SCHOLAR'S SHOWCASE

Western

WINTER 2016

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PHOTOGRAPH BY EMILY NGUYEN

Full essays can be found at:
http://www.sucess.uwo.ca/Scholars_showcase_magazine.html

Reflection:
Letter from the Editors

NACIZA MASIKINI & LINDA FEI

This year we are excited to take the Scholar's Showcase in a new direction. In the past, the Scholar's Showcase has been a publication created by the Scholar's Electives community. This is the first issue in which we are welcoming articles and art from students of the Western Scholars Program. With this new expansion came many high-caliber submissions. And we have sought far and wide for some of the best creative and scholastic pieces our peers have to offer and collected them in one place for you to peruse. We wanted to continue the vision our previous editors had in delivering a publication that offered the feel of an academic literary journal. Therefore, each page was designed to showcase each article and photograph in its own independent light – that if you were to open this magazine to any page, what you would see would speak for itself.
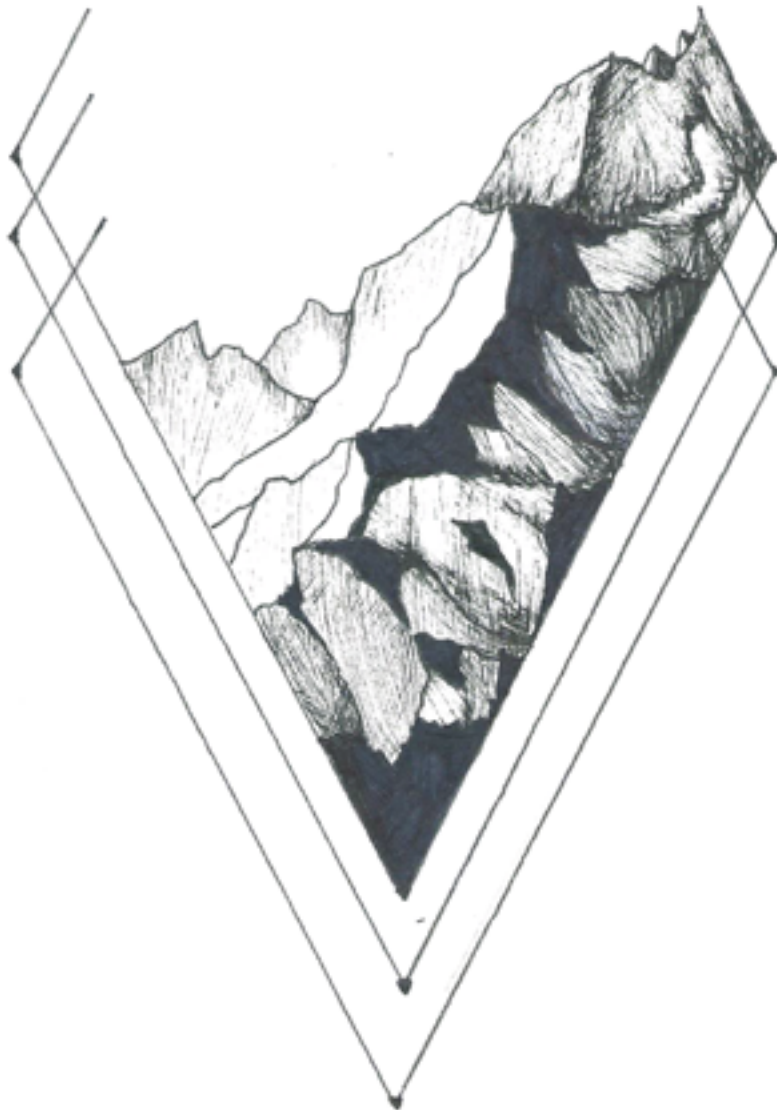
In this specific issue, we focused our attention on reflection. As we near the end of 2016, we see the social, political, and scientific climates continue to evolve and flux rapidly. We wanted to take some time to ruminate on all that has happened and what may be ahead. We welcome you, dear readers, to take a pause and reflect with us.

