Abstracts (2021)

The following abstracts accompanied posters presented at the ninth annual multidisciplinary Undergraduate Research Fair held at York University (Toronto, Canada) in March 2021. The poster images can be viewed by clicking on "Poster PDF" under each abstract title in the "Abstracts & Posters" section on the Revue YOUR Review *website:*

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SUREYA ALI

Rafael Correa's Failed Vision of Development Prosperity

In 2007, a new progressive government led by Rafael Correa was elected to power in Ecuador. The presidency of Correa had constituted debates coming from social movement groups arguing against the extraction of natural resources. The exploitation of natural resources in the Amazon region became a large component in Correa's administration (Riofrancos, 2020, p. 5). The idea to extract resources such as oil was viewed as a way to eradicate poverty and inequality. Correa justified resource extractions as means to generate state revenues for economic prosperity (Becker 2013, p. 54). The intensive form of extraction of resources was framed as the extractive development model. On the other hand, social movement groups, specifically Indigenous movement groups have argued against the extractive development model. The resistance against extractivism is generated from years of protest against neoliberal practices promoting the exploitation of natural resources (Riofrancos, 2020, p. 5). The fundamental purpose of this research is to examine how Correa's extractive development model failed to generate development for Ecuador. Additionally, the research identifies conflicts over land rights and the contradiction of the Constitution violating the rights of Indigenous territories. Through an analytical examination of scholarly articles, this research demonstrates that resource extraction has resulted in environmental consequences. The research argues that the extractive model creates an unsustainable economy, generates ecological damages, and results in the displacements of Indigenous communities.

MEERA BANKA

The Futility of Treatment for Narcissistic Personality Disorder

Research on the successful treatment modalities for narcissistic personality disorder (NPD) is quite scant. This paper examines the reasons why NPD is not treatable in practice. The literature and evidence in this article refer to peer reviewed secondary sources. After reviewing several studies, the general consensus indicates the need for more extensive research to determine effective treatment options for NPD. To date, most treatment options made available (or studied by researchers) are designed to treat comorbid issues alongside NPD. This makes it difficult to find successful treatment options solely for NPD. Research should also focus on individuals suffering immense psychological setbacks caused by interaction with individuals with NPD. Therefore, the primary focus of the treatment should not be limited to those suffering from this disorder as success rates of treatments for this disorder is minimal.

GUNJAN BHARDWAJ

Exploring the Wind-Evoked Escape Response in Cockroaches

This paper explores the wind-evoked escape response behaviour in cockroaches through the lens of Tinbergen's four questions: adaptation, phylogeny, mechanism, and ontogeny. Research for this project has been compiled through a literature review of scholarly articles. Research into adaptation (how the trait increases the fitness of the species) of behaviour serves the cockroach as it permits the creature to escape predators and survive. Examining the phylogeny (how a certain trait evolved) reveals that only some cockroaches have developed the specific response. Two potential theories were found. One postulates that the evolution of a thinner cuticle increased the need for the behaviour and the other attributes it to an evolution in wings. The mechanism of the behaviour (the underlying biological function) is widely understood through the numerous studies previously conducted. Examining the ontogeny of the behaviour (lifetime development) produced conflicting results. Some studies indicate that younger cockroaches have a stronger escape response while others state that it is older cockroaches. Further research needs to be conducted into the questions of phylogeny and ontogeny to better understand this behaviour.

PROMISE BUSULWA

Coping During Covid

A pilot study on social support, mental health, and the internet

The devastating effects of COVID-19 has impacted many aspects of society. This damage will likely persist long after COVID has been eradicated. Understanding this impact with regards to psychological wellbeing is essential to helping people cope with and recover from the consequences of the pandemic. This pilot study examined people's experiences with social support (SS), mental health (MH), the interplay of these factors, and whether experiences with these factors changed as the pandemic progressed. The researcher administered online surveys to young adults living in Ontario. Participants completed questionnaires consisting of the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS), the Multidimensional Scale of Perceived Social Support (MPSS) and an independent series of nominal (yes/no), and qualitative questions. Key findings from this dataset reveal that (1) a significant positive relationship was observed between social support and mental health, (2) social support and mental health have both been negatively impacted by the pandemic, (3) while people's social relationships improved as the pandemic progressed, mental health deteriorated due to sustained periods of stress and isolation, and (4) the internet is a key resource for maintaining people's wellbeing especially as a means to remain connected with others during this time. While there is a need for more research to develop concrete knowledge bases on people's experiences during the pandemic, this study demonstrates that social support and correct use of the internet have great potential as means for people to manage mental health during this unprecedented time.

