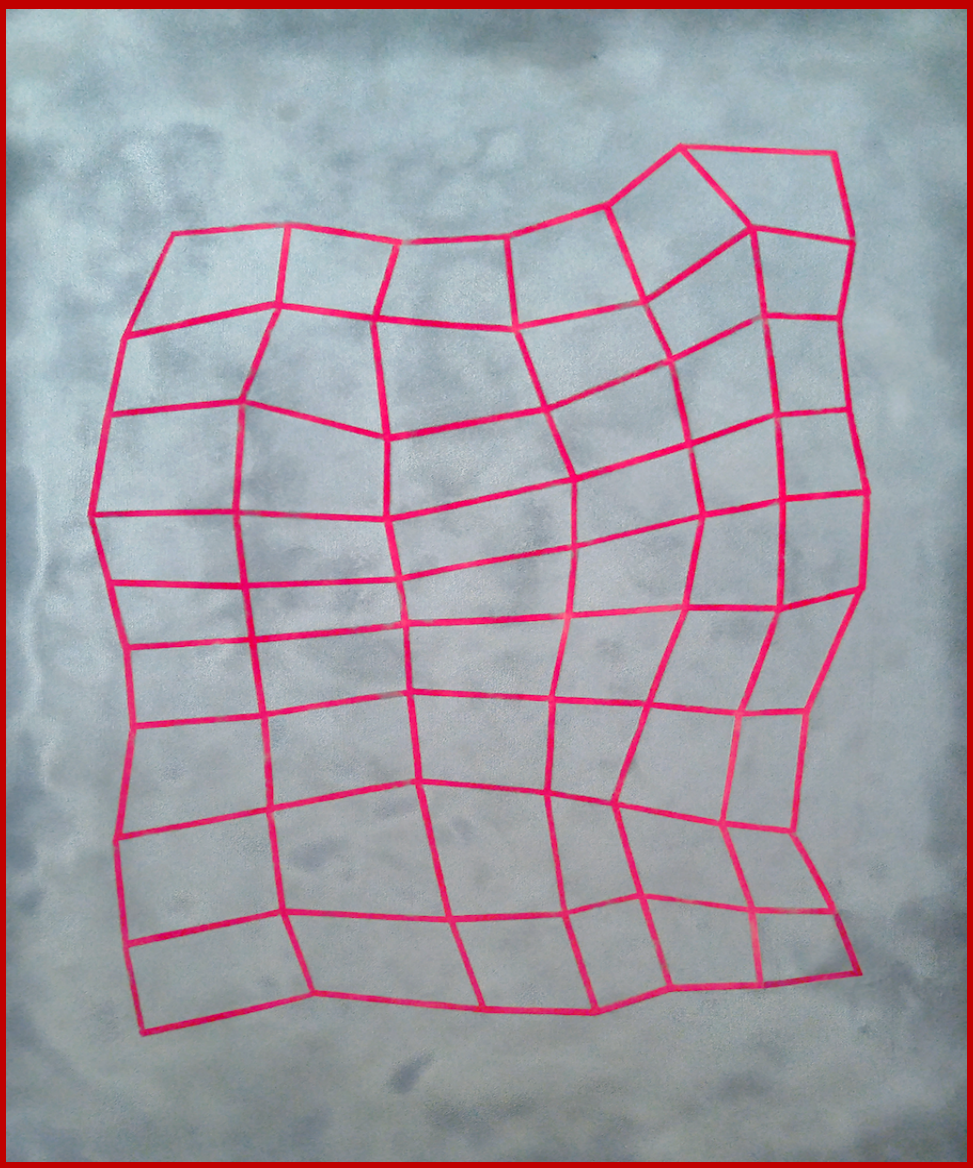
Revue YOUR Review

Volume/Tome 2 (2015)



York Online Undergraduate Research

Intended to showcase York University (Toronto, Canada) student research, *Revue* **YOUR** *Review* is an annual, refereed e-journal offering an opportunity for York University students to prepare a paper for publication. The journal is multidisciplinary, open-access, and bilingual: articles are published in English or in French.

Revue **Y***ork* **O***nline* **U***ndergraduate* **R***esearch Review* is associated with York University's annual, multidisciplinary Undergraduate Research Fair. Articles are revised from top essays submitted for York University credit courses and accepted as poster presentations at the juried Research Fair. Submissions are reviewed by an Editorial Board comprised of York University faculty members, writing instructors, librarians, and students, and may also be sent to expert readers within the discipline. Together, the Research Fair and its associated e-journal offer students an educational experience in researching, writing, preparing an abstract, designing and presenting a poster session, and revising a paper for publication—all components in the cycle of scholarly knowledge production and dissemination. Author rights are governed by Creative Commons licensing.

La *Revue* **YOUR** *Review* se propose de mettre en valeur la recherche des étudiants de premier cycle et offre aux étudiants de l'Université York (Toronto, Canada) l'occasion de rédiger un article pour la publication. Cette revue annuelle à comité de lecture et à libre accès est pluridisciplinaire et bilingue (anglais/français).

La *Revue* **Y***ork* **O***nline* **U***ndergraduate* **R***esearch Review* est liée à la foire annuelle de recherche de l'Université York. Les articles ont été sélectionnés et révisés des meilleures dissertations soumises pour un cours de premier cycle à l'Université et acceptées comme présentation d'affiches à cette foire, elle-même sous la direction d'un jury. Les soumissions à la *Revue* sont examinées par un comité de rédaction comprenant des membres du corps enseignant, des professeurs d'écriture, des bibliothécaires et des étudiants. La *Revue* et la foire de recherche offrent aux étudiants une expérience authentique de s'engager dans les processus de recherche, d'écriture, de préparation d'un résumé, de participer dans une conférence scientifique, de travailler avec des rédacteurs et de reformuler une dissertation sous forme d'article de recherche—l'ensemble des parties composantes du cycle de la production des connaissances et de la distribution du savoir. Les droits des auteurs sont soumis à la licence Creative Commons.

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[*] Posters can be viewed on the *Revue YOUR Review* website/Pour voir les affiches, veuillez visiter le site web de la *Revue YOUR Review* : http://yourreview.journals.yorku.ca.

Revue YOUR Review and Experiential Learning

Editor's introduction

Welcome to the second volume of *Revue YOUR Review*, York University's online undergraduate research review. This volume picks up on the momentum created by the publication of the inaugural issue of the *Review* (2014), and by the success of each iteration of York University's associated Undergraduate Research Fair since its inception in 2013. The articles published in Volume 2 have been selected, through a process of peer review, from among submissions that stem from research projects presented at the 2014 Fair.

A guiding principle in the establishment of both the Undergraduate Research Fair and *Revue YOUR Review* was one of promoting experiential learning. Loosely defined, experiential learning is a process of intellectual discovery that includes the application of a theoretical framework to concrete situations and reflection upon that endeavour with a view to augmenting awareness, to developing competencies, and to enhancing critical-thinking skills. Experiential learning builds upon acquired knowledge—often delivered in a classroom environment and reinforced through independent reading and exercitation—which is then tested in some form of "real-life" laboratory; but it is incomplete without the crucial element of contemplation about the process. The procedure of publication in *Revue YOUR Review* seeks to capture each of the fundamental aspects of the experiential-learning model for our contributors, and to extend the experience to an even broader selection of learners in the York University academic community.

The initial stage takes place within the structure of a for-credit undergraduate course at York University in which students are tasked with crafting a thesis for a research-based project and with developing that thesis into an original, coherent, and fleshed-out analysis, argument, set of findings, or creative work. After having received feedback from their instructors, potential participants submit an application to present their projects in the juried Undergraduate Research Fair with a newly elaborated abstract. Those who are selected and who participate in the Fair are then invited to attend a workshop on writing for publication, organized by the *Revue YOUR Review* editorial board, to help them to rework and refine their projects in the

format of an article; from there, they are encouraged to submit their articles to peer review for potential publication in the *Review*. All accepted papers are submitted to a round of copy-editing undertaken by students of a fourth-year professional-publishing practicum in York's Writing Department (Faculty of Liberal Arts & Professional Studies), and then may be delivered to individual writing coaches who work with authors to help them to strengthen their argumentations and to cultivate their written academic expression. The final product undergoes a last copy-edit, performed, this time, by journal staff.

The very act of undertaking a research-oriented project is in and of itself a form of application of theoretical knowledge to a concrete situation—that of knowledge transfer. The Research Fair provides a forum in which to actualize that transfer to a public of several hundred people; what's more, it requires that researcher-presenters process their instructors' comments and revisit their projects both to incorporate any suggested improvements and, most challengingly, to re-structure them into two-pronged presentations, each consisting of a poster and an oral presentation that requires mastery of the subject, a dynamic delivery, and concision. This jump from the course assignment to the idea marketplace certainly demands reflection: "What is this research about? What is its use or application? How can it be effectively communicated to those present?"

The experience of the Fair stage is instrumental in researchers' assessment of their own projects, and of whether their research might find resonance in the vast expanse of open-access online publishing. Their participation helps them to understand better their methodological approaches, eventual biases, and the potential impact of their work when met with the critical engagement of Fairgoers who carry with them their own perspectives, areas of expertise, and personal experiences.

Having tested and reflected on their theoretical learning as "sellers" of knowledge at the Fair, those participants whose articles have been selected for publication in the *Review* must confront yet another level of reflection on their work. Each contributor must ask: "How has the experiential quality of the process to this point shaped its direction moving forward? Will this analysis stand up to time? How has the process deepened my own understanding of and engagement with the matter?" It is at this stage that authors are paired with writing coaches, against whom they test their evolved knowledge and from whom they receive further critiques and valuable insights based on their coaches' own experiences in writing and in publishing. This stage often includes a back-and-forth between the two parties of the pairing, eliciting a final round of reflection on the part of authors before the last editorial touches are made and the definitive product unveiled to the public.

Revue YOUR Review's learning-through-experience principle is not limited to its authors, who have navigated the research, writing, presentation, selection, and editing processes outlined above, but also seeks to lend the critical-knowledge-transfer space that it has carved out to others within the University whose learning

environment might be enhanced by an active, participatory experience in the production of such an enterprise. To this end, the *Review* teams up with the aforementioned professional-publishing practicum both to receive copy-editing assistance from the students enrolled in the course and to provide those students with a valuable hands-on, experiential endeavour. Another way in which the *Review* has sought to provide a platform for student work—and precisely for *creative* student work—lies in its selection process for each volume's cover art: as of the 2016 Research Fair, parallel to the Fair's poster presentation event is an art walk, from among whose pieces a jury selects a winner to be exhibited on the cover of the ensuing volume of *Revue YOUR Review*. Finally, with generous funding from York University Libraries, we have been able to hire a student Digital Production Assistant whose education, skills, and perspectives complement the competencies of the editorial board.

We invite you, therefore, to view this venture as the product of a multifaceted effort that builds on theory, practical application, and reflection—the fundaments of experiential learning—and on the collaborative toils of a broad community of York University instructors and learners. It is, as such, a fitting forum in which to exhibit and to circulate a broad spectrum of investigations, critical analyses, and creative work undertaken by some of York University's most promising undergraduate researchers.

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L'apprentissage expérientiel et la *Revue YOUR Review*

Éditorial

Bienvenue au deuxième tome de *Revue YOUR Review*, la revue de recherche des étudiants de premier cycle de l'Université York. Ce volume poursuit sur la lancée de la publication inaugurale de la *Revue* en 2014, ainsi que sur le succès de chaque itération de la foire de recherche des étudiants de premier cycle de l'Université York depuis ses débuts en 2013. Les articles publiés dans ce deuxième tome ont été sélectionnés au moyen d'un processus d'examen collégial et d'un comité de lecture, parmi les soumissions issues de projets présentés à la foire de recherche de 2014.

Le principe directeur de l'établissement de la foire de recherche et de la publication *Revue YOUR Review* est de promouvoir l'apprentissage expérientiel chez les étudiants universitaires. Au sens large, un apprentissage axé sur l'expérience décrit un processus de découverte intellectuelle, ce qui comprend l'application d'un cadre théorique aux situations concrètes ainsi que l'occasion de réfléchir sur cette tentative, dans le but de développer les compétences et la pensée critique. L'apprentissage expérientiel s'appuie sur les connaissances préalables—souvent acquises en salle de classe et renforcées par la lecture indépendante et par la pratique—et mises à l'épreuve par la suite en « laboratoire » de la vie réelle, un processus pour lequel la réflexion est l'élément essentiel. Le processus de publication dans la *Revue* cherche à capturer chaque aspect fondamental du modèle d'apprentissage expérientiel pour nos contributeurs et à étendre l'expérience à une plus grande sélection d'apprenants de la communauté académique de l'Université York.

La phase initiale s'encadre dans la structure d'un cours de premier cycle à l'Université, où les étudiants entreprennent un projet à base de recherche ou un travail créatif. Par la suite, ils peuvent élaborer une thèse et l'élargir pour en faire une analyse originale, cohérente et détaillée, ou bien développer leur création artistique. Après avoir reçu les commentaires de leurs professeurs, les étudiants sont invités à soumettre une application au comité de lecture de la foire de recherche pour

présenter leurs projets à la communauté universitaire. Par après, ceux qui sont sélectionnés et qui participent à la foire sont invités à participer à un atelier d'écriture, organisé par le comité de rédaction de cette revue, pour apprendre à retravailler leur projet sous forme d'article. De là, on leur encourage à soumettre leurs articles au comité de lecture pour être considérés pour la publication éventuelle. Les articles acceptés sont envoyés à une équipe de rédacteurs de copie qui sont eux-mêmes des étudiants-stagiaires de dernière année du programme de publication professionnelle du Département d'écriture de l'Université. Au besoin, l'article peut être livré à un « parrain-coach » individuel, qui travaillera avec l'auteur afin d'améliorer ses arguments et de polir son expression écrite. Le produit final est révisé une dernière fois, cette fois-ci par les rédacteurs de copie de la revue.

Le simple fait d'entreprendre un projet de recherche est en soi une façon d'appliquer la connaissance théorique à une situation concrète, soit la transmission des savoirs. La foire de recherche constitue un forum d'échange où cette transmission se voit confiée à un public nombreux. De plus, ce cadre demande aux chercheurs-animateurs qu'ils prennent en compte les commentaires de leurs professeurs, qu'ils incorporent les améliorations suggérées et revisitent leurs projets afin de les refaçonner sous forme visuelle (une affiche) et de les présenter oralement—ce qui exige une maitrise du sujet, une diffusion dynamique et de la concision. Ce saut du travail de cours à un marché des idées nécessite certainement un bon élément de réflexion : Sur quoi se concentre ce projet de recherche? À quoi sert-il? Comment peut-on bien communiquer ses résultats à un public général?