The Arctic

PHOTOGRAPH BY JENNY LEE

Mountain Ode to DM

SKETCH BY LAUREN CHAN

Rawlsian Gender Pay Gap

Essay Excerpt

MICHELLE ASSELIN

The pay gap between men and women continues to be an ongoing social harm in the 21st century. This difference is especially prevalent in STEM fields (science, technology, engineering and mathematics). In 2013, women in these careers earned, on average, 22% less than their male counterparts despite completing the same quantity and quality of work (Davidson 2015). The bias against women does not only exist in the context of their paycheques—the opportunities given to women are also limited. Studies have shown that companies tend to hire men, even when female applicants are equally (or more) qualified (Davidson 2015). A multitude of factors cause working women to be penalized in their salaries, some of which include the need to stay home on maternity leave, the increased amount of housework expected from married women, and the prejudice and stereotypes held by employers. This problem persists because, at the political level, governments are not transparent about salary differences, little advocacy is being done to bring awareness to the issue, and few policies are in place to secure women's opportunities and salaries in STEM careers (Ceci 2015). Appropriate changes at the political level will eventually lead to a change in the mentality of society and ensure a future where one's salary is reflective of their work, not their gender.

The workforce is a subgroup of society in which social cooperation is essential. Distributive justice theories are applicable to situations where the benefits and burdens of social cooperation must be fairly distributed. Therefore, John Rawls' Theory of Justice can serve as a useful tool to analyze the issue of gender pay gap. The benefits and burdens encountered by the working class must be equally distributed amongst all members. Women are often denied promotion opportunities in their career fields, and as a result, must bear the burden of a smaller salary. The current distribution causes women to have too few benefits and too many burdens in the workplace. Rawls' theory is aimed at reforming the social institutions that distribute opportunities and wages amongst men and women so that they are distributed in a fair manner.

Ocean of Flowers
PHOTOGRAPH BY YINGJIE HE

Working Backwards:
How Filter Bubbles Diminish the Potential of the Internet

SALENA NAZARALI

The Internet is often admired as being an objective platform for the diverse expression of opinions and the sharing of information worldwide. The truth, however, is quite the opposite.

Contrary to popular belief, the Internet is not simply a bulletin board of information for all to see. Access is constantly limited and manipulated by a prevalent obsession of the tech world: **personalized user experience.** The discourse of personalized technology is overwhelmingly positive, often portrayed in the form of upbeat promotional videos and impassioned speeches at tech conventions. It is a buzzword used to excite audiences about a more technologically integrated and efficient world, while complimenting individualistic Western culture.

The unseen problem with personalized user experience is the fact that *it is unseen*. Essentially, this technology works by taking into account a multitude of factors before displaying your Facebook feed, Netflix suggestions, and more problematically, your list of Google search results. In doing so, it effectively personalizes your Internet experience without your knowing. The information you are given differs from the information others receive, and in this act of tailoring results, the technology of personalized user experience creates what is called the filter bubble.

Eli Pariser, Internet activist and author, explains this term in a TED Talk he gave in 2011: "*Your filter bubble is your own personal, unique universe of information that you live in online. And what's in your filter bubble depends on who you are, and it depends on what you do. But the thing is that you don't decide what gets in. And more importantly, you don't actually see what gets edited out.*"

By selectively showing content that suits the user's predicted preference, opposing opinions (or Internet content the user would not usually engage with) become non-existent. We take the information we receive as the universal truth, and are unaware of the fact that it is biased towards our assumed opinion. This lends the opportunity to intensify attitudes, and Pariser describes this as "*a world in which the Internet is showing us what it thinks we want to see, but not necessarily what we need to see*".

When this reality is revealed, it becomes easy to understand how filter bubbles ultimately lead to ignorance concerning other viewpoints and the belief that the world is being accurately represented in what is seen online. The Internet is not an unbiased and genuine source of information with inescapable personalized user experience; filter bubbles diminish the potential of the Internet as a platform for exposing individuals to new and different opinions.

"*We need it to introduce us to new ideas and new people and different perspectives. And it's not going to do that if it leaves us all isolated in a Web of one.*"

Personalization is not always an issue — an optimized list of Netflix suggestions isn't going to cause much harm, aside from wasted hours watching every episode of *Friends*. However, hard news, factual information, and intelligent discussions on the Internet have an impact on individuals. Filter bubbles narrow the minds of users rather than connect them with the diversity of the world.

Sunroom
COURTNEY MANN

a bouncy, forest green futon echoing a sweet, familiar scent of

warmly baked bread swallows the sunlight peeking through the

screened walls, as three small children play.

a buzzing, black and white television poses on a dusty throne and

porcelain sandwiches of cucumber and cheese mould on a fragile

china plate nearby, in a room that three small children have now

outgrown.