CLAUDIA DIAS MARTINS

Impact of Socioeconomic Status (SES) and Bilingualism on French Language Development in Early French Immersion

As part of a larger longitudinal study evaluating the impact of Early French Immersion on English and French language and cognitive development, a group of children were recruited in 2017 and tested annually while progressing through grades one, two, and three. The current thesis tracked the French language proficiency and development of these students who attended public and Catholic schools across Toronto. Considering the increasing diversity of students enrolled in Early French Immersion, the purpose of this study was to investigate the effects of home language experience and parental education on language learning abilities. Narrowing the focus to French language tasks administered, data was analyzed for performance on semantic and phonological verbal fluency, sentence-to-picture matching, and standardized vocabulary tests over the three years. Background measures assessed intelligence, English vocabulary, and included a questionnaire filled out by parents providing information relevant to demographics as well as details on the child's language and social background. Based on parents' responses to the questionnaire, children were assigned to (a) monolingual or bilingual groups and (b) middle socioeconomic status (SES) or high SES groups. Following the categorical designations of these variables, the results showed effects of bilingualism and SES on different aspects of children's developing French language proficiency. The findings suggest that there is no harm in enrolling children of diverse language backgrounds in the program, however future research could explore educational supports to optimize student success in the program across SES groups.

YASMIN DINI & YANET HABTOM

eHealth in the 21st Century

The case of the FitBit Versa2

Healthcare systems across the globe face increasing incidences of non-communicable diseases which elevate the global burden of disease. Policymakers are beginning to investigate reform to improve the healthcare system and meet the growing demand (Public Health Ontario, 2019). Wearable technology can potentially cause a shift in physician and self-directed care. Current discourse surrounding the incorporation of wearable technology into the healthcare system heavily focuses on the costs. Although this is a central component to understanding and addressing the issue, it lacks contextual depth. This study frames the debate around wholesale aspects of wearable technology to include its strengths, weaknesses, opportunities, and threats through an exploration of the data collection mechanisms, privacy structures, and other aspects in place. This investigation revealed that the Fitbit Versa 2 is an innovative method of tracking key fitness and health metrics, a good motivation tool for individuals who are interested in their health, and a compact and affordable option for individuals with disposable income. The analysis determined the Fitbit's strengths includes providing timely data which empowers patients to take control of their health. Yet, these strengths are coupled with some significant weaknesses such as the high price tag on both the initial device purchase and recurrent costs, in addition to the inability to deliver specialized insights to users. All in all, as non-communicable diseases chronically overwhelm healthcare systems and the population alike, Fitbit can emerge as a tool to transform users' lives and lighten the load on the system.

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JASLEEN GOSAL

Devaluation of Women's Labour in Food Systems and Feminist Resistance

The introduction of global markets has seen the rise of multinational corporations. This has allowed trade to flourish globally and enabled the transport of regional products all over the world. Critics have drawn attention to the many issues that come with this contemporary global landscape. This research argues that multinational corporate interests perpetuate and reinforce existing gendered differences in agricultural and food systems. These differences relate to the continued devaluation of women's labour in the production of food as well as the maintenance of gendered care-work in the household. These corporate interests also contribute to increasing concentrations of wealth inequalities which put more money in corporate hands at the expense of farmers. This project conducted a critical literature review to analyze the marginalization of women's labour in and outside of the site of food production, the key components of a corporate body, and the ways in which feminist resistance occurs in opposition to corporate interests. The findings reveal that the labour of women is continually marginalized and devalued at all levels of production and manufacturing, and that women are among the most negatively impacted by corporate interests in cheap labour.

ROBERT HANLON

The Financial Shock from Covid–19 to Canadian University Endowments

The reaction, response, and implications

Using data from the University of Toronto and University of Alberta endowments from 2018–2020, this research provides a thorough analysis of the asset allocation strategies used in practice during the COVID-19 pandemic and why those alterations are essential for the future implications of the positions held by endowment funds. It will review the University of Toronto and Alberta endowments response to the COVID-19 pandemic to shed light on several existing endowment behaviour models. Findings, based on primary sources, indicate that the University of Toronto and Alberta endowments have increased the portfolio weighting in bonds, international/global equities, and alternative/other assets in 2020 relative to 2019. This implies that the portfolio weight increase in the latter three asset classifications are consistent with a Merton theoretical view of the most optimal asset allocation as compared to Black. We suggest that a Merton approach to asset allocation is advantageous when there are adverse shocks in the market. This is due to the need to balance current financial obligations with future cash flows. We support Merton's view which argues that placing a higher weight on those asset classifications demonstrates a trade-off of risks and returns to optimize resources (Merton, 1991). With spikes in current liabilities, decreasing exposure to risky short-term investments is needed to finance those activities. While on the other hand, taking on risky assets is advantageous in present circumstances to take advantage of volatilities in the markets to maximize future cash-flows' benefits.