L'expérience de la foire de recherche est un pas essentiel pour les étudiants-chercheurs qui doivent évaluer leurs projets et se demander si ceux-ci trouveront leurs places dans la vaste étendue de la publication en libre accès. Leur participation à la foire les aide à mieux comprendre leurs approches méthodologiques et leurs biais aussi bien que l'impact potentiel de leurs travaux lorsqu'ils rencontrent l'engagement critique des visiteurs, qui ont leurs propres perspectives, domaines d'expertise et expériences personnelles.

Ayant testé et réfléchi à leur apprentissage théorique en tant que « vendeurs » de connaissances à la foire, les auteurs d'articles choisis pour la publication dans *Revue YOUR Review* confrontent encore un autre niveau de réflexion sur leur travail. C'est-à-dire que chaque contributeur doit se poser d'autres questions : Comment est-ce que l'expérience de la foire a influencé mon article? Est-ce que mon analyse résistera à l'épreuve du temps? Comment ce processus a-t-il approfondi ma compréhension et mon engagement avec le sujet? C'est à cette étape que les auteurs sont jumelés aux « parrains-coach », des experts-académiques dans la discipline avec qui ils peuvent tester leurs connaissances grandissantes et de qui ils reçoivent non seulement des conseils sur leur expression écrite mais aussi des critiques et des aperçus précieux. Cette étape comprend souvent un va-et-vient entre les deux parties—l'étudiant-auteur et l'expert—ce qui évoque un nouveau cycle de réflexion

de la part des auteurs, avant que les dernières modifications rédactionnelles ne soient faites et le produit final, dévoilé au grand public.

Ensemble, la foire de recherche et la *Revue* ont creusé au sein de l'université un espace pour la transmission des savoirs ainsi que pour l'apprentissage actif et participatif. L'occasion d'apprendre à travers l'expérience qu'offre la *Revue YOUR Review* à ses auteurs—qui ont pu naviguer les processus complexes de faire la recherche, de donner une présentation orale, d'écrire, de retravailler et de réviser leurs projets—ne se limite pas à ces contributeurs, car la *Revue* s'associe aussi à un stage en édition organisé par le département d'écriture de l'Université. Ainsi, la *Revue* profite de l'aide des stagiaires en matière de révision et de rédaction, tandis que les stagiaires, de leur part, bénéficient de faire partie d'une initiative expérientielle et authentique. D'autre part, la *Revue* offre une plate-forme pour l'ouvrage *créatif* des étudiants, grâce à sa promotion d'une œuvre d'art originale pour la couverture de chaque numéro : un effort entrepris à partir de la quatrième foire annuelle de recherche en 2016, qui a vu l'ajout d'un Parcours d'art durant la foire et la création d'un comité de sélection qui choisit l'œuvre gagnante publiée sur la page frontispice de cette publication. Enfin, grâce au financement généreux des Bibliothèques de l'Université York, nous avons pu engager un assistant de production, un étudiant qui apporte la formation, les aptitudes et les points de vue qui complémentent ceux des professionnels du comité de rédaction.

Nous vous proposons donc à estimer cette initiative en tant qu'effort coordonné à multiples facettes, issue de base théorique, d'application pratique et de réflexion—les fondements de l'apprentissage expérientiel—un effort qui s'appuie sur le travail collaboratif de la communauté universitaire d'éducateurs et d'apprenants. Dans cette optique, la *Revue YOUR Review* constitue un forum pertinent pour l'exposition et la diffusion d'un large éventail d'investigations multidisciplinaires, d'analyses critiques et d'œuvres créatives effectuées par des étudiants-chercheurs parmi les plus prometteurs de l'Université York.

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The Editors-in-Chief

Remerciements

Nous remercions vivement nos auteurs-étudiants, qui ont participé avec enthousiasme au long processus de révision des articles et qui ont reçu les commentaires avec grâce. Un grand merci aux « parrains-coach » volontaires—Marcella Duran, Shanna Lino, Irene Markoff, Scott McLaren, Dominique O'Neill et Peter Unwin—les experts-académiques qui ont su guider ces nouveaux auteurs à travers le processus de préparation de leurs articles scientifiques et qui ont partagé des conseils sur leur expression écrite. Nous tenons à remercier également Michael O'Connor, le rédacteur en chef de la maison d'édition Insomniac Press (London, ON), ainsi que ses étudiants du cours Book Publishing Practicum (WRIT 4721, Université York), qui ont fait la révision initiale des articles. Nous aimerions remercier tout particulièrement Joy Kirshner, directrice visionnaire des Bibliothèques de l'Université York, qui reconnaît la valeur d'offrir un forum à libre accès pour la production et la dissémination de la connaissance scientifique des étudiants et pour qui la conception d'une bibliothèque du XXI^{e} siècle comprend l'engagement communautaire et l'apprentissage expérientiel. Merci aussi à Andrea Kosavic, bibliothécaire chargée de la culture numérique à l'Université York, qui dispose d'une compréhension profonde en édition numérique, ce qui se traduit par son appui concret de cette revue. Nous sommes reconnaissants du travail excellent de notre étudiant-assistant en production numérique, Michael Pietrobon. La *Revue YOUR Review* est née d'une vision, mais vit grâce au soutien actif de ces personnes.

Les rédacteurs en chef

AARON CLARKE & MOHAMED SHEKSALAH

Nitric Oxide

Implications of a potential ergogenic aid

Nitric Oxide (NO) is an endogenous free radical and a potent vasodilator in the human body. While it has many clinical applications, interest in NO use as a potential ergogenic aid has increased greatly in recent years. There are now many different types of NO-producing supplements, split into three major categories: arginine, citrulline, and nitrate-based supplementation. Recent literature has yielded mixed results for all three. Arginine-based supplements work in some cases, but have several recurring limitations that question the validity of their conclusions. There is currently no conclusive or decisive evidence to support the claims made regarding arginine or citrulline-based supplements. Nitrate-based supplements taken 2.5 hours prior to aerobic exercise produce positive ergogenic effects such as decreased oxygen consumption and increased exercise tolerance at submaximal and moderate intensities; however, these supplements have no ergogenic effect on highly trained subjects. The amount of nitrate that needs to be consumed to obtain ergogenic effects can be obtained through a meal of 100g of nitrate-rich vegetables such as beetroot, spinach, and lettuce. Considering the unstable nature of nitric oxide, there is also a lack of studies observing the magnitude of protein damage over chronic supplementation. There is also a lack of studies that observed elderly and female populations. Future studies should investigate the effects of chronic supplementation on 3NT levels—a marker of protein damage.

Keywords: nitric oxide, arginine, nitrate, performance, beetroot, ergogenic

INTRODUCTION

Vasodilation is the process by which blood vessels increase in diameter, allowing for an increase in blood flow. Nitric Oxide (NO) is a potent vasodilator which is actively produced by the human body to increase blood flow and decrease blood pressure (Bescos, Sureda, Tur, & Pons, 2012; Larsen et al., 2011; Lundberg et al., 2011). However, NO is an unstable free radical, meaning that it is a compound that has potential to cause cellular damage if it is in high concentrations. This is avoided

because NO is stored in the body as its more stable forms: nitrate (NO_3) and nitrite (NO_2) (Hord, Tang, & Bryan, 2009). NO can be safely produced via oral bacterial enzymes that can convert NO_3 to NO_2, which can then be converted to NO by a number of other enzymes in the body (Lundberg et al., 2011). The primary method of increasing NO and inducing vasodilation, however, is through the activation of Nitric Oxide Synthases (NOS) located in endothelial cells. With the help of oxygen, NOS convert arginine (Arg), a conditionally essential amino acid (i.e. an amino acid which is sufficiently produced by the body except during times of metabolic stress or illness), to NO and its by-product Citrulline (Cit). NO then diffuses into smooth muscle cells causing changes that lead to smooth muscle vasodilation (Lundberg et al., 2011).

Historically, NO has been widely used in clinical settings because of its vasodilatory effects. NO-induced vasodilation has been shown to help patients with cardiovascular diseases such as coronary atherosclerosis, hypertension, and asthmatic bronchoconstriction (Bryan & Loscalzo, 2009). Interest and research in the field of NO-producing supplementation for sport performance has grown immensely in the past 30 years. Indeed, studies show that people with impaired NO synthesis have poor exercise tolerance (Lauer et al., 2009). The three major forms of NO-producing supplementation include arginine, citrulline, and NO_3-based supplementation.

ARGININE, CITRULLINE, AND NO_3 SUPPLEMENTATION

Due to its short half-life (1-2 ms) and its nature as a free radical, simply ingesting or injecting NO is neither a safe nor effective option (Hord, Tang, & Bryan, 2009). As such, to use NO as an ergogenic aid one must find a safe way to increase the bioavailability of NO.

Arginine and citrulline-based supplements work by increasing the amount of substrate (arginine) for NOS, leading to an increase in NO production. As mentioned above, arginine (Arg) is a conditionally essential amino acid and can easily be obtained through diet (Hord, Tang, & Bryan, 2009). Citrulline (Cit) is a non-standard amino acid that can be converted to arginine in the body with the help of several enzymes (Toda, 2008).

Unlike Arg and Cit supplements, NO_3-based supplements operate independent of NOS. Under exercising conditions, the NO_3 and NO_2 in one's body are naturally converted to NO for use (Bailey, Vanhatalo, Winyard, & Jones, 2012; Bescos, Sureda, Tur, & Pons, 2012; Lundberg et al., 2011). Additional NO_3 can be naturally found in the diet through dark leafy vegetables and has a half-life of 5-8 hours (Hord, Tang, & Bryan, 2009). About 60% of ingested nitrate is excreted in urine and about 25% gets concentrated in saliva (Lundberg et al. 2011). Spitting out saliva or using antibacterial mouthwash after taking an NO_3 supplement abolishes the effects of nitrate (Govoni, Jansson, Weitzberg, & Lundberg, 2008; Webb et al., 2008).

This paper will explore whether or not these common forms of NO supplementation work, through which mechanisms they might act, and under what conditions.

Arginine-based supplementation

We reviewed 20 studies that used Arg-based supplements and found mixed results. Out of 20 studies, nine claimed the supplement worked while 11 claimed it did not (Appendix, Table 1). However, when we examined these studies, we came across several recurring limitations that must be addressed.

First, many of the Arg supplements reviewed were mixed with other compounds, most of which had their own ergogenic effects. For example, Chen et al. (2010) set out to investigate the effect of chronic L-arg supplementation on moderately trained elderly men (>50yrs) performing a max incremental exercise test. They found no difference in baseline exercise parameters (VO_2 or power output), but did find a sustained 16% increase in anaerobic threshold. However, the supplement was mixed with several other compounds including citrulline, vitamin E, and alpha lipoic acid; therefore, the authors could not conclude that the increase in anaerobic threshold was solely due to L-arg. We found that 12 of the 20 Arg studies we reviewed included some form of mixed supplement (Appendix, Table 1). Seven of those 12 studies concluded that Arg supplementation worked as an ergogenic aid. The mixed supplementation casts doubt on the validity of these conclusions.

The second major limitation was that only five out of the 20 studies we reviewed measured NO metabolite levels (NO_X, referring to NO_3 or NO_2 in the body), and only one of those five reported a significant difference in NO_X levels (Bailey et al., 2010). This makes it difficult to know if the results of these studies can be attributed to NO supplementation.

The third limitation is that arginine is involved in several other metabolic pathways. This means it may not always lead to an increase in NO production. This was well illustrated in a prior study conducted by Fricke et al. (2008), which investigated the effect of 18g L-arg on muscle force and power in postmenopausal women. The authors found no increase in maximum grip force, or peak jump force, but did find a significant increase in maximum power in relation to body mass (measured as peak jump force divided by body weight). They concluded that the supplement may have increased maximum force and prevented muscle force decline in postmenopausal women. However, while these authors concluded that Arg supplements can have a positive benefit, they also note NO was likely not the cause of the observed result and stated that increased Arg may not necessarily lead to an increase in NO synthesis. Arg is known to actively participate in the synthesis of creatine (Buford et al., 2007) and L-Arg infusion at rest is known to increase plasma insulin, glucagon, growth hormone, IGF-1, prolactin, and catecholamine

concentrations (McConell, 2007), all compounds that are ergogenic aids in their own right.

It is difficult to isolate the ergogenic effects of Arg-based supplementation to arginine itself. Arg is active in many other pathways and may not always stimulate NO production. Further concerns regarding arginine supplementation include the fact that NOS must compete with arginase enzymes, which use Arg in the urea cycle (Bescos, Sureda, Tur, & Pons, 2012). Arginase activity seems to increase with exercise, which suggests additional arginine will not be converted to NO (Sureda et al., 2006).

Citrulline-based supplementation

Like Arg-based supplements, Cit-based supplements are also NOS dependent; however, unlike Arg, Cit is not a substrate for arginase enzymes. We came across only one Cit-based study that did not use a mixed supplement. Subjects were given an oral L-Cit supplement, and then completed an incremental test to exhaustion on a treadmill (Hickner et al., 2006). Contrary to the author's hypotheses, treadmill time to exhaustion was 1.5% lower and rate of perceived exertion was found to be higher compared to placebo. In addition, NO_X levels were observed to be 7% lower following supplementation, suggesting Cit actually decreased levels of NO production. As a by-product of NO production, it is possible that higher levels of Cit may have suppressed NOS activity.

In light of the findings outlined above and the reported side effects of Arg and Cit-based supplementation (e.g. nausea, vomiting, and diarrhea [Grimble, 2006]), we cannot recommend either as an effective form of NO supplementation.

Nitrate-based supplementation

The three main forms of NO_3 supplementation are two pharmaceutical nitrates ($NaNO_3$ and KNO_3) and Beetroot Juice (BRJ). We reviewed 27 studies that used one of these forms of NO_3-based supplementation. Appendix, Table 2 summarizes each study and Table 3 provides an overall summary of the findings. Like the Arg-based studies, the NO_3 studies produced varying results, though 22 out of 27 showed a performance benefit. For example, Wilkerson et al. (2012) revealed that there was a strong negative correlation (r= -0.81) between the change in plasma NO_2 levels and the change in performance. This finding provides strong evidence that increased NO in one's system is related to better performance (lower times) on an aerobic time trial.