Pink Seashore
PHOTOGRAPH BY JENNY LEE

Layered Time

PHOTOGRAPH BY LINDA FEI

Conquistador

PHOTOGRAPH BY NACIZA MASIKINI

The Land Gap:
Finding the Importance of Non-Governmental Organizations for Tanzanian Women

An Excerpt

ANDREA BURKE

The word "empowerment" itself has found itself under scrutiny, despite being a championed term in the world of development. Mara J. Goldman and Jani S. Little write that "there remains a great deal of ambiguity and contestation over what empowerment means, how it is measured, and how it is best achieved...empowerment is a multidimensional process that follows multiple pathways...through and across multiple scales." Large-scale, global women's "empowerment" is thus difficult to define, measure, and achieve. Even terminology such as "gender equality" has seen variances in what is generally regarded as a cohesive monolith in terms of development: the Anglophone world. Canadian conceptions of equality among the genders, as defined by the Canadian International Development Agency (CIDA), emphasizes "choice, control and opportunities and is characterised by an equal valuing in society of the similarities and differences between women and men." The Australian government's definition aligns more strongly with the mechanistic and measurable rhetoric of the MDGs of 2000, which is also demonstrated in the new SDGs. Regarding the UN MDGs, the approach itself – separate

from individual criticisms outlined above – has been problematized for attempting to isolate targets and separate social conditions into clean, attainable objectives; "there are...recognized limitations in the MDGs by specifying one goal for gender equality... we are only going to overcome the growing social inequality of we incorporate the gender perspective into all their goals, not just one." Quantifiable goals are thus problematic and difficult to estimate. Even unquestioned indicators such as the "dollar a day" poverty line fails to take into account new urban-rural differences in cost of living, as well as national and regional considerations. Global goals and guidelines therefore have fallen short of achieving women's empowerment because they are limited to surface-deep ideals and are unable to address regional, national, and cultural complexities that plague women globally. However, as Ingrid Palmary and Lorena Nunez state, the attention to gender in certain global goals and initiatives cannot be disputed or discounted. Gender has come into the mainstream in terms of policy and priority. The Tanzanian case demonstrates this, while possessing its own unique details due to its social fabric.

Superantigens:
An Interview with Dr. John McCormick

LINDA FEI & KEVIN FAN

Dr. John McCormick is an Associate Professor in the Department of Microbiology and Immunology at Western. His research focuses on *Streptococcus pyogenes* and *Staphylococcus aureus*, two bacterial species with superantigen proteins that induce a strong immune response in humans. We had the privilege to sit down with him and discuss his research in this fascinating field.

UNDERSTANDING THE PATHOGEN: WHAT ARE SUPERANTIGENS?
Superantigens is a class of bacterial surface proteins that cause non-specific activation of the immune system and can lead to toxic shock. They are the most potent known activators of T-cells—causing adverse effects at extremely low concentrations—and are linked with the induction of autoimmunity.

How can mounting an immune response to superantigens be harmful to the host?
Dr. McCormick explains to us that "The bacteria figured out a way to manipulate our immune system. We don't think it's immunosuppression; we think it's actually inflammation-driven and it's benefiting the bacteria somehow."

To test how superantigens mediate bacteria colonization, Dr. McCormick examined the effect of removing parts of the immune system on the rate of infection. "When you take away a part of the immune system, you'd think the infection would become worse. In the case of *S. pyogenes*, when you take out the immune cells and T-cells, the *S. pyogenes* can't infect anymore," he tells us.

How did bacteria evolve superantigens?
"That's a tricky question", Dr. McCormick starts off. He believes that over time, bacteria have taken two separate molecules that bind to host proteins and combined them. In addition, superantigen toxins bind to rapidly adapting immune molecules, making it more difficult to pinpoint their evolutionary genesis.

TRANSLATIONAL RESEARCH: MOUSE MODEL OF STREP COMPLICATIONS

What are some models used to study the complications of strep infections?
Typically, kids with strep throat will develop recurrent infections if they're not treated. This can lead to the development of rheumatic heart disease, which causes around 300 thousand deaths per year. This complication is completely preventable through proper treatment of strep throat and access to medications, explains Dr. McCormick.

Dr. McCormick explains his lab is developing a mouse model to reflect and study human rheumatic heart disease: "We are developing a model that relies on a live infection, which is what happens in humans." Along with his collaborators, Dr. McCormick conducts tests to precisely measure heart function in these mice. "The data indicate that if the mice are receiving infections with *Streptococcus pyogenes*, they get defects in their hearts." These include damaged heart valves and increased risk of heart infection by other pathogens.