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KRISTA HANNESEN

A Means to an End

Women in 19th–century England and its colonies

This project researches women's rights and exploitation within marriage and society in 19th-century England and its colonies. It reviews two novels, Charlotte Brontë's Jane Eyre *and Jean Rhys'* Wide Sargasso Sea, *and compares the treatment of each novel's main female characters in colonial patriarchal English society. The research sheds light on the similarities and differences between English women and women from English colonies and their treatment by patriarchal society in the 19th century. This project focuses on how the main male character in both novels, Mr. Edward Fairfax Rochester, treats his two wives: Bertha Mason who is Creole and Jane Eyre who is English. While* Jane Eyre *and* Wide Sargasso Sea *both feature Mr. Rochester and his two wives, each novel reveals different perspectives on the effect of the English colonial patriarchal system on women in the 19th century. Using a diverse set of academic articles to understand those differences, I looked for information on women's rights and expectations within marriage and society in 19th-century England and its colonies. Analysis of this information reveals that while English and non-English women were negatively affected by England's colonial patriarchal system, non-English women faced even more oppression and hardship than English women at the hands of English men. In other words, while Brontë excuses English colonial and patriarchal behaviour, Rhys uncovers the truth behind the damage such attitudes cause for minorities in England and its colonies.*

BRAXTON HARTMAN

Atypical Brain Connectivity in Autism

Autism spectrum disorders (ASD) are characterized by difficulties in social interaction and communication, as well as restricted and repetitive behaviours. Although widely accepted as being neurodevelopmental in nature, the specific abnormalities of brain function underlying the disorder remain poorly understood. A growing number of studies have investigated the neuropathology of autism using functional connectivity magnetic resonance imaging (MRI) which investigates the relations among large-scale, functionally specialized brain networks. Research studying healthy adults has demonstrated that the antagonistic "default" and "dorsal attention" networks, which subserve internally and externally directed cognition respectively, are modulated by a third "frontoparietal control" network which flexibly couples with either the default or dorsal attention network depending upon locus of attention. We investigated resting-state functional connectivity within and between the default, dorsal attention, and frontoparietal control networks in a group of 25 adult males with ASD and a control group matched on age, intelligence quotient (IQ), and motion parameters. The hierarchical organization of brain networks, assessed via agglomerative clustering, was altered in the ASD group. Region-of-interest analyses identified abnormal functional connectivity of the left frontal eye fields which were hyperconnected to the medial prefrontal cortex and hypoconnected to the insula, which are thought to mediate context-memory binding and salient stimulus detection. Finally, graph theoretic analysis demonstrated an increase in betweenness centrality of the left middle frontal gyrus (Brodmann Area 6), a crucial interconnector node, in the ASD group. These results provide evidence that the typical resting-state relationships among the default, dorsal attention, and frontoparietal control networks are altered in ASD.

ZARA ISLAM

Drug Report

Capecitabine

Cancer is a disease that causes a number of the body's cells to start dividing rapidly and spreading into surrounding tissues. Cancer is the second leading cause of death in the world with a very low survival rate. There are a few discovered chemotherapeutic drugs that show promising results for the patients and increase the survival rate. Capecitabine is one of them. It is a known orally administered fluoropyrimidine chemotherapeutic agent which is employed in the treatment of metastatic, breast, and colorectal cancers. Activated through a three-step enzymatic pathway, this drug mimics continuous infusion of 5-fluorouracil and creates 5-fluorouracil at the tumour site. As an oral agent, capecitabine is more convenient for patients and medical personnel. Also, it avoids the complications associated with venous access. This project reviews the biochemistry, Synthesis, ADME (absorption, distribution, metabolism, and excretion), toxicity profile, drug function, comparison with older drugs, and bioavailability of the chemotherapeutic drug. Capecitabine is an important new treatment option for breast cancer patients. Ongoing clinical trials can provide further information on the drug's role in a range of settings. Currently, capecitabine shows a promising future for cancer treatment.