Interestingly, recent literature suggests that NO_3 can have ergogenic effects in dosage amounts that are comparable to what one may obtain from a meal including 100g of NO_3-rich vegetables (Hord, Tang, & Bryan., 2009). Studies also show that the optimal time to take NO_3 supplements is 2.5-3 hours prior to exercise in order to obtain the greatest benefit (Webb et al., 2008).

Training status

Unlike the Arg-based studies, all NO_3 studies reported an increase in NO_X levels, regardless of whether or not there was a positive performance effect reported. Interestingly, the studies with the lowest percent increases in NO_X were among the five studies that did not report any significant ergogenic effect (Bescós et al., 2011; Wilkerson et al., 2012; Peacock et al., 2012). This suggests that the subjects in these studies had a lower response to NO supplementation compared to those in other studies. Further investigation revealed that the subjects of these studies had one trait in common: their training status. VO_2max is a measure that reflects maximal oxygen uptake. A higher VO_2max means that more oxygen can be used during exercise. All subjects in these five studies were classified as highly trained aerobic athletes with VO_2max greater than 60 mL/kg/min. With all other variables being controlled, these athletes did not show any performance enhancement through NO supplementation. This is a previously unreported finding, and we believe this is the single-most-important factor in determining whether or not NO_3 supplementation will have an ergogenic effect. Illustrating this point, a recent study investigated the effect of 6.2mmol of NO_3, consumed 2.5 hours prior to exercise by highly trained athletes, on an 80 km time trial and reported no significant performance benefit (Wilkerson et al., 2012). This is despite having similar experimental protocols as two other studies that reported a benefit from NO_3 supplementation (Lansley et al. 2011; Murphy, Eliot, Heuertz, & Weiss, 2012).

Unlike the mixed supplementation used in Arg-based supplementation studies, NO_3 was shown to be the active ingredient in the three different forms of NO_3 supplementation used in the NO_3 studies that we reviewed. By using KCl and NaCl as placebos, several studies have proved that the observed effects of supplementation were the result of NO_3 alone (Bescós et al., 2012; Bescós et al., 2011; Larsen et al., 2006; Larsen, Weitzberg, Lundberg, & Ekblom, 2010; Larsen, Weitzberg, Lundberg, & Ekblom, 2007). Another recent study was able to isolate the effects of BRJ supplementation to its high NO_3 content and not any other substance (Lansley et al., 2011). BRJ was used as an alternative form of NO_3 supplementation in many studies because of its high NO_3 content (Hord, Tang, & Bryan, 2009) and because of fears surrounding the safety of pharmaceutical NO_3 supplementation (Lundberg, Larsen, & Weitzberg, 2011; Rogers, Vaughan, Davis, & Thomas, 1995). Together, these studies show that NO_3 is the active ingredient in pharmaceutical and dietary nitrate supplementation.

NO_3 limitations

Performance benefits were not consistent across the different nitrate studies reviewed (i.e: some studies reported larger decreases in blood pressure than others). We believe the reason for this is the vastly different methodology used in each study. It is also important to note that a few studies had experimented with NO_3 supplements

that had been mixed with other compounds. We did not review these extensively because, like the mixed arginine supplements, it is difficult to attribute mixed supplement effects to NO alone. These mixed compounds include 2-ethyl, GPLC (a carnitine-based supplement), and store-bought NO_3 supplements that were reported to be mixed with over 30 other compounds (Bloomer et al., 2010).

NO_3 controversies

There have been several controversies surrounding the use of NO_3 supplements. Of minor concern is that subjects who supplemented with BRJ also reported minor side effects such as Beeturia and red stools (Bailey et al., 2010a; Bailey et al., 2010b; Vanhatalo et al., 2010; Webb et al., 2008). The most significant controversy is concerned with the use of pharmaceutical NO_3. Due to health and ethical concerns, human supplementation with pharmaceutical NO_3 was not allowed in the United Kingdom (Jones et al., 2011). As such, UK-based studies used BRJ as an NO_3 supplement (Bailey, Vanhatalo, Winyard, & Jones, 2012). However, it has been observed that the lethal oral dose of NO_3 in humans is around 330 mg/kg body weight (European Food Safety Authority, 2008). Thus, while the dosages used in the studies reviewed were well above the WHO recommended Adequate Daily Intake (ADI) of 0–3.7 mg/kg or about 0-0.06mmol/kg (Hord, Tang, & Bryan, 2009), they are also significantly below what may be considered a lethal dosage. Some researchers have claimed, however, that even at low levels NO_3 could be dangerous, and they have warned against its uncontrolled use (e.g. Lundberg, Larsen, & Weitzberg, 2011). This claim was tested in a 2012 study that examined cell damage after NO_3 supplementation in highly trained athletes and found no significant changes over three days (Bescós et al., 2012). This study concluded that acute supplementation of $NaNO_3$ was safe for humans if consumed alongside dietary nitrate. Therefore, the concerns surrounding NO_3 use as an ergogenic may not be applicable in all situations.

SUMMARY OF FINDINGS AND DISCUSSION

NO supplements are increasingly being used by recreational athletes as an ergogenic aid, but little is currently known about the nature of these supplements. After reviewing recent literature, several conclusions and inferences may be made. Arg and Cit supplements that use endogenous NOS to convert Arg to NO have yielded inconsistent results and there are no consistent data from which to make any reliable conclusions.

NO_3-based supplements show the most promise. There is a strong correlation between the change in plasma NO_2 levels and a change in performance. These supplements have been shown to work across a large range of aerobic exercise modalities.

Importantly for experimental control, NO_3 is the only active ingredient in $NaNO_3$, KNO_3, and BRJ, the three most common forms of NO_3-based supplementation. While all NO_3 supplements are shown to exert their effect by increasing NO, this increase is dependent on the training status of the individual. Highly trained athletes have the lowest-percent increases post-ingestion and are not likely to gain any performance benefit from the additional NO_3.

There have been warnings that ingesting pharmaceutical NO_3 can lead to protein damage or cancer (Rogers, Vaughan, Davis, & Thomas, 1995). Despite such fears, $NaNO_3$ supplements, if taken safely with dietary nitrate, do not cause any significant protein damage over an acute dosage period.

SUGGESTIONS FOR FUTURE RESEARCH

Chronic exercise has also been shown to increase NOS expression in dogs (Sessa et al., 1994) and to increase NO production in hypercholesterolemic patients (Lewis, Dart, Chin-Dusting, & Kingwell, 1999). It is possible that chronic exercise training over a lifetime may increase NOS expression in human subjects to the point where NO_3 supplementation is no longer effective, which may be the case with highly trained athletes. This has potential implications for elderly populations, who are known to have decreased levels of NO production (Goubareva et al., 2007).

In addition, excessive NO production is dangerous because of its capacity for protein damage. Indeed, the dosages used in the studies reviewed were far in excess of those recommended by the WHO (Hord, Tang, & Bryan, 2009). A recent study proved that acute supplementation of $NaNO_3$ with dietary nitrate does not result in protein damage, reflected in 3NT levels (Bescós et al., 2012); there are, however, no studies that have examined 3NT levels with chronic (>5 days) supplementation. Therefore, future studies should examine the effects of chronic exercise on NOS expression, the effects of NO_3 supplementation in elderly populations, and 3NT levels over chronic supplementation periods.

CONCLUSION

After reviewing all the pertinent literature, the claim can be made that NO_3 supplements can help to improve aerobic exercise tolerance and performance in young, moderately trained men and are not suitable for highly trained endurance athletes. Arg and Cit-based supplements are not recommended. Rather than buying a supplement, however, it is recommended that individuals interested in NO_3 supplementation should consume about 100g worth of NO_3-rich vegetables 2.5-3 hours before exercise. One would receive the same amount of NO_3 as the subjects in most of the studies reviewed and save a considerable amount of money.

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APPENDIX

Table 1. Side by Side Comparison and Summary of Studies Using Arginine or Citrulline Supplementation.

Study Author & year	Study design	Subjects (number, gender, (wt) VO_2max)	Supplement	Dose & duration	Signigicant Physio-logical Results	Significant Performance Results (%)	Worked as an Aid	Measured NO_X
Stevens et al., 2000	r, db, co	13 m	L-Arg + GaKic	11.2g for 23 d	none reported	↑FRI (28%), ↑Muscle work (0.8%)	Yes	No
Buford et al., 2004	r, db, pl	10 m	L-Arg + GaKic	11.2g for 1 d	↑ [L-Arg]	↓ change in peak mucle output	Yes	No
Campbell et al., 2006	1) r, db, c 2) r db cl	1) 10 m 2) 35 m	L-Arg + AAKG	1) 4g 2) 12g for 1 d	none reported	2) ↑1RM bench press, ↑ peak power output	Yes	Yes
Matsumoto et al., 2007	r, db, pl. co	8 m (72.6 ± 3.9kg)	L-Arg + BCAA	2.5 g for 1 d	↑[plasma BCAA], ↑ Phenylalanine release from the leg	none reported	Yes	No
Little et al., 2008	r, db	35 m	L-Arg + AAKG + Cr	0.175g for 10 d	none reported	↑ Bench-press repetitions (12.4%), ↑ Peak power (7.1%)	Yes	No
Fricke et al., 2008	r, db	23 f (>50y)	L-Arg+HCL	18g for 180 d	none reported	↑peak jump force	Yes	No
Bailey et al. 2010	r, db, co	9 m	L-Arg + Vitamins + Amino acids	6 g for 3d	↑ NO_X, ↓ 7% SBP	↑ TTE, ↓ VO_2	Yes	Yes
Camic et al., 2010	r, db, parallel	50 m	L-arg + GSA	1.5g or 3g for 21 d	none reported	↓GET (4.1%)	Yes	No
Chen et al., 2010	r, db, pl, ce, MI	21 m(>50y), VO_2max=3.71 ± 0.34 L/min	L-Arg + L-Cit + antioxidants + VitE + folic acid	5.2g for 21 d	none reported	↑ anaerobic threshold (16.7%)	Yes	No
Denis et al., 1991	r, db, co, ce	15 m/f (61 kg)	L-Arg + L-asp	5 g for 10 d	↓ [plasma NH4]	none reported	No	No
Eto et al., 1994	ce	3 m	L-Arg + L-asp	24 g for 1 d	↓ [plasma NH3]	none reported	No	No
Colombani et al., 1999	r, db	14 m	L-Arg + L-asp	15g for 28 d	↑ [glucagon], ↑ urea, ↑ [L-Arg]	none reported	No	No
Schaefer et al., 2002	r, db, cl, co	8 m	L-Arg	3 g for 1 d	↓ [plasma NH3], ↓ [bLac], ↑ [L-Cit]	none reported	No	No

Abel et al., 2005	r,pl, ce, MI	30 m (74kg), VO_2peak= 56±7.8 ml/kg/m	L-Arg + L-asp	5.7+8.7g for 28 d	none reported	none reported	No	No
Burtscher et al., 2005	r, db, pl, ce, MI	16 m (72.5 ± 6.5kg)	L-Arg + L-asp	3g for 21 d	↓ [bLac]	↓ VO_2, ↓ VCO_2	No	No
McConnell et al., 2006	r, db, co	9 m	L-Arg + HCL	30g for 1 day	↓ [blood glucose]	none reported	No	No
Liu et al., 2008	r, db, co	10 m	L-Arg	6g for 3 d	none reported	none reported	No	Yes
Bescós et al., 2009	r	9 m (67.7 ± 8.7kg)	L-Arg	5.5 ± 0.3g for 3 d	↓ [bLac]	none reported	No	Yes
Tsai et al., 2009	r, pl	12 m (75.75 kg)	L-Arg	7.5 g for 1 d	↑ [BG], ↑ [insulin]+ ↓ [blood FFA]	none reported	No	Yes
Koppo et al., 2009	r, db, co, ce	7, VO_2peak=52.0 ± 4.8 ml/kgm	L-Arg	6 g for 14 d	↑ [serum L-Arg]	↑ phase 2 VO_2 (12%)	No	No
Hickner et al., 2006	r, pl, db, cb	17 m/f, VO_2max = 52.1 ± 1.9	L-Cit	3g or 9g (3x3) for 1 d	↓ NO_X (7%)	↓time to exhausion (1.5%), ↑ RPE	No	yes

Legend. r=randomized, pl=Placebo-Controlled, co=crossover, db=double blind, ol=open-label, rm=repeated measures, cb=counterbalanced, GaKic=glycine-arginine-alpha ketoisocaarproic acid, AAKG=alpha ketogluterate, L-asp=L-aspartate, L-glut=L-glutamate, ce=cycle ergometer used, T=treadmill used, TT=Time trial, DT=Distance Trial, LI=low intensity, MI=Moderate intensity, SI=Severe Intensity, GE=gross efficiency, GET=gas exchange threshold, L-Arg=L-Arginine, NO_X=nitric oxide metabolites (NO_2 and NO_3), VO_2=Oxygen uptake, PO=power output, TTE=Time to exhaustion, TTC=Time to completion, BG=Blood Glucose, BI=Blood Insulin

Table 2. Side by Side Comparison and Summary of Studies Using Nitrate Supplementation.