A PROMISING APPROACH: PROBIOTICS

Dr. McCormick is a member of the Canadian Research and Development Centre for Probiotics, an organization that helps create affordable probiotic foods to Eastern and African countries. What are some major research focuses in this field?
Dr. McCormick has focused on understanding how bacteria can communicate with each other. "Bacteria actually have a language and can communicate among themselves and sometimes other species using signal peptides. One of the things we're trying to understand is how a *Lactobacillus* strain, which is a probiotic, can communicate with *S. aureus.* We have worked out a system in which the *lactobacillus* can secrete small molecules that shut off toxin expression in *S. aureus*."In addition to communicating, bacteria also compete with each other for space. Dr. McCormick says, "For example, *S. pyogenes* turns on antimicrobial peptides that kill other bacteria in the nasopharyngeal area."

How can probiotics protect against *S. pyogenes* infection?
Dr. McCormick tells us that a probiotic chewing gum has been developed— "The gum contains *Streptococcus salivarius* which is not a pathogen. It has been shown to inhibit *S. pyogenes* and compete with *Streptococcus* in the tonsils." Infection-fighting probiotic foods and snacks can one day make delivering drugs to kids easier.

APPLICATION-BASED RESEARCH: DEVELOPMENT OF A STREP VACCINE

Dr. McCormick's team is also working on developing a vaccine for S. pyogenes. What are some major challenges in developing this vaccine?
Dr. McCormick tells us that the main challenge is that, since there are eleven known *Streptococcus* superantigens, "if we made a vaccine against only one of the superantigens, the bacteria would use another [superantigen to infect the host]. Therefore, if a vaccine is used, we would need all eleven superantigens in the vaccine."

A vaccine could potentially prevent *Streptococcus* from colonizing the throat of humans. "Since humans are the only reservoir for strep, this is a potential way to eradicate the organism."

Currently, vaccines targeting other surface proteins of *Streptococcus* are also being developed. Dr. McCormick suggests that a future vaccine would likely be available in the form of a cocktail: "If a *Streptococcus pyogenes* vaccine is ever developed, it would probably be a multi-component vaccine with other things in it too."

FINAL THOUGHTS

What is a piece of advice you would give to an undergraduate student going into research?
Dr. McCormick emphasizes the importance of personal interest— "It is important to figure out what you like and try to identify what you're interested in. If you end up in a career in research, you end up being very focused. It's important to figure out what you find exciting and work hard to find the best fit in a research lab."

Relax

SKETCH BY LISA-MONIQUE EDWARDS

Star Trails

PHOTOGRAPH BY EMILY NGUYEN

This photograph captures the rotation of the Earth
through the "movement" of the stars. It is constructed
from more than 200 snapshot taken in London,
Ontario on a clear summer night.

Good Morning, Mr. Roth

JULIA SEBASTIAN

"Not today. Not today," she mutters, pulling into her driveway. She shifts the car into park and kills the engine, but doesn't leave just yet. Still sitting, she drums her frustration in morse code on the dash, vainly attempting to postpone the inevitable. She looks down at her hands—anywhere but at the house next door. She knows that once she does, she'll have to face Mr. Roth.

Mr. Roth could be counted upon at almost any hour of the day to be sitting on their porch looking out at the quiet street. Built in the same year and style, both his and her two-story houses had the same front porch, driveway and low-sloping grassy lawn, but were mirror images of each other—like identical twins who stubbornly part their hair to opposite sides. Although she had never gone inside, she somehow knew that the interior of both their houses was the exact same—before her house had been renovated. Her parents repainted the exterior white, while Mr. Roth's watered-down, coffee-coloured was a reminder of decades past. The only notable thing about Mr. Roth's yard was that it harboured a majestic magnolia tree, jokingly dubbed the "Trouble Tree" by neighbours since it shed pink tear-drop-shaped petals, which begged to be collected despite having no practical usage and a brief life span.

Every day, on the way to and from school, she and her mother would pass Mr. Roth sitting on his porch. And every time, her mother would stop to wave at him with one arm, and jab her daughter in the ribs with a sharp elbow—an unspoken command to say, "Hello".

"Do I have to?" she'd whine.
"Yes."
"But why?"
"It's the right thing to do!" Her mother always replied.

After a while, stubbornness gradually yielded to habit, and she became accustomed to dragging herself out of the car, mustering a cheery smile, wave and "Good morning, Mr. Roth". She wasn't a bad person—not at all; she'd never begrudge an elderly man a simple "Good morning" before school. But it wasn't always just a simple hello, was it? Sure, some days

were lucky – sometimes, a quick greeting was it; afterwards, she could duck into the car. But some days, her customary formalities seemed to invite long, one-sided conversations with Mr. Roth, and it would be hours before she could slip away, out of her mother's reach. Such days had even made her late for class before, and few teachers accepted talking to a neighbour as excuse.