VYJAYANTHI JANAKIRAMAN, HAILEY LUONG, & JUSTIN CHIU

Save–a–Bear

Human interactive device, addressing accessibility, emotional care, and the seriousness of teaching CPR to children, all in the comfort of one's home

This project focused on the application of the interaction design process, design knowledge and skills to design interactions with a child-size manikin for children to learn the cardiopulmonary resuscitation (CPR) technique. Despite having numerous CPR manikins and feedback devices available on the market, very few are specialized in teaching children the essential skill. The interactions with the manikin should be designed to support haptic feedback to facilitate the children's learning. The study focused on key factors that should be prioritized when developing a CPR manikin for children. The research was conducted as a group utilizing various methods, including primary/secondary, PACT, competitive analysis, and affinity mapping. Findings reveal that there is a need to address accessibility, emotional care, and the seriousness of teaching CPR.

This project led to the creation of Save-A-Bear. It is a portable and responsive CPR bear with compression and audio feedback that addresses accessibility, emotional care, and the seriousness of teaching CPR to children all in the comfort of a child's home. Features that include an inbuilt speaker that plays 100 beats per minute (BPM) songs, tracks compressions by recording metrics on the app, is easily portable, and raises awareness of the importance of understanding CPR & first-aid practices. This device assists in the transition to remote learning through its physical and digital component and at-home training program. By creating this device, children will be well equipped with the skills to deal with any future medical emergencies, to take care of themselves, their loved ones, and the community.

MOBOLUWAJIDIDE JOSEPH

Stolen People on Stolen Land

Following the global wave of Black Lives Matter protests in 2020, the question of Blackness and its construction is one that deserves further reflection if the attendant issues confronting Black bodies are to ever be addressed. More pointedly, conceptions of a Black Canada and its unique nuances have yet to be adequately mapped out in academic scholarship. This paper aims to address this specific gap by employing an etymological study of Blackness especially in relation to other concepts from which it draws its salience. By Blackness, reference is being made to conceptions of a Black Canada that is diasporic and is in conversation with multiple Black geographies (K. McKittrick, 2006), invokes more fluid conceptions of indigeneity and cultural heritage roots (T. Adefarakan, 2011; G.J.S. Dei, 2017), and seeks to resist colonial, imperialist, and neoliberal logics. In exploring Blackness in a Canadian context, I am attentive as well to the nuances of Canadian multiculturalism discourse and how it creates a Eurocentric terrain on which the Black diaspora is an addendum and largely erased.

SUMEIVA KHAMISSA

Reimagining Queer Muslim Youth

Is representation enough?

Using an anti-colonial, critical lens, I analyze two young adult novels and one film which present the lives of queer Muslim teenagers in various countries around the world. Locating themes of white saviourism, forced marriage, and the overall negative experience of being a queer Muslim. I ask myself and the readers, is representation enough? Queer children and youth rarely get to see positive examples of themselves. For queer Muslims, literature and media often is the only source where they see their inner desires mirrored back at themselves. This representation must go beyond the phenomenon of their existence, but also shed light on the happiness and fulfilment that can be experienced. Moreover, I urge non-Muslim LGBTQ+ members to move away from the colonial story line of queerness and understand that "coming out" is not the end goal for every queer person, but rather that queerness is an abstract theory that does not encapsulate every experience.

DOLUNAY KOCABAG

Social Identity of Blindness and Its Impact on Well–Being During the Pandemic

The present study explored the social identity of Canadians with sight loss in the context of the Covid-19 pandemic. The goal of the study was to determine if measures of sight loss can predict social identity described by three factors: group centrality, group affect, and in group ties. Bivariate correlations indicated that age of onset of the sight loss, severity of sight loss, and activity impairment due to sight loss did not predict the strength of identification with the sight loss community. However, an individual's acceptance of their sight loss and their openness to share experiences related to sight loss significantly correlate with the strength of their identification with the Canadian sight loss community. The second goal of the study was to determine if sight loss social identity can play a role in the well-being of individuals with sight loss during the Covid-19 pandemic. Bivariate correlations showed that stronger identification with the sight loss community predicted lower levels of Covid-19 related stress for 3 factors of social identity.

SONIKA KUMARI

Eye Movement Desensitization and Reprocessing Versus Cognitive Behavioural Therapy

Which one is a better treatment option for post-traumatic stress disorder?