Study Author & year	Study design	Exercise Modality	Subjects (number, gender, (wt) VO_2max)	Dosage & Dosage duration	Dose Timing	Physiological Results	Performance Results (%)	Worked as an Aid
Bescós et al., 2012	r, db, co,	40min cycling DT (91% Hrmax)	13 m, (72.4 ± 9.7 kg),VO_2max= 60 ± 7 mL/kgmin	11.6 mmol $NaNO_3$ for 3 d	3 h	↑ NO_2 (78%), ↑ET-1	DNI	N
Bescós et al., 2011	R, db, co	Four 6-min submax cycling (2-3.5W/kg) and one IT to exhaustion	11 m (73.3 ± 5.6 kg), VO_2peak= 65.1 ± 6.2 mL/kg/min	11.8 mmol $NaNO_3$ for 1 d	3 h	↑ NO_2, (16%)	↓ VO_2 2.9% at RCP SI	N
Wilkerson et al., 2012	R, sb, co	80km cycling TT at 75% VO_2max	8 m (79 ± 9 kg), VO_2peak= 63 ± 8 mL/kg/min	6.2 mmol BRJ for 7d	2.5 h	↑ NO_2 (25%), ↓BP	↓ TTC (0.8%) but was NS	N
Peacock et al., 2012	r, db	LI cycle exercise (55-75% Vomax)	10 m (74 ± 8 kg), VO_2peak= 69.6 ± 5.1 mL/kg/min	9.9 mmol KNO_3 for 1 d	2.5 h	↑ NO_2 (127%),	DNI oxygen cost	N
Christensen et al., 2013	R, sb, co	O_2 kinetics (3 x 6min at 298W), 400 kcal TT and repeated sprint capacity (6x20 s sprints)	10 m (69 ± 8 kg), VO_2peak= 72.1 ± 4.5 mL/kg/min	8 mmol BRJ for 6d	3 h	↑ NO_X (Day 4 = 258%, Day 6 = 298%)	DNI VO_2 kinetics	N
Larsen et al., 2006	R, db, co	no exercise	17 m/f	0.1 mmol/kg $NaNO_3$ for 1 d	n/a	↑ NO_2 (59%), ↓DBP	No exercise	Y
Larsen et al., 2007	R, db, co	5 minutes cycling at work rates equivalent to 45 - 100% VO_2peak	9 m, VO_2peak= 55 ± 3.7 mL/kg/min	0.1 mmol/kg $NaNO_3$ for 3 d	1 h	↑ NO_2 (82%), ↓SBP (6.7%)	↓ submax VO_2,↑GE (6.6%),	Y
Webb et al., 2008	ol, co	no exercise	14 m/f	6.2 mmol BRJ for 1 d	0.5 h	↑ NO_2 (100%), ↓SBP(8%), ↓DBP(10%)	No exercise	Y
Bailey et al., 2009	R, pc, co	4 MI (80%GET) and 2 SI (70%D) ce tests	8 m, (82 ± 6 kg) VO_2peak= 49 ± 5 mL/kg/min	5.5 mmol BRJ for 6 d	sipped throughout the day	↑ NO_2 (96%), ↓SBP, ↑ [Hbtot], ↑ [HbO_2], ↓ [HHb]	↓ O_2 amplitude during MI, ↓VO_2 slow component during SI, ↑TTF (16%) during SI,	Y

Larsen et al., 2010	R, db, co	LI cycle exercise, combined arm and leg cycle IT, 80rpm	7m, 2f, VO_2max= 3.72 ± 0.33 L/min	0.1 mmol/kg $NaNO_3$ for 3 d	40 mins	↑ NO_2 (133%), ↑ in plasma cGMP	↓TTE during SI, ↓ VO_2 (5.8%) during LI, ↓VO_2Max (2.8%)	Y
Bailey et al., 2010	R, db, co	6 LI (15%MVC)and 3 HI (30% MVC) two-legged knee extensor exercise	7 m, (81 ± 7 kg)	5.1 mmol BRJ for 6 d	n/a	↑ NO_2 137%, ↓SBP 4%, ↓DBP, ↓MAP 2%, ↓ muscle ATP turnover, ↓ muscle ADP accumulation, ↓ muscle Pi accumulation, ↓ muscle PCr depletion	↓VO_2 10.6% during LI, ↓ VO_2 13.7% during HI, ↑ TTF25%, ↓ muscle ATP turnover rate, ↓ muscle ADP accumulation, ↓ muscle Pi accumulation, ↓ muscle PCr depletion	Y
Kapil et al., 2010	1) db, co 2) ol, co 3) ol, co	no exercise	1) 6 2) 20 3) 9	1) 4, 12 2) 24 mmol KNO_3 3) 5.5 mmol of BRJ for 1 d	n/a	↑ NO_2 (30-300%),	No exercise	Y
Vanhatalo et al., 2010	R, b, co	2 bouts of MI (90%GET)and 1 IT to exhausion	8 m/f (71.8 ± 11.5 kg), VO_2: 47 ± 8 ml/kg/min	5.2 mmol BRJ for 15 d	2.5 h	↑ NO_2 (Day 1 = 39%, Day 5 = 25%, Day 15 = 46%), ↑ SBP, ↑MAP	↓VO_2 3.6% on d1, 4.8% on d 5, 4.2% on d15.,↓VO_2 amplitude during MI, After 15 days:↑W 2.5%, ↑Peak Work Rate in IT, ↑GET Work rate	Y
Larsen et al., 2011	r, db, co	LI cycle exercise, 60-70rpm	14 m (70 ± 2 kg), VO_2: 56 ± 3 ml/kg/min	7mmol $NaNO_3$ for 3 d	1.5 h	↑ NO_2 (526%)	↓ O_2 consumption (3%) during LI exercise, ↑ mitochondrial P/O ratio (19%)	Y
Lansley et al., 2011a	R, db, co	4- and 16.1-km cycling TT	9 m (69.3 ± 7.2 kg), VO_2: 56 ± 6 ml/kg/min	6.2 mmol BRJ for 1 d	2.75 h	↑ NO_2 (138%), ↓SBP (5%)	↑ PO/VO_2 7%, ↓ TTC (2.7-2.8%)	Y

Lansley et al., 2011b	R, db, co	4 MI (80%GET) and 2 SI (70%D) tests	9 m (79.6 ± 9.7 kg), VO_2: 55 ± 7 ml/kg/min	6.2 mmol BRJ for 6 d	3 h	↑ NO_2 (105%), ↓SBP (4%)	↓ VO_2 during walking (12%), ↓ VO_2 during MI & SI (7%), ↓VO_2 (14%) during SI walkin, ↑ TTF (15%)	Y
Kenjale et al., 2011	R, ol, co	CPX incremental test to exhausion	8 m/f (84.5 ± 16.5 kg)	6.2 mmol $NaNO_3$ for 1 d	1.75 h	↑ NO_2 (520%), ↓DBP, ↑ [Hbtot], ↑ [HbO_2], ↓ [HHb]	↓VO_2 , ↑TTE (17%)	Y
Bahra et al., 2012	R, db, co	no exercise	14 m/f	8 mmol KNO_3 for 1d	3 h	↑ NO_2 (75%), ↓SBP 3.6%	No exercise	Y
Cermak et al., 2012	R, rm, co	10km TT at LI and MI (45% and 65% Wmax)	12 m (73 ± 2 kg), VO_2: 58 ± 2 ml/kg/min	8 mmol BRJ for 6 d	2.5 h	↑ NO_3 (1900%),	↓ TT completion time (1.2%), ↑ PO (2.1%), ↓ VO_2 (3.5-5.1%)	Y
Murphy et al., 2012	db, co	5km TT	11 m/f (23.7 kg)	8 mmol BR for 1 d	1.15 h	DNM NO_X,	↑ running velocity (5%)	Y
Wylie et al., 2013	R, db, co,	YoYo HI intermittent cycling test	14 m (83 ± 10 kg), VO_2: 52 ± 7 ml/kg/min	28.7 mmol for 1 d	1.5 h	↑ NO_2 (395%), ↓ blood [glucose] ↓rise in plasma K+	↑ Performance in the Yo–Yo IR1 by 4.2 %	Y

Legend. r=randomized, pl=Placebo-Controlled, co=crossover, db=double blind, sb=single blind, ol=open-label, rm=repeated measures, ce=cycle ergometer used, TT=Time trial, DT=Distance Trial, LI=low intensity, MI=Moderate intensity, SI=Severe Intensity, IT=incremental exercise, GE=gross efficiency, GET=gas exchange threshold, $NaNO_3$=Sodium nitrate, KNO_3=Potassium Nitrate, BRJ=Beetroot juice, BR=Beetroot, RCP=respiratory compensation point, NO_X=nitric oxide metabolites (NO_2 and NO_3), NO_3=nitrate, NO_2=nitrite, ET-1=Endothelin-1, VO_2=Oxygen uptake, PO=power output, TTE=Time to exhaustion, TTC=Time to completion, DNI=did not improve, DNM=Did not Measure, Dosage: BRJ NO_3 dosage assumed to be 6.2mmol per 0.5L unless stated otherwise 10mg/kg NO_3 ~ 0.161mmol/kg

Table 3. Summary of Results for Studies on the Ergogenic Effects of Nitrate Supplementation.

Physiological results	Performance-related results
2.9-14% decrease in VO_2	1.2% decrease in TTC
22-526% increase in NO_X	15-25% increase in TTF and TTE
3.6-7.8% decrease in SBP	2.1-2.5%increase in W and PO
10% decrease in DBP	5% increase in running velocity
2% decrease in MAP	

SAORI FUKUOKA

No-Show Behaviour: Ethnic Minorities in a Diverse Community

A research project at the Black Creek Community Health Centre in Toronto

Patients who fail to attend scheduled appointments without prior notification to their healthcare centres, i.e. "no-shows," create negative outcomes for both healthcare providers and patients. This study examined whether visible-minority status, ethnicity, country of origin, immigrants' age at arrival, and immigrants' length of residency in Canada were related to no-show behaviours using data from 2,238 participants from four selected months—January, April, July, and October, 2012—at a community health centre in northwest Toronto, located in a highly diverse community in which 53.9% of the clients were visible minorities. The study examined two forms of no-show behaviour: number of appointments missed and percentages of appointments missed. The results suggested a relationship between the number of appointments missed with visible-minority status, ethnicity, and country of origin. A relationship was also found between percentage of appointments missed with country of origin, immigrants' age at arrival, length of residency in Canada, and immigrants' visible-minority status. Immigrants who had been in Canada fewer years and who arrived at a younger age showed the highest rate of no-shows. Visible-minority immigrants had a higher percentage of no-shows, though how significant this finding was depended on age at arrival. However, when both immigrants and non-immigrants were considered, the highest no-show rate came from non-immigrants who were not visible minorities. Further study should investigate reasons for no-shows using factors identified by the current study. Some recommendations for the Centre are also presented.

Keywords: no-show, visible minority, ethnicity, country of origin, appointment, immigrant, age

INTRODUCTION

Patients who miss scheduled appointments without notifying their healthcare providers, or "no-shows," cause various issues for their healthcare centres, for other

patients, and for themselves. Missed appointment slots by no-shows create loss of revenue and time for healthcare centres (Satinani, Miller, & Patel, 2009), inconvenience to other patients who are on waiting lists, and potential health risks to the patients themselves because of missed treatments (Dave & Barragan, 2012; Defife, Conklin, Smith, & Poole, 2010; Paterson, Charlton, & Richard, 2010). No-show rates range from 9% to 50% and problems caused by no-shows are serious (Paul & Hanna, 1997; Peeters & Bayer, 1999). Therefore, it is important to identify reasons and factors contributing to no-show behaviour and to develop effective interventions to reduce no-show rates.

Reasons for no-show behaviour are varied and complex. Some reasons are due to personal problems such as medical issues, life conflicts, lost motivation (Defife et al., 2010), lack of transportation, no phones to call, and simple forgetfulness (Bean & Talaga, 1995; Campbell, Chez, Queen, Barcelo, & Patron, 2000; Maxwell et al., 2001; Paul & Hanna, 1997). Some may have problems with their clinics, such as trust issues, feelings of discrimination, and a misunderstanding of the appointment system (Lacy, Paulman, Reuter, & Lovejoy, 2004). Other reasons include demographic factors such as age, gender, race, education, and language barriers (Finkelstein, Liu, Jani, Rosenthal, & Poghosyan, 2013; Martin, Shi, & Ward, 2009; Mitchell & Selmes, 2007; Parikh et al., 2010).

The current study explored the no-show phenomenon in order to reduce no-show rates at the Black Creek Community Health Centre (BCCHC), a community health clinic in Toronto, Canada. The BCCHC offers various clinical services and programs to its community. They have implemented reminder calls to reduce their no-show rates; however, nearly 30% of the total appointments remain "no-shows" (Dave & Barragan, 2012). The goal of this study is to find factors and/or characteristics of no-shows at the Centre and, ultimately, to develop alternative interventions to reduce no-show rates.

The research on no-shows at the BCCHC originally started as a team project for the Advanced Community-Based Applied Research course 2012-2013 at York University. Each member of the team looked at the no-show phenomenon from different perspectives and examined unique factors. My study originally focused on the relationship between no-show behaviour and language discordance between patients and healthcare providers at the BCCHC. The study revealed an outcome opposite to the hypothesis: English speakers in fact had more no-shows; thus, other factors needed to be examined (Fukuoka, 2012). I then continued research on the no-show phenomenon at the BCCHC as an independent study, supervised by Dr. Michaela Hynie, York University, and investigated different factors. The present contribution discusses unique characteristics of the community served by the BCCHC and explores possible relationships between these characteristics and the no-show phenomenon.

One of the unique characteristics of the BCCHC is its diversity of population. The Centre is located in the Black Creek neighbourhood in northwest Toronto. The majority (70.6%) of the residents in Black Creek are visible minorities (City of Toronto, 2013a), whereas 47% of residents in the City of Toronto are visible minorities (Statistics Canada, 2013). The percentage of immigrants in Black Creek is also higher than that of Toronto in general: 63.0% and 50.1%, respectively (Wilson et al., 2011). These numbers show that the community served by the BCCHC is more diverse than the City of Toronto as a whole, one of the most diverse cities in the world (City of Toronto, 2013b).

In the Black Creek neighbourhood, many ethnic minority groups have faced multiple discriminations (Access Alliance, 2011). The target factors of discrimination included language, religion, immigration status, the area of Black Creek, race, age, gender, education outside Canada, and limited English proficiency (Access Alliance, 2011). A study reported that perceived discrimination was positively related to a person's own racial identity (Heim, Hunter, & Jones, 2011). Perceived discrimination also has an association with negative feelings towards the healthcare system, professionals working within it, and the use of healthcare services (Harris et al., 2012). These negative feelings include trust issues. Uslaner (2012) mentioned that visible minorities are less trustful of the system than non-visible minorities because of perceived societal discrimination. It is also important to note that "perceived disrespect of the patients' beliefs and time by the health care system" was mentioned as another reason for no-shows (Lacy et al., 2004, p. 542). Feelings of distrust toward society could then influence a person's no-show behaviour.

However, immigrants would be able to develop feelings of trust toward society if they could integrate and establish a strong national identity (Uslaner, 2012). These feelings of belonging to the nation could help prevent perceived discrimination, which might contribute to trust toward society and/or the healthcare system. That is, attachment to their ethnic groups would weaken over time, causing a stronger connection with their adopted nation (Wu, Hou, & Schimmele, 2011). Therefore, the length of residency seemed to be an important factor in a sense of belonging to the nation.

Furthermore, a Canadian study revealed that the age at which immigrants arrive in Canada was also a predictor of national belonging (Cheung, Chudek, & Heine, 2011). If individuals arrived before 14.5 years of age, the length of time in Canada and adaptation to the country were positively related at a significant level, yet the effect changed if individuals immigrated after 14.5 years of age (Cheung et al., 2011). The relation between age at immigration and length of residency in Canada actually yielded a moderately negative result, typically, in terms of identification with mainstream Canadian culture for those who immigrated at around 25 years or older. The authors of the study further reported that, "though none of our participants arrived in Canada after the age of 50, linear extrapolation from our model suggested that the rate of acculturation would have become significantly negative at age 51"

(Cheung et al., 2011, p. 149). One's age at arrival in Canada, therefore, in addition to one's length of residency here, is considered to be a crucial factor for national belonging, which relates to feelings of trust in the healthcare system (Uslaner, 2012).