On even unluckier days, Mr. Roth would tell jokes. Like most eighty year-old men with a lifetime of adventures, Mr. Roth was an engaging storyteller. Unfortunately, also in the way of most eighty or so year old men, he could only recall ten different jokes. Some afternoons, her mother would stand in front of his porch, one arm "casually" wrapped around her daughter's shoulders, while listening to the fortieth rendition of the one about the Polack and the sugar bowl. Unlike her mother, who would laugh as if she had never heard something so funny, her daughter was always uncomfortable and planning her escape.

Now still in the car, she sighs, mentally planning to say a quick "Hello" and get it over with before her mother could tell her to from the passenger seat.

But *wait,* she remembers with a rebellious jolt, her mother didn't come with her to school today--

"I drove myself"! She thinks with mounting excitement. She doesn't have to do anything she doesn't want to do today!

"One…" If she acts fast, she can pop out, collect her bags, and race inside before being noticed.

"Two…" If she could just open the trunk…

"Three!" In one swift motion, she bolts from the car, snatches her bag and sprints up her front steps with reckless abandon. At the top, she presses her back into the wall and sighs, high on adrenaline. Reaching for the front door, she wavers, her mother's disapproving voice echoing in her mind: "*It's the right thing to do*."

She sighs. With dwindling resentment and mounting conviction, she turns around and graciously calls towards the house next door, "Good morning, Mr."— She begins, then pulls up short.

The magnolia tree is gone.
The porch is empty.

On the front lawn, jammed into the ground amidst scattered pink teardrops is a small, blue "For Sale" sign.

Solemn Independance

PAINTING BY DANIELLE PERRO

The Advent of Bioprinting

ELENA KUM

Prototyping technology has taken a radical departure from its inception 30 years ago. Three-dimensional printing – a phenomenon that was once only heard of by sci-fi aficionados – is now ushering in a new era of medicine where 3D-printed tissues, implants, and prostheses exist.

Dr. Aaron Price and his research team at Western University are on the front lines of this new paradigm. Dr. Price, who specializes in additive manufacturing and soft robotics, is exploring how electroactive materials can be employed to create 3D-printed prosthetics and rehabilitation devices that would be superior to their conventional counterparts.

"Electroactive polymers, which respond in a unique way when we apply an electric field, can be harnessed as actuators to perform meaningful mechanical work," says Dr. Price. "This happens to serve particularly well in medical applications."

Dr. Price's team is also exploring the novel use of electroactive polymers in frameworks that encourage cell growth for tissue regeneration, known as cellular scaffolds.

"We had an idea to take a scaffold that was prepared from a biologically-derived material and coat that with some of the electroactive polymers that we work with," explains Dr. Price. "We could then apply a voltage in solution to that scaffold, and it would expand or contract, simulating some of the biological loads that you would find within the body."

Understanding the nuances of cell communication and differentiation in response to mechanical loads will help researchers accomplish an incredibly challenging feat: the printing of viable tissues and organs.

Yet even at its current state, bioprinting research has yielded many more challenges than successes.

"It's an uphill battle," describes Dr. Price. "The materials are quite delicate and gel-like, making it difficult to print as they deform under their own weight. The materials also diffuse into each other, leading to uncontrolled mixing. We also have challenges related to the availability of some of the biomaterials."

Bioprinting research is indeed in its infancy with many barriers still to overcome. But Dr. Price describes this as one of the wonders of the field: "What's very nice about bioprinting is that there are no shortage of ideas – there are lots of opportunities for new research in the advancement of this exciting technology."

Impossible Ring of Poppies

SKETCH BY LAUREN CHAN

Strength
PAINTING BY LISA-MONIQUE EDWARD

Surveillance Cyborgs:
Googling Our Way Through the Information Age

SALENA NAZARALI

I wake up in the morning and check Facebook to see whose birthday it is today, Instagram to let people know that I like their selfies, Snapchat to see what everyone was up to while I was disconnected and asleep. Maybe I'll scroll through the CBC webpage, picking which stories are worth my time to skim through, and Google what the weather will be like in London today because that is much more convenient than actually looking out my window. Millions of other people living in first world countries have a similar ritual, and the thought of living without constant connection to the Internet seems, frankly, impossible. However, despite our dependent relationship with technology, there is one problem in the above anecdote which likely went unnoticed. Google was used as a verb. The act of "Googling" has become so common and naturalized in society that the use of the seemingly free service occurs without thinking of implications. It is often forgotten that the search engine service profits off of us in an indirect way. Rather than upfront payment in money,