In the psychotherapy world, there is a debate over which therapy is the better treatment for post-traumatic stress disorder (PTSD). The aim of this evidenced-based project is to use research studies to identify which therapy is better to treat those suffering from PTSD. Cognitive Behavioural Therapy (CBT) and Eye Movement Desensitization and Reprocessing (EMDR) have both been considered as safe and effective treatments. Research evidence suggests that while CBT is somewhat more effective, it is a longer treatment and has significantly higher drop-out rates. Also, there are no CBT research studies with a control group in follow-up studies to determine the long-term effects of CBT. In contrast, EMDR is a preferred approach based on the higher efficacy, long-term therapeutic gains, short and fast treatment times and low drop-out rates. These factors provide an additional financial benefit to client populations that are only able to afford short-term therapy. More research with larger sample sizes is needed to better understand the treatment outcomes of both therapies. Future research should also focus on verifying if these treatments are effective across different cultures. Future directions also suggest that more practitioners need to be trained in order to make EMDR available to a variety of client populations.

JOUDY KUSAIBATI

Identity Text Program

How do I perceive myself in Canada as a newcomer refugee? Identity is constructed by ethnicity, gender, class, nationality (etc.), and its formation is a continuous process shaped by ever-changing life experiences. I attempted to document my identity formation through self-reflexive analysis. I observed four stages that influenced my identity in Canada (Honeymoon phase, frustration period, adjustment period, and acceptance period). My journey from Syria to Canada has made me create my current hyphenated identity and motivated me to question what it means to be Syrian-Canadian.

AUDREY LI–CHAY–CHUNG

Love the Way You Lie

A review of the psychology of lying and
truth–telling in individualist and
collectivist societies

A lack of consolidated knowledge of the influence of culture on the psychological processes of deception and honesty currently exists. In an attempt to address this, a comparison study of three separate studies was conducted, all of which explore the cross-cultural differences of lying and truth-telling behaviours and each presenting a new aspect to consider. The first study focuses on cultural differences in perceptions of lying and truth-telling with regards to prosocial behaviours, antisocial behaviours, and modesty; the second study elaborates by examining the influence of behavioural cultural norms; the third study centers on the interaction between culture and lying in the context of the cancer diagnosis of a family member. The conclusions from these three studies are analyzed in relation to both Western individualist and non-Western collectivist cultural standards. They are moreover used to evaluate the occurrence of lying and truth-telling in real-life contexts by means of an observational analysis of my group of friends and an examination of Lulu Wang's film, "The Farewell" (2019). The overall findings from the literature and real-world applications fortify the existence of the effect of culture on lying and truth-telling behaviours. As deception and honesty encompass a significant part of daily life, the confirmation of cross-cultural variations presents the opportunity for a deeper understanding of diverse cultures and the individuals who belong to them.

KAD MARIANO

Vive l'Acadie éduqué!

How the 1968–1969 Acadian student demonstrations redefined *acadianité* and French–Canadian education

In 1968-1969, Acadian university students protested against inequities present in New Brunswick's bilingual education system. These students reconceptualized historical understandings of acadianité, *the essence of Acadian identity, to redefine their relationship with Anglo-Canadian governance. This paper analyzes the historical progression of* acadianité *and its connection with New Brunswick's French-Canadian education system. In the 1960s, the Acadian students viewed themselves as a colonized people within an English-dominated province, redefining the Acadian imagined community. This idea contradicts the dominant Anglo-Canadian narrative of "two communities living equally." Using this conceptualization, the Acadian students mobilized to establish a dual English and French school system within New Brunswick. This semi-integrated system provided Acadians with the means for economic and linguistic development in a society that historically oppressed them. This paper also argues that the Université de Moncton was at the confluence of Acadian nationalism and governmental power. Because of its political position, the university fostered and became the medium for these student demonstrations. The 1968-1969 Acadian student protests reconceptualized Acadian nationalism and transformed Anglo-Franco relations within New Brunswick. They defied the socio-political assumptions embedded into New Brunswick society, including Acadian compliance and English dominance. This paper then details the implications of these protests on Indigenous identity and a separate Indigenous-oriented education system. Ultimately, this paper questions the relationship between education, educational institutions, and the imagined community that education serves. Education is consequently an institution that improves or limits a community's socio-political development and its ability to develop a national identity.*