Based on the previous research and discussions mentioned in this section, three hypotheses were proposed:

1) patients' ethnicities and countries of origin are related to their no-show behaviour;
2) in particular, patients who belong to visible-minority groups display higher no-show rates, and this tendency is not limited to immigrants;
3) the longer the immigrants have resided in Canada, the lower their no-show rate is predicted to be. This tendency will be moderated by age of migration: if immigrants arrived at a younger age, there will be a negative relationship between their length of residency and no-show rates; however, for those who came at an older age, starting from around 25 years old, it will be a weaker association with no-show rates.

METHOD

Data collection: Data from intake form and the term "no-show"

The following data about individual BCCHC clients were obtained from information provided on the Centre's client intake form (see Appendix A): 1) unique ID; 2) date of intake; 3) gender; 4) date of birth; 5) insurance status; 6) language; 7) race/ethnic origin; 8) country of origin; and 9) year of arrival in Canada. No further personal information was gathered. The analysis was restricted to data taken from clients who were 1) adult patients (18 years and older); 2) patients who made at least one appointment in 2012 from the following clinical services and programs offered by the BCCHC: family doctor, nurse practitioner, registered nurse, foot specialist (chiropodist), nutrition (registered dietitian), counselling services, diabetes education, and breastfeeding support; and 3) patients who had given express permission to the BCCHC to use their information for research and program development.

The records of appointments made in 2012 from the eight types of clinical services and programs mentioned above were obtained. From within the year, four months—January, April, July, and October— were selected to represent each season. The records included the number of appointments that each patient 1) made, 2) attended, and 3) missed with each service. "Missed appointments" in this study refers to patients not only failing to physically attend their appointment, but also failing to notify staff of the cancellation. These were defined as "no-show appointments." It is important to distinguish non-attendance for an appointment with and without a prior notification of cancellation because the problem is only with the latter.

After the selection, the data for 2,238 adult patients at the BCCHC were obtained. The patients consisted of 618 males, 1,618 females, and 2 of unspecified gender. The participants' age ranged from 18 to 98 years with an average age of 47.38. As for the

language, 28 different languages were spoken. Most patients indicated use of the government's insurance plans but 532 (23.8%) of them did not indicate any plans.

There were 52 different ethnicities and 97 different countries of origin (places of birth) found. Participants' countries of origin may differ from their ethnicities. Thus, both factors were categorized for analysis. The classification was referred from the definitions on the Statistics Canada website (Statistics Canada, 2012) and modified considering the participants' data and suggestions from the BCCHC.

The classification of ethnicity in this study is as follows: 1) Canadian; 2) European origins/White; 3) Caribbean/African and Black; 4) Latin, Central, and South American; 5) West Central Asian and Middle Eastern; 6) South Asian; and 7) East and Southeast Asian. Then, the participants' countries of origin were classified into the following eight groups: 1) Canada and United States; 2) Europe; 3) Caribbean and Bermuda; 4) Central and South America; 5) Africa; 6) West Central Asia and the Middle East; 7) South Asia; and 8) East and Southeast Asia. Nearly two thirds of the participants (1,472, or 65.8%) were born outside Canada. Table 1 in Appendix B shows a summary of the participants' demographic information.

People who were born outside Canada were either immigrants or refugees. Their "age at arrival" in Canada was calculated by the date of arrival and birth. Please note that in this study, we did not distinguish between the two and classified refugees as immigrants. Regarding the length of residency in Canada, it too was determined using date of their arrival and birth. These calculations were also done for non-immigrants. If participants were born in Canada, the length of residency was identified as their age and age at arrival was, therefore, zero.

Certain ethnic groups were defined as Canada's visible minorities. According to Statistics Canada (2012), the definition is "persons who are non-Caucasian in race or non-white in colour and who do not report being Aboriginal." The classification of the visible minorities by Statistics Canada (2012) was: 1) Chinese; 2) South Asian; 3) Black; 4) Filipino; 5) Latin American; 6) Southeast Asian; 7) Arab; 8) West Asian; 9) Korean; and 10) Japanese. In addition, "Oriental" was included in this study based on the participants' record. The data show that more than half of the participants (1,207, or 53.9%) were visible minorities.

Data analysis

To analyze percentages of no-shows (no-show rates), analysis of variance (ANOVA) and analysis of covariance (ANCOVA) were conducted to examine factors such as ethnicity, country of origin, and visible-minority status. All unknown categories in dependent and/or independent variables (visible-minority status, race/ethnic background, country of origin, and gender) were treated as missing data and excluded from analysis. In addition, patients who indicated their ethnicity as Canadian at intake were also excluded because, given Canada's multiethnic history

and present, and the various and nuanced acceptations of "Canadian," such a designation did not allow us to draw meaningful conclusions.

No-show rates were calculated from the total number of no-shows divided by the total number of scheduled appointments from all services and programs. No-show rates for each clinical service/program were not utilized because the numbers of total appointments in some services were relatively low and difficult to analyze (see Table 2 in Appendix B for a summary of information regarding the number of appointments for each service/program).

As past research suggested a negative association between age and no-show rates (Bennett & Baxley, 2009; Parikh et al., 2010), we controlled for age in the analysis. Also, participants who made only one appointment (478, or 21.4% of the total) were excluded when no-show rate was used in the test in order to avoid all-or-nothing cases. For example, if a person only made one appointment during the selected months, showing or not showing once to the appointment made a 100% difference. The same 100% no-show rate means something totally different when it was a person who made, for example, 20 no-shows out of 20 appointments. This kind of all-or-nothing extreme effect should be minimized and controlled.

Chi-square tests were used to examine the proportion of the participants in regard to test factors such as ethnicity. We categorized numbers of no-show appointments into three groups: zero, one, and two times or more (0, 1, 2+). In the chi-square test, those who made only one appointment were included because the test examined the number of no-shows, not the rate.

Regarding immigrants' age at arrival and length of residency in Canada, ANOVA and ANCOVA were used to test their relation to no-show behaviour. Based on discussions in the previous section, these two factors were categorized into three groups: for age at arrival, 1) 0-15 years; 2) 16-24; and 3) 25 or older; for the length of residency in Canada, 1) 0-4 years (newcomers); 2) 5-14 years; and 3) 15 or more years. We also analyzed visible-minority status with two factors (age at arrival and length of residency in Canada) among immigrants. Those who were visible minorities but born in Canada (non-immigrants) were also compared with non-visible minorities among non-immigrants. Finally, visible-minority and immigration statuses with no-show rates were examined.

RESULTS

Descriptive statistics: Numbers of appointments and no-show rates

This study examined 10,721 scheduled appointments made by 2,238 participants. Of all appointments, 1,231 appointments were no-shows, or 11.48% of the total. These "no-show appointments" were created by 703 clients, or 31.41% of the total participants. The number of no-show appointments ranged from 1 to 12, and the average was 1.75. Among no-shows, the number of appointments made during the study period ranged from 1 to 48, and the average was 7.02. The all-participants'

average no-show rate was 12.72%. After the exclusion of participants who made only one appointment, the total number of participants was 1,760; the total number of scheduled appointments was 10,243, and 1,157 of these appointments (11.30% of the total) were no-shows. The average no-show rate after the exclusion was 11.97%.

Measures of association: Pearson's chi-square test

Visible-minority status

Visible-minority status was examined excluding 620 unknown cases. The total number of participants was 1,618, which consisted of 1,207 visible minorities and 411 non-visible minorities. The chi-square test revealed that there was a notable association between visible-minority status and the three levels (0, 1, and 2 or more) of no-shows, χ^2 (2, N = 7822) = 93.60, p < .001. v = .109 The tests suggested that visible minorities were more likely to be repeat no-shows. Figure 1 shows differences in percentages between visible-minority statuses.

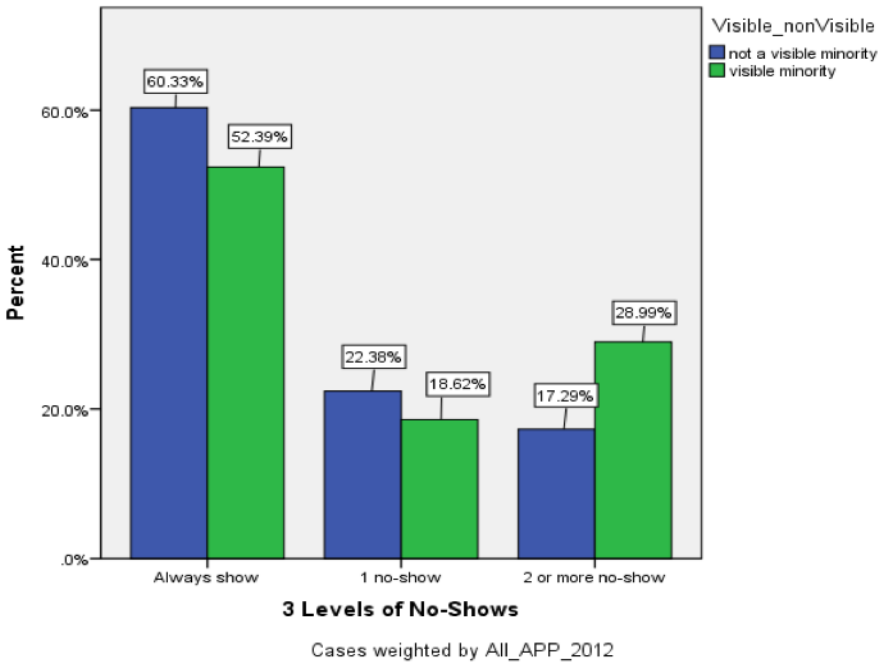

Figure 1. Three levels of no-shows with visible-minority status: percentages within the group.

Race/ethnicity

The number of valid cases in race/ethnicity, excluding "unknown" and "Canadian," was 1,601, which consisted of 379 "European/White," 753 "Caribbean/African/Black," 366 "Latin/Central and South American," 13 "West Central Asian and Middle Eastern," 46 "South Asian," and 44 "East and Southeast Asian." The chi-square test

revealed that there was a significant difference in no-shows among the six ethnic groups, χ^2 (10, N = 7739) = 192.182, p < .001, v = .111.

In particular, a large difference was found in the one-time no-show category. The groups of "West Central Asian and Middle Eastern" and "South Asian" had significantly higher percentages and numbers than the average and expected numbers compared to the rest. For the two-or-more-no-shows category, "East and Southeast Asian" and "Caribbean/African/Black" showed higher percentages than the average. Figure 2 shows the comparison among six groups in percentages within the ethnicity group.

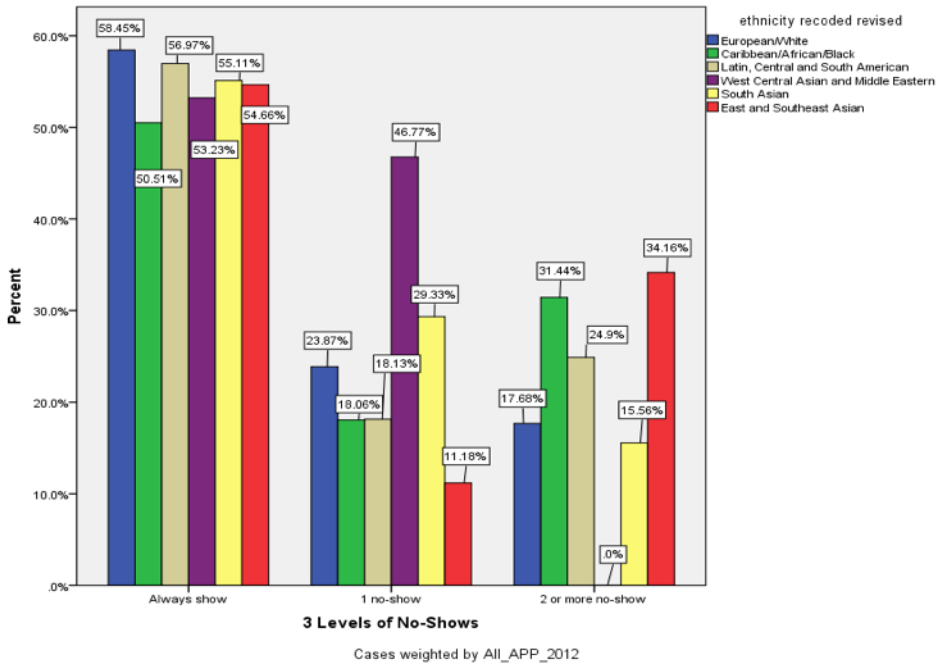

Figure 2. Three levels of no-shows with race/ethnicity: percentages within the group.

Country of origin

The number of valid cases of country of origin, excluding "unknown," was 1,842, which consisted of 196 Canada/USA, 296 Europe, 654 Caribbean/Bermuda, 432 Central and South America, 134 Africa, 29 West Central Asia and the Middle East, 59 South Asia, and 42 East and Southeast Asia. The chi-square test revealed that there was a significant association between the eight groups of countries of origin and the number of no-shows, χ^2 (14, N = 8973) = 431.496, p < .001, v = .155. In the two-or-more no-shows, the "Caribbean/Bermuda" and "Africa" groups showed slightly higher than the average. Figure 3 shows the comparison between groups in percentages within the country-of-origin group.

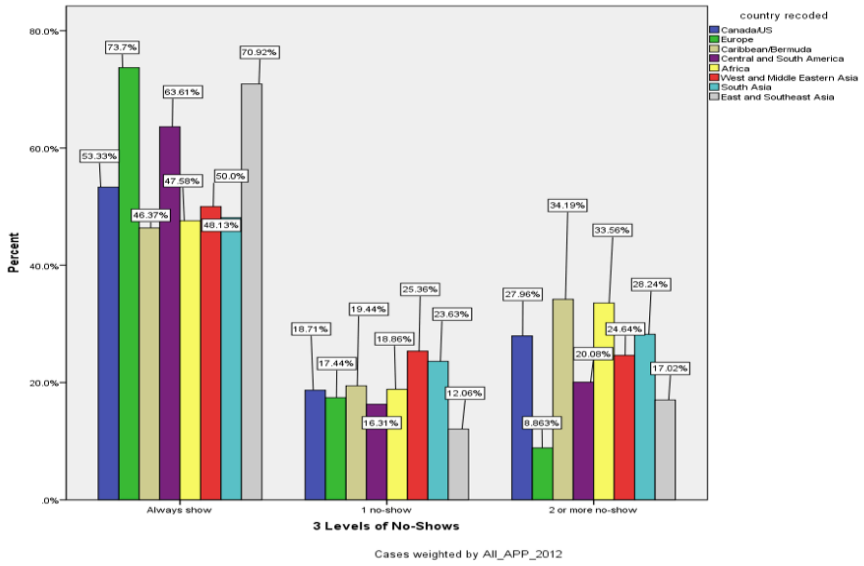

Figure 3. Three levels of no-shows with country of origin: percentages within the group.