Google obtains something much more valuable; information. As multiple readings throughout this course have discussed, society is transitioning to information age, in which "information and communication have come to play a foundational role in production processes" (Hardt and Negri 2001). Big data is constantly being collected, and with the growing presence of technology in our lives it is hard to keep companies like Google in check. The general public is often blinded by the appeal of services offered by information companies, and we forget that when we ask a question on Google Search or use an online service, we are handing them information about ourselves. Through the use of networked technologies such as Google, we are under constant surveillance. As this is naturalized, we have become a part of a cybernetic society in which we are not individuals simply interacting with technology; we are surveillance cyborgs, influencing and being influenced by the constant transaction of information between us and corporate giants. Surveillance culture and proof of our cybernetic society can be seen through Google's overbearing technological, economical, and political presence. One must be aware of the power that comes with owning this information, and consider the impact that this has on individuals and society.

The original technology of Google was a simple search engine to access the Internet in a user-friendly manner, however, the company has been extremely successful in branching out its applications. Google itself still operates as a search engine and concurrently offers a number of extensions which users can incorporate into their daily life to increase efficiency. Gmail is often used by professionals and consumers; Google Chrome, the web browser, is used for its faster download time and simple interface; Google Docs offers an easy way to collaborate with other users; Google Maps is used over Apple Maps because of reliability; Google Calendar offers synchronicity across different devices, and they even bought YouTube. All of these services are indeed conducive to living a more efficient lifestyle, however, the integration of these technologies into our lives supports the idea that we

are cyborgs. Mark Weiser's prediction of *ubiquitous computing* comes to life when one examines the reality of networked technology, which is "fundamentally characterized by the connection of things in the world with computation" and expects that technology "become so commonplace, so unremarkable, that we forget their huge impact on everyday life" (Weiser and Brown 1996). Based on the introductory anecdote, it can be said with confidence that we are living in the technologically-naturalized world of Weiser's *Phase III*. The constant give and take of information between human and machine is termed *cybernetics* by mathematician Norbert Wiener, and is very relevant when understanding how daily life has been made more efficient through the integration of these technologies and our daily functions (Jennet 2001). When one signs on to their Google Account, search history and all other actions taken through the Google mediums are logged. Through the completed surveillance exercises, one can see how much information we give to Google simply due to the scope of their services. Although Google extensions maximize the efficiency of the individual, one must remember that all information that is incorporated into Google's services for your benefit is being *given* to Google. Such is how technology can be a service for personal use, and a means by which they obtain valuable data.

Raw data that is collected by networked technologies, especially by Google, can easily be transformed into relevant information and subsequently made profitable. The incredible amount of data Google owns, courtesy of our contributions, gives them an unfair competitive advantage on the economic playing field. Google Search learns of what goes on inside the heads of the general public based on frequent searches combined with demographics, and their numerous extension services gather even more data. When we use Google services, we essentially tell the company our concerns, our interests, and all other sorts of personal information which they can then use to profit off us in the future, by means of pairing data analytics with advertising and other methods. Astra Taylor elaborates on this concept, stating that "these services aren't free even if we

don't pay money for them; we pay with our personal data, with our privacy" (Dwyer 2014). She also discusses the problems which are being overlooked in our excitement around the transition into the information age, specifically surrounding the concept of an information monopoly. She says "the old-media dinosaurs [are not] dying out, but [are] adapting to the online environment; meanwhile the new tech titans [are] coming increasingly to resemble their predecessors"; this is an unfortunate truth with information giants such as Google (Dwyer 2014). Alphabet Inc., a multi-national conglomerate dabbling in many technological fields, is the umbrella company developed by Google, and it is safe to say that Google's big data provides a very useful competitive edge. As Simon Garfinkel puts it simply, "providers use this information to improve their service" (Garfinkel 2011). To extend upon this idea of a monopoly in the information age, the Privacy Grade surveillance exercise gave almost every single Google extension an A rating; this can be seen as good and bad news. It is reassuring to know that our personal data is not free for other corporations to access, however, this exclusive knowledge about consumers gives Google an unfair advantage over other companies. This further promotes inequality in the economy amongst business competitors, growing the power of large corporations and reducing the already weak chance for smaller companies to thrive. To information giants like Google, we are surveillance cyborgs who are constantly providing data for them to use to their advantage, improving their economic strength.