CATHERINE MORIN–MITCHELL

A Path Toward Mental Health Equity

Assessing classic literature as a source of racial trauma in the classroom

Each year, mental health issues affect 1 in 5 people in Canada. Black Canadians are at a higher risk because of exposure to racism. Currently, classrooms across the country are teaching literature that presents historic racism to Canadian students. This essay explores the negative impact of racism in literature on the mental health of Black students in Canada through two theoretical frameworks. Intersectionality and the Ecosocial approach are used to identify the group most affected by racist literature presented in Canadian classrooms, as well as establish it as a mechanism through which racial trauma negatively impacts the mental health of young, Black students in high school and post-secondary programs. The perspective of Black students and Black educators shows that racism in literature is a source of racism-related stress in schools, and an increasing number of studies show that discrimination and the fear of discrimination activate the body's stress response system, which can affect both mental and physical health. The resulting analysis speaks to the responsibility and agency of institutions or individuals to understand and confront the issue. While there is not yet a definitive answer to this problem, this paper proposes a solution that will leave the literature intact and help restore the dignity of the racialized groups affected.

HANIEH NAEIMI, AYLA SADEGHI, CLARA LEONG, JOEY SI, & KATHRYN MCKIE

Does a Person's Attractiveness Influence Our Tendency to Get to Know Them?

This study investigates the effects of attractiveness on trust and decision-making. Previous research has shown that attractive people appear more trustworthy, and individuals mainly rely on facial stimuli for these judgements. We were interested to see whether when people have the chance to get a description of a face, do they still make their decision based only on visual attractiveness or do they pay attention to the description. We used the trust game, in which players are given an amount of money each round and they decide how much to transfer to another player. We modified the trust game to implement facial stimuli for hypothetical players and a hint taking option, where participants could choose if they wanted to spend money for a description of the facial stimuli before making financial decisions. This study used a repeated measures design and was conducted through an online survey using snowball sampling (N = 214). We hypothesized that participants would be more likely to ask for a hint when shown a picture of a less attractive person; however, we found the opposite only in male participants. In other words, only male participants were more likely to choose a hint for more attractive faces, which was interpreted as interest rather than caution to trust. These findings suggest that factors other than attractiveness can play a role in decisions to trust unknown individuals. Further research should investigate gender differences in hint taking and practice racial matching of participants and stimuli.

TIANA PUTRIC

The Sixth Domain

Neurowarfare, neuroweapons, and the future of counterterrorism

Technological advancements have led to the development of biochemical, pharmacological, and direct energy neuroweapons that are capable of manipulating the human brain and central nervous system. Available to both state and nonstate actors, neuroweapons can be used in military operations to enhance or degrade the physical, psychological, and physiological performance of allied forces and hostile terrorists. Neuroweapons are the future of warfare and counterterrorism and terrorism operations; however, little research exists on this subject. This project aims to contribute to neurowarfare research by uncovering how counterterrorism and terrorism forces acquire and utilize neuroweapons. This project also investigates the biological, chemical, pharmacological, and engineering processes behind neuroweapons and examines how these technologies hack into and augment the brain. This paper utilizes a three-pronged methodology: peer-reviewed literature like journal articles and books; grey literature, including sources such as government reports, articles, and exposes; and real-world case studies. Results of this research suggest that neuroweapons have ushered in a new, sixth domain of war: the human brain. Findings also indicate that neuroweapons can reduce or eliminate the primary, secondary, and tertiary effects of war, including death and displacement of innocent civilians; destruction of a nation's cultural treasures; and regression of developing nations. Finally, results support the hypothesis that populations are the new weapons of mass destruction. This project is important because it contributes to an understudied field of scholarship, forecasts future security threats, and proposes how peace-seeking forces can gain an advantage over malicious actors without inflicting collateral damage.

PARNIAN SAFARAIFARD

Why Do We Get the Urge to Squish Cute Things?

People often express superficially aggressive behaviour such as squeezing, biting and crushing in response to cute things, a desire known as cute aggression. Since the origin of this term in 2013, there have only been a few academic papers on this topic. This scoping review gathers all the available literature to demonstrate what is known so far and the areas for further research. The topics explored include why we find things to be cute, the effect of cuteness on the brain, and how it overwhelms some to result in cute aggression. The literature suggests that when we see something with "baby-like" characteristics, such as big, wide-set eyes, chubby cheeks, and thick arms and legs—characteristics formally called "baby schema"—our minds interpret it as adorable. This releases a strong, positive emotional response by activating the brain's reward system, which then motivates us to protect it. Those who experience cute aggression have an overwhelming amount of reward and emotion related brain activity in response to cute things. The findings suggest that cute aggression serves to prevent becoming overwhelmed with these strong, positive emotions by balancing them with negative expressions. Overall, cute aggression is deemed to dilute these strong emotions to aid in being a good caretaker. This topic holds clinical potential by studying how this phenomenon translates to those with disorders relating to reward and emotion. However, since this is a new area of research, it can benefit from large-scale direct replication studies before moving forward to its clinical applications.