Measures of difference: ANOVA and ANCOVA

An ANCOVA was used to examine the means of no-show rates according to participants' visible-minority status, race/ethnicity, and country of origin. However, there was no significant difference among the no-show rates for each of these factors. While the first and second hypotheses received some support from the chi-square analyses, the ANCOVA analyses did not support them.

An ANOVA was conducted to explore no-show rates with immigrants' age at arrival and length of residency in Canada. A total of 1,160 immigrants who made two or more appointments were examined, and a significant interaction among the three levels of age at arrival and the levels of length of residency in Canada, F (4, 1151) = 3.88, p = .004 was found. A significant main effect was also found on age at arrival and the length of residency in Canada, F (2, 1151) = 6.19, p = .002; F (2, 1151) = 11.35, $p < .001$, respectively.

Length of residency made the largest difference in no-show rates among those who arrived at a younger age (0-15 years old). The longer these immigrants lived in Canada, the lower the no-show rate became; however, this trend did not apply for those who arrived at 25 and older. The third hypothesis was supported (see Figure 4).

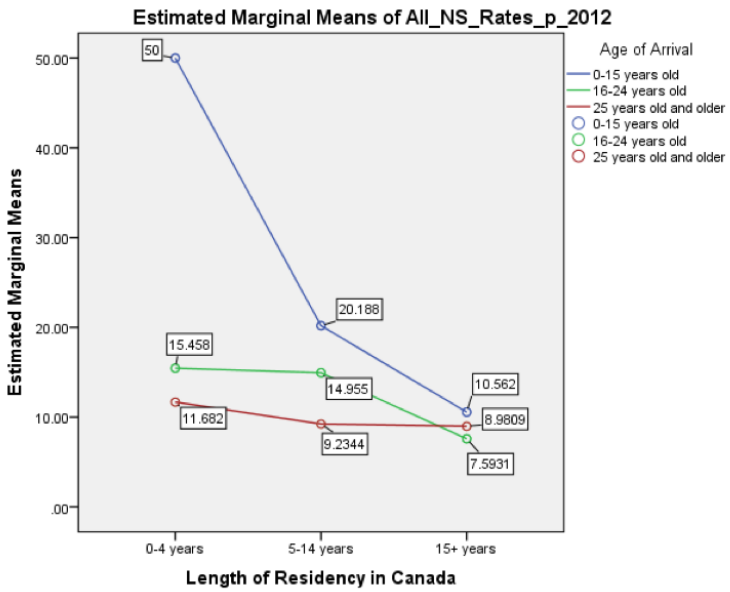

Figure 4. Estimated mean differences of no-show rates between three levels of length of residency in Canada by age at arrival among immigrants (N = 1160).

The no-show rates of immigrants with visible-minority status by three levels of age at arrival in Canada were examined using an ANCOVA. A total of 908 cases, 760 visible minorities and 148 non-visible minorities, were examined. There was a significant interaction between age at arrival and visible-minority status in no-show rates, F (2, 901) = 3.49, p = .031. A significant main effect was also found on visible-minority status in no-show rates, F (1, 901) = 6.08, p = .014.

As seen in Figure 5, the visible-minority group showed a higher average no-show rate (13.41%) than did the non-visible-minority group (1.69%), but this difference was attributable to those who immigrated at age 24 or less. The no-show rates for visible-minority and for non-visible-minority immigrants arriving at age 25 or greater were virtually identical. Table 6 in Appendix B shows average no-show rates for immigrants by different factors.

An ANCOVA was conducted to examine immigration status and visible-minority status for no-show rates; the total number of cases was 1,286 (964 visible minorities and 322 non-visible minorities; 908 immigrants and 378 non-immigrants). The ANCOVA showed that there was a marginally significant interaction between immigration status and visible-minority status, F (1, 1281) = 2.94, p = .087. There was a significant difference in the non-visible-minority group, where immigrants (M = 5.92, SD = 27.33) had a significantly lower no-show rate than those who were non-immigrants (M = 11.26, SD = 38.59), p = .045. However, as for the visible-minority

group, immigration status seemed not to have an impact on no-show rates. Figure 6 shows differences in no-show rates between visible-minority and immigration status.

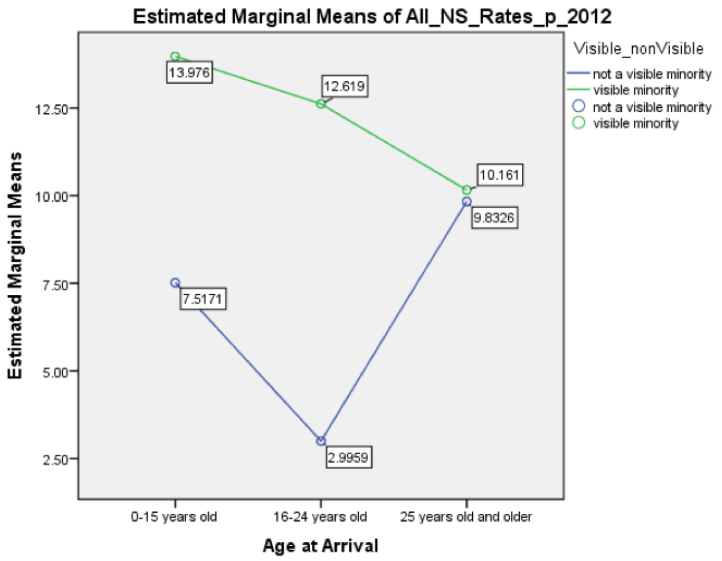

Figure 5. Estimated mean differences of no-show rates between three levels of age at arrival among immigrants by visible-minority status (*N* = 908).

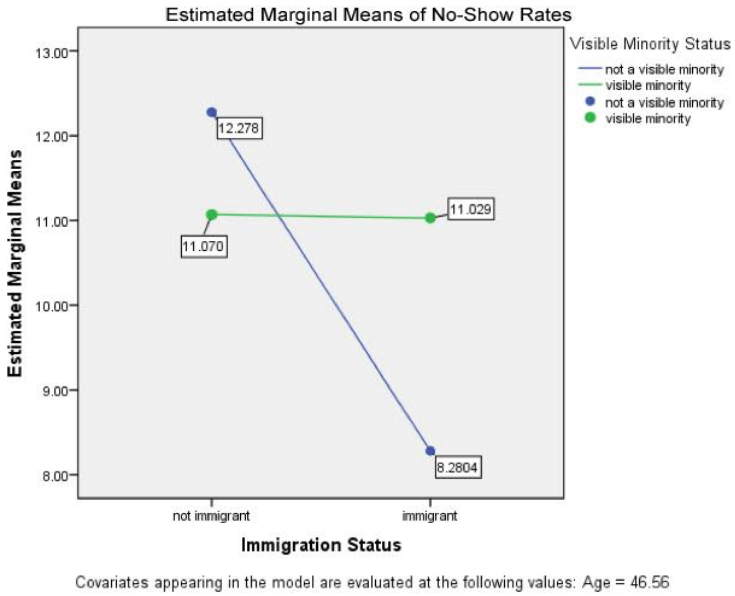

Figure 6. Estimated means of no-show rates with visible-minority status by immigration status (*N* = 1286).

DISCUSSION

Significant differences in the numbers of no-shows for ethnicity, visible-minority status, and country of origin were found with the chi-square analysis. Analysis of variance (ANOVA) and analysis of covariance (ANCOVA) revealed that age and length of migration, visible-minority status, and immigration status affected no-show rates, but in complex ways. It should be noted that these factors were examined in a relational rather than a causal fashion; however, the result suggests that these factors should play an important role in further investigations to identify the reasons for no-shows.

In addition, it may be that other factors, possibly unobserved, are confounded with this study's explanatory factors in regard to the no-show rate outcome variable. Possibilities include: socio-economic status, educational levels, working styles, living situations, and gender. These other factors should be explored in future research.

Age was one of the strong confounding explanatory factors, and it also showed a significant negative association with the no-show behaviour found in this study. Therefore, to control this extraneous variable, age was included as a covariate in the analysis of variance in the current study, except for the analysis examining age at arrival and length of residency in Canada, for the sum of these two variables is the person's actual age. In other words, it would have been redundant to include the person's actual age. It is recommended that future studies of no-show rates consider age as both an explanatory and confounding variable. In Appendix B, Tables 3 and 4 show mean age and mean no-show rates, respectively, for different factors; Tables 5 and 6 show mean age and mean no-show rates, respectively, for immigrants.

Visible-minority and immigration status

Visible minorities generally showed a higher no-show rate than non-visible minorities; however, when both immigrants and non-immigrants were included in the analysis, no-show rates of the patients from the non-visible-minority and non-immigrant combination had a higher no-show rate than other combinations. In contrast, immigration status did not have the same relation to no-show rates for the visible-minority group.

The chi-square test suggested that visible minorities were more likely to repeat no-shows than those who were not visible minorities; however, the study did not examine how many appointments they missed as a no-show. As mentioned above, when both immigration statuses were included in the analysis of variance, the highest no-show rate came from participants who were neither immigrants nor visible minorities. In that case, reasons for no-shows were not likely to be because they were not familiar with the appointment system in Canada. Also, not being a visible minority equates to less likelihood of facing racism or discrimination and thus trust issues might not be considered reasons for no-shows. Future study should

explore this population—clients who were not visible minorities and who were born in Canada—and other possible factors that could influence their no-show behaviour.

Suggestions to the BCCHC

The ultimate goal of the project is to reduce the number of no-show appointments. The analysis of the scheduled appointments showed that about one third of the participants missed some or all scheduled appointments, and these no-show appointments were about one tenth of the total appointments in this study. Also, those who made more appointments were more likely to display no-show behaviour; however, this is only an association between the number of appointments and no-shows. In addition, more than half of the "no-shows" missed only one appointment, which created 406 unattended appointment slots. The other half of the no-shows were "no-show repeaters," which created 825 unattended appointment slots. Thus, 33.0% of the total missed appointments were one-time no-shows, and it is likely that most were due to forgetfulness. This result corresponds with the finding from the survey research in 2012 at the BCCHC by my colleagues, i.e. that the main cause of no-shows was forgetfulness (B. Choi, personal communication, April 11, 2013; C. Smirle, personal communication, April 12, 2013). Taking current and past studies into consideration, the following are recommended interventions.

1. *Appointment reminders*

One would expect that employing an appointment-reminder system might help to reduce the no-show instances that result from forgetfulness; however, despite the Centre's having implemented such a system, no improvement has been observed (Dave & Barragan, 2012). Perhaps different types of reminders need to be implemented. Parikh et al. (2010) suggested that a reminder from staff was more effective and significantly reduced no-show rates compared to using an automated reminder system. According to Henry, Goetz, and Asch (2012), text-message reminders "may work best for patients who are homeless, have low-incomes, or are less likely to have a home-based telephone" (p. 414). Based on the data from the BCCHC, the number of newcomers in the previous five years (2008-2012) was 379, or 25.75% of the total number of immigrants and 16.93% of participants. It is possible for newcomers not to have a home-based telephone. In addition, text messaging as a tool of communication has been dramatically increasing in Canada (Canadian Wireless Telecommunications Association, 2013). As younger participants had a higher rate of no-shows, and at the same time are more likely to use cellular phones with text-messaging capabilities than older adults, it stands to reason that a text-message reminder might be more effective for clients at the BCCHC.

2. *Open-access scheduling*
When patients need to wait for many days to make an appointment, not only does it frustrate them, they are also more likely to forget the appointment. They may not even need the appointment any longer. Past studies have proven the effectiveness of introducing an open-access scheduling method to reduce no-show rates (Bundy, Randolph, Murray, Anderson, & Margolis, 2005; Kopach et al., 2007; Lacy et al., 2004). According to Kopach et al. (2007), "when participants were able to schedule an appointment for the next day, their no-show rate was decreased by 50%" (pp. 121-122). Open-access scheduling would provide available and timely appointments and could be an effective tool for reducing no-show rates.

3. *No-show policy*
The multiple no-shows also need to be prevented. These no-show repeaters created 465 unattended appointments slots, 37.7% of total no-show appointments, made by 117 participants (5.2% of the total participants). The multiple no-shows would be more likely to have different reasons from just forgetting their appointments; therefore, a different intervention should be considered.

For example, a study at a community mental health centre introduced a new no-show policy that significantly reduced its no-show rates from 21.5% to 14.6% (Van Dieren, Rijckmans, Mathijssen, Lobbestael, & Arntz, 2013). The policy included scheduling a 20-minute appointment following the first no-show and discussing the reasons for the no-show and solutions for preventing future no-shows with healthcare providers (Van Dieren et al., 2013). Initiated at the onset of no-show behaviour, the policy could prevent future no-shows. Another example of an effective no-show policy is the termination of the service as a penalty for patients' no-shows. If they failed to attend their appointments three times in a year, they were not allowed to make their next appointment until they completed a one-hour session on improving appointment-keeping behaviour (Schmalzried & Liszak, 2012). Discussing the issue with patients would seem to be a key factor for an effective policy.

Conclusions and perspectives
No-show behaviour continues to be a serious issue at various healthcare centres. The factors in predicting no-show behaviour found in this study provide perspectives for implementing interventions for the Centre and suggest new questions for further research. For example, future studies could investigate the reasons for the no-shows by using the survey method to find out whether the individuals' ethnic identity is associated with trust towards society and its relationship with no-show behaviour. Future research should also explore reasons and factors of a high rate of no-shows among non-visible minorities who are non-immigrants.

Many factors are interconnected in explaining a person's no-show behaviour. It is important to note that the reasons for no-show behaviours are likely complex and individual differences should not be underestimated.