More problems arise when one focuses on the surveillance aspect of power through information. It has been established that the integration of our lifestyle and technology makes us cyborgs as we are constantly sending and receiving information, however, what about the political element? The Trace My Shadow surveillance exercise stated that Gmail is known to be scanned by the National Security Agency; this means that Google allows certain external organizations access to their data files. By continuing to use Google extensions and blindly agreeing with the terms and conditions,

we allow our private information to be revealed; what we are interested in, what we are buying, where we have been, who we talk to, what we talk about, and even where we will be. One's search history and entire record of interactions with networked technologies is easily accessible as stored data, and such information is quite personal. With our role as surveillance cyborgs who have integrated ourselves with technology, the divide between the individual and technology is blurred. Donna Haraway's ideas suggest that the "relationship between people and technology [is] so intimate that it's no longer possible to tell where we end and machines begin" (Kunzru 2013). With this concept in mind, one should consider the immense power this gives the government. If the government has access to big data, and we as individuals have naturalized the presence of technology in our lives, we essentially live under constant invasive surveillance. John Naughton poses some very relevant questions concerning the rise of government surveillance post-9/11, in which he asks "when, despite all this surveillance the next terrible thing happens, what will the politicians do then? How much more surveillance will they demand? And how much more can society stand?" (Naughton 2014). The main issue being raised here is that

technology and individuals are so intertwined that accessing one's Internet history is almost a violation of rights. As surveillance cyborgs living in the information age, we need to update our ideology behind rights, laws, and politics to fit the naturalized technological society we live in.

The analysis surrounding Google services leads to quite an unsettling question; are they servicing us, or are we servicing them? It is indisputable that Google extensions make our lives more efficient in numerous ways, however, is efficiency really worth the cost of being a surveillance cyborg for the gain of corporations and the government? The loss of privacy and individuality is quite a price to pay, and when one realizes the toll the emerging information age is having on society, one recognizes the need for change. Ideas surrounding privacy, rights, and transparency must change in order to maintain effectiveness in the society of ubiquitous computing and naturalized technology. The appealing and useful features of Google and other networked technologies are indeed necessary for one to keep up with the fast paced lifestyle of 2016, yet it is equally as necessary to critically assess how these technologies are affecting the structure of society. So how are we going to survive the full transition into the information age? Unfortunately, we can't Google the answer to this question.

Candy Machine
SKETCH BY MARISSA GIULIANI

The Bell Jar and The Double

An Excerpt

CAROLYN HUGHES

"Dying is an art, like everything else. I do it exceptionally well" (Plath "Lady Lazarus"). Taken from one of her many famous poems, Sylvia Plath was a woman that, despite the typically dark topics, lived through the words she wrote. Rightly so, considering the time period in which she grew up had women living within the confines of the female ideal that is meant to be pure and a providing figure. This figure of the idyllic double that society imposed upon women of the 1950s is explored within Plath's one and only novel, *The Bell Jar*. Through the character of Esther Greenwood, Plath illustrates the ways in which the double alters how women view themselves and each other, as well as what happens when they can't quite fit into the double's shoes. Despite being written as a bildungsroman, *The Bell Jar* speaks volumes as Esther refuses the typical ending of one for a woman in which she achieves a full sense of self through marriage. It is questionable whether Esther ever truly forms her own identity while under the thumb of society, or rather if it is a novel of one's unbecoming. *The Bell Jar* demonstrates the impacts of society's ideals on women and how in striving to become someone else, one loses themself in the process, with sometimes fatal consequences.

In order to understand *The Bell Jar*, it is important to first understand life in Post-World War II America. The 1950s were booming in more ways than one: the economy, the suburbs, and with the greatest force, the baby boom. Men returning from war brought with them confidence in the brightness of the future, and Americans were keen to raise a family in such prosperous conditions. Suburbs were developed to house young families and these "Fertile Valleys" became the backdrop for the picture-perfect lives led by the middle class, one that could now afford to buy more as a result of the expansion of the economy (History "The 1950s"). Yet the atmosphere was tainted. The tension that existed as a result of the Cold War weighed on the shoulders of every citizen, however it was those white-picket fences that were the boundaries to all women. Having been forced to leave the workforce at the conclusion of the war, the expectation was that women would act as homemakers rather than look for new employment (White). Male superiority stemmed from the idea that women existed to bear children and provide for the man. Such concepts were reinforced through media adverts and magazine articles like those entitled "Don't Be Afraid to Marry Young" and "Femininity Begins At Home" (History "The 1950s"). For those women who craved a more fulfilling life it was a time of great discontentment and restriction.

