to me, I will never forget following what I was passionate about.

But I've never expected money out of it, as if it should be that easy. It won't be for quite some time, but remember that your perspective may be your saving grace, as it is with most things.

Because this is the Dream: me sitting here, writing this, and you, sitting there, reading this. In my own way, I've done it. I'm doing it.

I've been lucky; most don't make it out of the darkness like I did. But all it takes is that small spark, the

knowledge that personal achievement can exist for people.

You can't expect money anymore, but that's not a bad thing at all. It opens the doors to innumerable possibility.

It helps me in my quest for a better future, and fills me with a driving, improbable hope. A hope for myself, for my family, for my country, and for you, too: that you will feel the same spark, will see the same light. ■

WRITTEN BY: JARON SERVEN

MORE FOLLOWERS *than* YOUR DOG