SHERRY SCHNEIDER

Mindfulness Meditation and Obesity

Obesity is an ever-growing epidemic that contributes immensely to the world health burden. Although existing weight loss programs that use techniques such as physical activity and diet have shown significant short-term results, many participants gain back unwanted weight within three to five years. Mindfulness meditation (MM) that teaches individuals how to cultivate higher levels of mindfulness through systematic training has shown promise in areas of increased awareness and control of eating behaviours. This paper aims to explore current literature on mindfulness in relation to obesity and overweight by drawing from the results, strengths and weaknesses and overall implications of the included studies to answer the question: What effect does MM have on weight loss interventions and behaviours of overweight and obese adults in North America? A review of four studies investigating MM and obesity intervention programs was conducted with a focus on psychological health, weight loss management and eating behaviours. Results suggest that MM has positive effects on weight loss interventions and behaviours in overweight and obese adults in North America. These include improvements in mental, physical, emotional, and psychological health. In these studies, mindfulness and weight present an inverse relationship and results show promise in the implementation of MM in obesity intervention programs. Future research suggestions include an analysis of the extent to which mindfulness impacts stress and individual behaviours that lead to weight loss, as well as deciphering how mindfulness delivery methods impact outcomes such as the effects that mindfulness instructors have on participant success.

KYLIE SCHROEDER

Is That a Girl in Your Pocket, or Are You Just Abusive to Robots?

The science behind artificially intelligent technologies is developing faster than most would have ever anticipated. These technologies are beginning to span into realms that reach to include what could have once been considered science fiction, and as artificial intelligence systems become more sophisticated, more capable of social interaction, and as common as the smartphones we all keep in our pockets, our interactions with them are extremely significant. Considering that the four most used voice controlled virtual assistants all are female, either in character, or just in tone, it could be suggested then that their usage can perpetuate, normalise, and even fetishize submissive, obedient gender expectations. These oppressive views might become much more commonplace unless actively discouraged, but since AI assistants are developed to encourage user engagement, being unfailingly cheery, funny, and polite, it would mean that confrontational, quashing responses to harassment are avoided—instead opting to side-step, be coy or flirtatious, or feign ignorance. As the usage of virtual assistants continues to rise, a growing concern is that the overwhelmingly common use of a female voice in these subservient, passive roles will reinforce the aforementioned attitudes towards women, compromising our progress to equal treatment. To combat the detrimental social effects caused by female gendered AI assistants, we should make AI assistants androgynous or gender neutral. Research shows that people have an innate preference for human voices, particularly feminine ones, but that enthusiastic engagement can still be nurtured through cooperation even if the voice is eerily not-quite-female or not-quite-male.

MANMINDER SINGH

Information Diffusion, Risk Communication, Environmental Degradation, and Neo-Liberalization

How the Covid-19 global pandemic has unfolded to reveal humanity's vulnerability to a global disaster in the post-industrial age

This article, written in March 2020, explores the two dimensions of the Covid-19 pandemic: the infodemic which has raged online, and the evolution of the pandemic itself. I explore the social and technological dynamics that that have been at play including group polarization, the ambiguity of harm, and risk communication. I also contend that the Covid-19 pandemic is a technological disaster, and using the disaster cycle framework, I outline that the pandemic has been essentially a result of economic, ideological, and geopolitical decisions made starting in at least the mid twentieth century. This is a slow-moving disaster that is an indicator and a product of climate change, urbanization, and globalization. As this was a novel phenomenon at time of writing, the information sources primarily consisted of academic pre-papers, news articles, and foundational disaster-theory papers.