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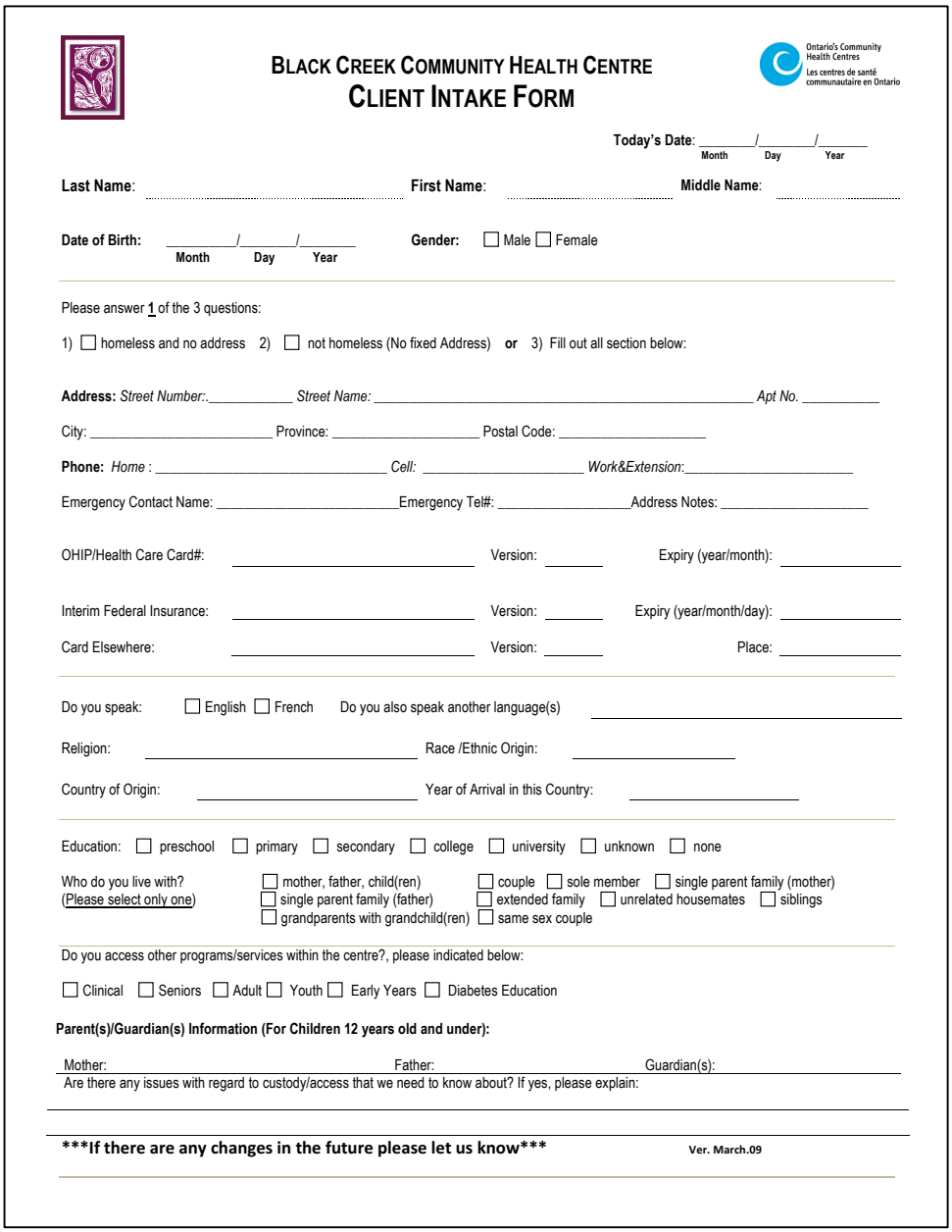
APPENDIX A



BLACK CREEK COMMUNITY HEALTH CENTRE
CLIENT INTAKE FORM

Ontario's Community Health Centres
Les centres de santé communautaire en Ontario

Today's Date: _____/_____/_____
Month Day Year

Last Name: ..... **First Name**: ..... **Middle Name**: .....

Date of Birth: _____/_____/_____ **Gender**: ☐ Male ☐ Female
Month Day Year

Please answer **1** of the 3 questions:

1) ☐ homeless and no address 2) ☐ not homeless (No fixed Address) **or** 3) Fill out all section below:

Address: *Street Number:*_____ *Street Name:* _____ *Apt No.* _____

City: _____ Province: _____ Postal Code: _____

Phone: *Home* : _____ *Cell:* _____ *Work&Extension*:_____

Emergency Contact Name: _____Emergency Tel#: _____Address Notes: _____

OHIP/Health Care Card#: _____ Version: _____ Expiry (year/month): _____

Interim Federal Insurance: _____ Version: _____ Expiry (year/month/day): _____

Card Elsewhere: _____ Version: _____ Place: _____

Do you speak: ☐ English ☐ French Do you also speak another language(s) _____

Religion: _____ Race /Ethnic Origin: _____

Country of Origin: _____ Year of Arrival in this Country: _____

Education: ☐ preschool ☐ primary ☐ secondary ☐ college ☐ university ☐ unknown ☐ none

Who do you live with? (Please select only one)
☐ mother, father, child(ren) ☐ couple ☐ sole member ☐ single parent family (mother)
☐ single parent family (father) ☐ extended family ☐ unrelated housemates ☐ siblings
☐ grandparents with grandchild(ren) ☐ same sex couple

Do you access other programs/services within the centre?, please indicated below:

☐ Clinical ☐ Seniors ☐ Adult ☐ Youth ☐ Early Years ☐ Diabetes Education

Parent(s)/Guardian(s) Information (For Children 12 years old and under):

Mother: Father: Guardian(s):

Are there any issues with regard to custody/access that we need to know about? If yes, please explain:

*****If there are any changes in the future please let us know*****

Ver. March.09

Appendix A. Black Creek Community Health Centre Client Intake Form.

APPENDIX B

Table 1. Demographics of a sample of 2238 patients at the BCCHC.

Characteristic	*N*	%
Gender		
Male	618	27.6
Female	1618	72.3
Unknown	2	0.1
Age (years)		
18-25	321	14.3
26-35	448	20.0
36-45	406	18.1
46-55	323	14.4
56-65	246	11.0
66-75	216	9.7
76-100 (98)	278	12.4
Language		
English speakers	1871	83.6
Non-English Speakers	367	16.4
Insurance Status (based on the data obtained)		
OHIP	1622	72.5
IFH	94	4.2
OHIP or IFH	1706	76.2
OHIP and IFH	10	0.4
None	532	23.8
Race/Ethnicity		
Canadian	17	0.8
European/White	379	16.9
Caribbean/African/Black	753	33.6
Latin, Central and South American	366	16.4
West Central Asian and Middle Eastern	13	0.6
South Asian	46	2.1
East and Southeast Asian	44	2.0
Unknown	620	27.7
Country of Origin		
Canada/USA	196	8.8
Europe	296	13.2
Caribbean and Bermuda	654	29.2
Central and South America	432	19.3
Africa	134	6.0
West Central Asia and the Middle East	29	1.3
South Asia	59	2.6
East/Southeast Asia	42	1.9
Unknown/Other	396	17.7
Immigration Status		
Immigrants/Citizens/Refugees	1472	65.8
Non Immigrants	766	34.2
Total	2238	100

Table 2. Summary of the number of appointments for four selected months in 2012 by the programs at the BCCHC.

	N of APPs	Mean	Median	Mode	*SD*	Min.	Max.
Family DR (*N* = 828)							
Total Apps	3046	3.7	2.0	1	3.38	1	24
N of Show	2739	3.3	2.0	1	3.22	0	23
N of No-Show (%)	307 (10.1)	0.4	0.0	0	0.74	0	5
Nurse P. (*N* = 811)							
Total Apps	2498	3.1	2.0	1	2.81	1	25
N of Show	2210	2.7	2.0	1	2.55	0	21
N of No-Show (%)	288 (11.5)	0.4	0.0	0	0.75	0	8
R N (*N* = 196)							
Total Apps	398	2.0	1.0	1	1.69	1	13
N of Show	369	1.9	1.0	1	1.66	0	13
N of No-Show (%)	29 (7.3)	0.2	0.0	0	0.37	0	2
Nutrition (*N* = 129)							
Total Apps	194	1.5	1.0	1	0.87	1	5
N of Show	142	1.1	1.0	1	0.99	0	4
N of No-Show (%)	52 (26.8)	0.4	0.0	0	0.57	0	2
Counselling (*N* = 203)							
Total Apps	1306	6.4	4.0	1	6.43	1	31
N of Show	1016	5.0	3.0	1	5.62	0	29
N of No-Show (%)	290 (22.2)	1.4	1.0	0[a]	1.60	0	8
Foot SP (*N* = 308)							
Total Apps	719	2.3	2.0	2	1.39	1	15
N of Show	664	2.2	2.0	2	1.36	0	15
N of No-Show (%)	55 (7.6)	0.2	0.0	0	0.45	0	3
Diabetes (*N* = 522)							
Total Apps	2553	4.9	3.0	2	4.65	1	35
N of Show	2346	4.5	3.0	2	4.64	0	35
N of No-Show (%)	207 (8.1)	0.4	0.0	0	0.82	0	5
Breastfeeding (*N* = 6)							
Total Apps	7	1.2	1.0	1	0.41	1	2
N of Show	4	0.7	1.0	1	0.52	0	1
N of No-Show (%)	3 (42.9)	0.5	0.0	0	0.84	0	2

Note. The notation (a) in superscript indicates that multiple modes exist. The smallest value is shown.

Table 3. Means of age for patients at the BCCHC by the factors (*N* = 2238).

Factor	No exclusion			After exclusion[a]		
	M	*SD*	*N*	*M*	*SD*	*N*
Visible-minority Status						
Visible minority	42.1	16.64	1207	42.8	16.88	964
Non-visible minority	63.9	20.21	411	63.7	19.20	322
Total	47.6	20.00	1618	48.1	19.69	1286
Immigration Status						
Immigrants	46.8	18.80	1472	47.5	18.89	1160
Non-Immigrants	48.5	20.98	766	49.7	20.33	600
Total	47.4	19.59	2238	48.2	19.42	1760
Visible Minority * Immigrants						
Visible & Immigrants	42.6	15.95	955	43.3	16.23	760
Visible & Non-Immigrants	40.2	18.97	252	41.2	19.05	204
Non-Visible & Immigrants	70.6	16.16	187	70.0	16.19	148
Non-Visible & Non-Immigrants	58.2	21.52	224	58.4	20.00	174
Total	47.6	20.00	1618	48.1	19.69	1286
Race/Ethnicity						
European/White	64.5	20.39	379	64.5	19.47	294
Caribbean/African/Black	41.4	16.44	753	42.0	16.73	609
Latin, Central & South American	41.7	16.09	366	42.5	16.18	292
West Central Asian & Mid. Eastern	48.9	19.71	13	50.4	20.57	11
South Asian	55.1	16.97	46	56.1	15.88	37
East & Southeast Asian	45.5	18.57	44	51.0	19.04	29
Total	47.5	20.00	1601	48.0	19.72	1272
Country of Origin						
Canada/USA	43.5	20.50	196	45.9	19.55	151
Europe	71.9	15.26	296	71.5	15.37	230
Caribbean/Bermuda	41.6	16.02	654	41.8	16.30	536
Central & South America	43.5	15.50	432	44.3	15.63	342
Africa	37.6	12.57	134	38.5	13.12	97
West Central Asia & Middle East	48.1	17.82	29	49.2	18.83	23
South Asia	53.1	15.74	59	53.0	15.18	50
East & Southeast Asia	52.3	15.81	42	56.4	15.09	32
Total	47.5	19.52	1842	48.1	19.32	1461

Note. Participants who did not indicate their ethnicity/country of origin were treated as missing data. Participants who made only one appointment were excluded (a).

Table 4. Means of no-show rates for patients at the BCCHC by the factors (*N* = 2238).

Factor	No exclusion			After exclusion [a]		
	M	*SD*	*N*	*M*	*SD*	*N*
Visible-minority Status						
Visible minority	13.1	24.55	1207	12.1	19.91	964
Non-visible minority	8.9	20.78	411	8.6	17.29	322
Total	12.0	23.71	1618	11.3	19.34	1286
Immigration Status						
Immigrants	12.3	24.35	1472	11.3	19.64	1160
Non-Immigrants	13.6	26.16	766	13.3	23.04	600
Total	12.7	24.99	2238	12.0	20.88	1760
Visible Minority * Immigrants						
Visible & Immigrants	13.0	24.61	955	12.0	19.88	760
Visible & Non-Immigrants	13.5	22.35	252	12.8	20.07	204
Non-Visible & Immigrants	6.1	18.39	187	5.0	13.33	148
Non-Visible & Non-Immigrants	11.3	22.35	224	11.7	19.57	174
Total	12.0	23.71	1618	11.3	19.34	1286
Race/Ethnicity						
European/White	9.6	21.46	379	9.3	17.86	294
Caribbean/African/Black	12.8	23.23	753	12.4	19.28	609
Latin, Central & South American	12.8	25.31	366	10.6	18.66	292
West Central Asian & Mid. Eastern	4.1	13.82	13	4.9	15.01	11
South Asian	15.9	30.65	46	14.3	27.01	37
East & Southeast Asian	16.7	31.66	44	18.4	30.18	29
Total	12.2	23.81	1601	11.4	19.42	1272
Country of Origin						
Canada/USA	13.2	24.72	196	12.5	19.95	151
Europe	7.8	21.38	296	6.1	15.40	230
Caribbean/Bermuda	13.4	23.26	654	13.0	19.34	536
Central & South America	12.0	24.75	432	10.2	18.82	342
Africa	14.9	26.53	134	14.4	21.24	97
West Central Asia & Middle East	7.0	20.33	29	4.4	10.72	23
South Asia	11.9	25.35	59	12.1	24.06	50
East & Southeast Asia	12.2	26.24	42	12.9	24.87	32
Total	12.1	23.89	1842	11.1	19.21	1461

Note. Participants who did not indicate their ethnicity/country of origin were treated as missing data. Participants who made only one appointment were excluded (a).

Table 5. Means of age for patients who are immigrants at the BCCHC by the factors (*N* = 1472).