Deep Blue Sky

PHOTOGRAPH BY JENNY LEE

Vamos

PHOTOGRAPH BY NACIZA MASIKINI

Canada's Hidden History:
The Ongoing Implications of Colonialism for Aboriginal Canadians
An Excerpt

MIKAYLA FINNERTY

INTRODUCTION

South African activist Desmond Tutu states that "when the missionaries came to Africa they had the Bible and we had the land. They said "Let us pray." We closed our eyes. When we opened them, we had the Bible and they had the land" (Global Footprints 2009). Within the Canadian context, the experiences of Aboriginal people can be seen as extremely similar. Although largely underrepresented, Aboriginal Canadians have endured a breadth of historical trauma. Beginning with the "settlement" of New France by European explorers in the 16th century, as well as the 19th century introduction of residential schools, Aboriginal Canadians have been widely marginalized within Canadian society (Lacchin 2015:3). The oppression and devaluation of Aboriginal Canadians continues even in the 21st century; the last residential school closed in 1996 and until 1960, Aboriginal Canadians did not have the right to vote (Lacchin 2015). How can Canada proclaim to be a liberal-democratic country in which everyone is granted equal opportunity, yet systemically disadvantage 4.3% of the population (Statistics Canada 2015)? The discriminatory treatment of Aboriginal Canadians within residential schools and during colonization can be seen as the dominant precursor in producing the current social, political, and economic inequalities they face. This paper will employ a structural framework to explore how residential schools existed as institutions of social control intended to assert the dominant European ideology over Aboriginal communities. Moreover, this paper will analyze the ways in which Canada's colonial history has constructed and contributed to the current inequalities facing Aboriginal Canadians.

SECTION I: THE INDIVIDUALISTIC ARGUMENT

In C. Wright Mill's The Sociological Imagination, he states that "neither the life of an individual nor the history of a society can be understood without understanding both" (Wright 1959:1). The sociological imagination asserts that in order to think sociologically, we must understand the relationship between history and biography to fully grasp the complexity of societal issues. The current inequalities faced by Aboriginal people within Canada are deeply rooted in the colonial history of Canada's residential schools.

Clarity

PHOTOGRAPH BY NACIZA MASIKINI

Shadow

PHOTOGRAPH BY YINGJIE HE

Letting go, letting be

VERA CHENG

In a results oriented age, societal standards of what is considered successful seems to be the unspoken criteria that defines our worth. We subconsciously abide by the invisible hand that governs our perspective of self-worth. Despite of recent revelations of breaking societal standards we still act upon them, refusing to let go, refusing to run free. We follow the masses. The masses define the rewards and if we want the rewards we have to follow the system. The same system that wreaks havoc and stress and strain on our wellbeing. What's it worth blindly following someone else's version of success? Is it sustainable on our sanity to neglect our own?

We do it because it's familiar. The expectations, guidelines and criteria are well defined, clear and definitive. The path has been walked many times and all we need to do is follow. We do the work, fulfill the obligations, perform the same maneuvers, repeat the same verses. At the end, there is a list of preset checkboxes and scales measuring our performance with a reward or penalty. Then the process recycles itself, shifting a little with time, but nevertheless, the same process. This beaten down path is easy on the mind, but heavy on the soul. It strains our unique visions of what success is. It makes us disoriented individuals drowning in expectations we don't even believe in.

The Buddhist philosophy of "letting go" and "letting be" is incredibly freeing. Being in a results-orientated system funnels our vision into a pinhole and cuts off any ability to absorb lessons. But the cloud of seemingly immovable stress exists only in the mind. A simple shift in perspective frees you from the heavy hold of societal expectations. Create your own path and expectations. Granted, it will be harder since it has not been travelled before. The ground will be rougher, your steps will be heavier and the air will be thicker, but you will feel lighter. Lighter because you are finally moving towards a goal worth sweating over. Lighter because you are not monotonously checking off boxes on a criterion but discovering rare serendipities about yourself.

Rather than passively doing a task simply because you have to, embrace and interact with it. The race to the finish line is much less meaningful if you cannot extract anything from the process. The entire journey is rendered meaningless after crossing the line because you were blind to side lessons. Don't force your widespread and inspiring vision into an insignificant and narrow pinhole. Courageously let go of the boundaries and guidelines set for you because there is great value in pursuing unlimited spaces of creativity and individuality. Embrace the beauty of uncertainty because only then is anything possible.

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Burst
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