PHILIP STUPAR

Transnationalizing Predatory Food and Body Advertisement

Western food and body-related corporate advertising methods, when delineated into a five-category model encompassing food, gender, and body insecurity, have been assessed as potential psychic drivers of "thinness," fear of food, and the implied inadequacy of the "average" individual's body perception vis-à-vis the manufactured "beauty idol." Noting the exponential economic growth and consistent maintenance of insecurity-based advertising within Western food, diet, and media industries in the previous decades, this research sought to uncover the similarities in rising rates of North American eating disorders and negative body perceptions, their potential linkage to delineated methods of food and body-image advertising through specific industries, and their reproduction in a "non-Western" sociocultural setting. The following conclusion was subsequently reached: the perceptually negative impacts on gendered North American eating disorder and body-image rates and their methodological reproduction in the Asia-Pacific region represent a statistical tabulation suggestive of a successful "exporting" of Western corporate food and body-image advertising to demographics saturated with its subversive sub-threshold effects. This suggestion becomes particularly visible, and almost definitively exemplified, in the female-identifying populations of Fiji who are noted to have gone from a near-zero rate of medically diagnosed disordered eating and a female body ideal described as "heavier, [and] more robust," to an alarming increase in eating disorder rates and negative body-image perceptions following the introduction and subsequent accessibility of Western, specifically American, satellite television programming.

MARIA VONICA, SULTANA FOUNEV, YANA MAIOROVA, & MATEA TAUSAN

It's the Little Things

The biodiversity and abundance of insects on Glendon Campus

Insect species are crucial to the integrity of forest environments and serve an important role in the food chain for smaller animals and birds. The aim of our research project was to determine the effects of urbanization on the biodiversity and abundance of insects in the different environmental conditions that Glendon Campus of York University (Toronto, Canada) offers. We set up 4 pitfall traps in 3 different sites on campus: one in an isolated forest, one by the Don River, and the final site by a highly circulated road. We hypothesized that the insect volume would be lowest by the most urban environment (i.e. the road) and the highest in the most natural environment (i.e. in the isolated forest). After a week of specimen collection and microscope identification, our results showed both the most biodiversity an abundance as predicted in the most isolated forest environment and the least amount in the humid environment by the Don River. This highlighted the importance of forest preservation, as it does affect insect species, but also can be extended to other mammals and avian species that prefer undisturbed environments.

HARMONI WATSON

The Consequences of Police Brutality on Psychological Well–Being and Collective Action

Over the last year, police killings of unarmed Black men and women have led to worldwide protests against police brutality and anti-Black racism in the justice system. Research on racism suggests that being the target of racial discrimination can have averse psychological consequences, but there is a lack of research on the psychological effects of experiencing police brutality. The goal of this study is to investigate whether exposure to police brutality affects the self-esteem of Black students. I will also examine whether exposure to police brutality affects the willingness of Black students to participate in collective action as past research indicates that perceiving discrimination is associated with greater support for political action. One group of participants will read an article describing a situation involving police brutality against a Black victim while another group will read an identical article but with a non-Black victim. After reading the articles, participants will complete measures of stated self-esteem, willingness to participate in collective action, and support for the Black Lives Matter movement. I hypothesize that participants who read an article about police brutality with a Black victim will have lower self-esteem and a greater willingness to participate in collective action than participants who read the article about police brutality with a non-Black victim. If the results support this hypothesis, it will suggest that exposure to police violence has a negative effect on the mental health of Black individuals. It will also provide further evidence for the perception that injustice against the ingroup can lead to greater support for political action.

JONELLE WAUGH

Food Deserts in Toronto

My article discusses the prevalence of food deserts in Toronto. A food desert can be defined as a geographical area where there is limited access to affordable and healthy food options. These are most common in low-income communities. The purpose of my article is to discuss food deserts in the city of Toronto and why they occur, in relation to the bigger issue of food insecurity. I apply themes of urban environmental justice to explain that there is a link between urban food deserts and low-income people of colour, which puts them at an increased risk for unhealthy diet choices. I used the York University library to access journal articles and other resources that gave me the insight to define food deserts, identify the location of convenience stores in Toronto, and relate this connection to low-income communities. I found that layering disadvantages such as low socioeconomic status, poor access to transportation, and distant proximity to supermarkets contribute to the making of food deserts and cause other complications such as a rise in diet-related diseases. I conclude by suggesting some solutions to food deserts/ food insecurity. These include: the use of community gardens throughout the city which in turn supports the local economy; food trucks that travel to low-income communities to provide healthy foods at a reduced cost; community fridges where residents support each other by putting fresh foods and produce into refrigerators (currently in 5 locations across the city). However, instead of applying "band-aid" solutions to food insecurity, in the larger scheme of things there is a need for fundamental structural changes to food policies in Canada that can change a neighbourhood's food environment and provide healthy food options.