Factor		No exclusion			After exclusion[a]		
		M	*SD*	*N*	*M*	*SD*	*N*
Age at arrival							
0-15 yrs old		32.7	15.58	148	33.8	16.58	112
16-24 yrs old		40.1	19.18	431	40.4	19.48	336
25+ yrs old		52.4	16.71	893	52.9	16.63	712
Length of residency							
0-4 yrs		34.9	12.06	379	35.4	12.54	296
5-14 yrs		38.2	12.92	486	38.0	12.94	364
15+ yrs		61.1	16.77	607	61.4	16.35	500
Age at arrival & length of residency							
0-15 yrs old	0-4 yrs	18.3	0.50	4	18.0	0.00	2
	5-14 yrs	21.7	2.75	60	21.7	2.69	45
	15+ yrs	41.2	15.93	84	42.6	16.78	65
16-24 yrs old	0-4 yrs	23.1	2.59	106	23.2	2.59	84
	5-14 yrs	29.8	3.81	152	29.6	3.77	114
	15+ yrs	59.4	15.98	173	59.8	15.96	138
25+ yrs old	0-4 yrs	39.7	10.95	269	40.5	11.43	210
	5-14 yrs	46.5	10.89	274	46.3	10.96	205
	15+ yrs	66.7	13.19	350	66.3	12.99	297
Total		46.8	18.80	1472	47.5	18.89	1160
Age at arrival & minority status							
0-15 yrs old	Visible minority	28.2	10.42	100	28.6	10.76	78
	Non-visible minority	59.1	19.97	16	62.5	18.42	13
16-24 yrs old	Visible minority	33.4	11.63	275	33.5	11.69	212
	Non-visible minority	70.7	13.78	75	70.8	13.47	61
25+ yrs old	Visible minority	49.4	14.66	580	50.1	14.81	470
	Non-visible minority	72.4	16.58	96	70.6	17.65	74
Length of residency & minority status							
0-4 yrs	Visible minority	34.8	11.42	248	35.6	11.88	198
	Non-visible minority	40.6	23.24	7	42.8	24.60	6
5-14 yrs	Visible minority	37.7	12.71	382	37.9	13.01	290
	Non-visible minority	39.2	14.02	16	40.9	13.74	14
15+ yrs	Visible minority	54.2	15.79	325	54.6	15.83	272
	Non-visible minority	74.9	10.28	164	74.5	10.57	128
Total		47.2	19.05	1142	47.6	18.98	908

Note. Participants who did not indicate their ethnicity/country of origin were treated as missing data. Participants who made only one appointment were excluded (a).

Table 6. Means of no-show rates for patients who are immigrants at the BCCHC by the factors (N = 1472).

Factor		No exclusion			After exclusion[a]		
		M	*SD*	*N*	*M*	*SD*	*N*
Age at arrival							
0-15 yrs old		19.1	29.88	148	16.4	22.34	112
16-24 yrs old		12.4	24.66	431	11.2	19.40	336
25+ yrs old		11.0	22.99	893	10.5	19.20	712
Length of residency							
0-4 yrs		13.6	24.55	379	12.7	19.34	296
5-14 yrs		13.9	25.98	486	13.1	20.94	364
15+ yrs		10.1	22.71	607	9.1	18.64	500
Age at arrival & length of residency							
0-15 yrs old	0-4 yrs	50.0	40.82	4	50.0	0.00	2
	5-14 yrs	22.2	31.23	60	20.7	25.14	45
	15+ yrs	15.5	27.59	84	12.3	19.15	65
16-24 yrs old	0-4 yrs	18.4	29.78	106	15.0	22.07	84
	5-14 yrs	15.4	25.64	152	15.3	20.78	114
	15+ yrs	6.2	18.23	173	5.6	14.67	138
25+ yrs old	0-4 yrs	11.1	21.19	269	11.4	17.81	210
	5-14 yrs	11.3	24.53	274	10.2	19.52	205
	15+ yrs	10.8	23.14	350	10.0	19.95	297
Total		12.3	24.35	1472	11.3	19.64	1160
Age at arrival & minority status							
0-15 yrs old	Visible minority	21.0	30.80	100	18.0	23.62	78
	Non-visible minority	4.1	8.15	16	5.0	8.828	13
16-24 yrs old	Visible minority	13.6	24.67	275	13.0	19.73	212
	Non-visible minority	2.6	13.07	75	1.5	7.073	61
25+ yrs old	Visible minority	11.3	23.10	580	10.5	19.09	470
	Non-visible minority	9.2	22.31	96	7.9	16.89	74
Length of residency & minority status							
0-4 yrs	Visible minority	14.3	25.01	248	12.9	19.18	198
	Non-visible minority	13.0	19.53	7	15.2	20.45	6
5-14 yrs	Visible minority	13.4	25.45	382	12.8	21.00	290
	Non-visible minority	6.0	9.33	16	6.8	9.707	14
15+ yrs	Visible minority	11.5	23.27	325	10.5	19.10	272
	Non-visible minority	5.8	19.01	164	4.3	13.19	128
Total		11.9	23.83	1142	10.8	19.14	908

Note. Participants who did not indicate their ethnicity/country of origin were treated as missing data. Participants who made only one appointment were excluded (a).

COLLETTE MURRAY

Altered Beauty

African-Caribbean women decolonizing racialized aesthetics in Toronto, Canada

This study reviews narratives of black Canadian women who problematize the racism that they face in relation to beauty. Critical Race Theory is used to analyze the effects of hair and skin discrimination and the consequences of ideological racism surrounding perceptions of beauty. The participants review material aids, discuss their past experiences with racism, and reveal anti-racist strategies in order to decolonize normalized grooming practices.

> *Her skin is dark. Her hair chemically straightened. Not only is she fundamentally convinced that straightened hair is more beautiful than curly, kinky, natural hair, she believes that lighter skin makes one more worthy, more valuable in the eyes of others. Despite her parents' effort to raise their children in an affirming black context, she has internalized white supremacist values and aesthetics, a way of looking and seeing the world that negates her value. Of course this is not a new story.*
>
> —bell hooks, *Black Looks: Race and Representation*

Keywords: African-Caribbean, beauty, Critical Race Theory, hairstyles, racism, women

INTRODUCTION

The daily negotiation of one's beauty is not a new phenomenon for black women. As Shirley Anne Tate (2007) explains, the topic of skin shade and hair texture remain a long-standing issue carried into the twenty-first century. Dark skin shades and natural, afro-textured hair are judged in society through the lens of a racialized aesthetic, in which these features are socially constructed and discriminately labelled as different. The grooming practice of altering hair texture or skin tone to make the diversity of black women's body surfaces *fit* within beauty norms further perpetuates

the perception of straight hair and lighter skin shades as the Western standard. I identify myself as a dark-skinned black woman with locs,[1] tightly-coiled, afro-textured hair that is sectioned and grows in a twisted grouping. As an individual with dark skin and natural afro hair, I wonder how black women decolonize projected ideas and judgements that may conflict with their own views on beauty. Interviews with black Canadian women in Toronto reveal that despite the fact that black women find themselves in a dialectical position between being racialized by their beauty on the one hand and being expected to conform to ideological racism with respect to beauty on the other, some choose anti-racist strategies in order to decolonize themselves.

Since Critical Race Theory (CRT) is useful when analyzing race and racism on a structural, institutional, and individual level (James et al., 2010), this methodology can be applied in order to understand the lived experiences of black women and how they are directly affected by racialized aesthetics. For the present study, material objects such as hair- and skin-altering aids were presented in interviews to evoke conversations with the participants relating to times when they or others were judged for or discriminated against for their skin shade or hair textures. Narratives were analyzed in order to contextualize how black women face an interlocking experience of race, gender, and social difference. This study provides a historical context of the racialization and delegitimization of black skin and hair texture followed by an examination of how standards of beauty may be considered a form of ideological racism. Finally, grooming practices and the consequences of racism are discussed along with anti-racist strategies that are taking shape in the present day.

RACIALIZATION OF SKIN AND HAIR

Figure 1. Fairy Soap ad.

Ayana Byrd and Lori Tharps (2001) outlined a historic hair chronology that includes early discrimination of black hair from fifteenth-century to present-day America. West African hairstyles, each with its own unique style, were a crown of glory that indicated a person's age, strength, devotion to a spiritual deity, marital status, religion, ethnic identity, rank, geographic region, and even a surname from a clan. European contact during the time of the slave trade in the Caribbean and the Americas changed this traditional understanding. Slave traders shaved the heads of their Wolof, Mende, Mandingo, and Yoruba captives; this "was the first step the Europeans took to erase the slave's culture and alter the relationship between the African and his or her hair" (Byrd & Tharps, 2001, p. 11). How a female slave wore her hair was relative to her work

assignment, because a head rag hid the unsightly hair of the field slave and those working in the master's home often had styled hair imitating their white owners. The significance of African hairstyles was suppressed and replaced within a colonized system of bondage and judgment.

A general scan of nineteenth-century soap ads shows that they include visual and written descriptions that classified black hair as wool. This form of thinking reflects a time when black bodies were pathologized and constructed as inferior because of their dark skin and tightly coiled hair. "Science," such as eugenics, ranked such features at the bottom of evolutionary ranking. Racist nineteenth-century soap ads rationalized the superiority of white over dark skin, such as in a Fairy Soap ad (Figure 1) in which an African child is asked, "Why doesn't your mamma wash *you* with Fairy soap?" Racist advertising firms reified soap for its cleansing and purifying qualities as if it had the power to wash black skin white (Hall, 2001). Race thinking was further perpetuated with a Cook's "Lightning" soap ad (Figure 2) that exaggerated and dehumanized the shade of African-descended peoples' skin in order to position the product as a solution to "lightening" it.

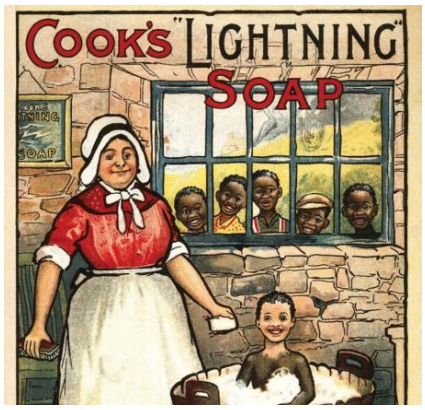


Figure 2. Cook's "Lightning" Soap ad.

Since the nineteenth century, skin has been socially constructed as different through the relational interaction with racialized *Others*. This concept of *Other* derived from the *race concept,* in which observable characteristics such as phenotype (skin colour) and hair texture were classified into eighteenth-century typologies of Caucasoid (white), Negroid (black), and Mongoloid (Asian and Oriental) groups "defined as different by virtue of predetermined properties that are seen as fixed and permanent" (Fleras, 2010, p. 31). Scholarly research has shown time and again that lighter-skinned and straighter-haired slaves sold for the best household positions (Okazawa-Rey, Robinson, & Ward, 1986).

Judged for their race and difference of skin and hair features, former slaves made conflicted decisions in order to survive daily discrimination. Their chances in life were proportional to how light their skin colour was. A lighter-skinned slave shaved her/his hair to remove evidence of blackness in order to escape for freedom (Byrd & Tharps, 2001). Some of the fairest blacks concealed their identity to pass as a white person (Prince, 2009). Therefore, a skin-shade, hair-texture hierarchy designated darker skin and "kinky" hair as less attractive and as belonging to a less intelligent and inferior slave within these communities in the Caribbean and United States. This hierarchy impacted life opportunities, status, and freedom; however, these were not

limited to the immediate post-slavery or civil rights era. A clear link between skin colour, hair texture, and success created reinforced attitudes carried over from slavery and colonialism to present-day judgments of beauty, femininity, and attractiveness in postcolonial countries (Tate, 2007). It may be argued that overt racism shifted to hidden discrimination and it is within this context that the next section examines how female descendants of Caribbean/African and Black Canadians experience racism with respect to beauty today.

BEAUTY AS IDEOLOGICAL RACISM

Beauty "is about an appeal to the senses and a judgement made based on that appeal" (Tate, 2009, p. 2). By analyzing subjective definitions, one is able to consider whose standards and interests particular notions of beauty are based upon. From the standpoint of feminist theory, women of colour claim that global definitions of beauty are typically defined by whiteness with Western European features associated with civility, modernity, and Christianity (Hunter, 2005). This definition is evidence of ideological racism, the "prevalence of cultural values and communication patterns in advancing dominant interests as natural and normal at the expense of those who are defined as irrelevant and inferior" (Fleras, 2010, p. 78). Furthermore, racism of this sort can be actualized by normative and everyday racism; both types are defined as reinforced racism expressed in daily life and interaction, such as language and images.

According to Fleras & Elliot (2010), beauty ideology borrows a number of concepts from racism including *whiteness*—an accepted centre that presents itself as the unquestioned norm and power—and *race thinking*, which is a structure of thought that divides up the world between deserving and undeserving (Razack, 2008). From a Critical Race Theory perspective, whiteness yields an entitlement to rank-perceived differences in ascending/descending scales of worth (Byrd & Tharps, 2001) and is embedded within social institutions onto individuals in systemic ways. In the context of beauty, the process of *racialization* begins with taking perceived racial differences and evaluating them based on a perceived hierarchy that defines attractive, beautiful, and acceptable as white. The process of racialization continues when the hierarchy transfers negative meanings onto a racialized body on which "differences [are] visible for all to see, and thus provide[s] 'the incontrovertible evidence' for a naturalization of racial difference" (Hall, 2001, p. 245). Through this process, the racialized individual is deemed an inferior *Other* because her body does not reflect the characteristics deemed to prevail at the top of the hierarchy.

Okazawa-Rey et al. (1986) argued that beauty carries a message with illusory power transferred from society to institutions and then onto individuals. I argue that the fact that most black women are disproportionately affected by these labels is evidence of normative racism, which perpetuates a Eurocentric ideology privileging white features as superior, natural, and normal. Interviewees in our current study

unanimously agreed that this ideology exists and one also challenged it: "YES! Light-skinned women are placed on a pedestal. By default, because someone is light skin they are automatically better looking? Absolutely not! There are some ugly, light-skinned people." Beauty, then, is a manifestation of ideological racism that incorporates hierarchical perceptions inherent to *whiteness*, *race thinking,* and *racialization*. Beauty is therefore an example of Frantz Fanon's (1967) argument of the problem of hierarchizing culture, a process by which the normalcy of certain values and the use of power are used to impose dominant values over another culture and negate its value.

EVERYDAY RACISM OF BLACK HAIR/SKIN AND GROOMING DECISIONS

Participants reflected on the material aids[2] presented in the interview. Looking at and touching each object triggered past experiences of being referred to as "blackie," "burnt toast," and "tar baby." Such labels represented *everyday racism*, the unconscious daily speech habits that demean minorities (Fleras, 2010). One participant shared:

> When I saw the white children in my class have hair that blowed in the wind, I wanted that. I had straightened hair past my shoulders but if my hair got wet, it was a "cotton-ball." I hated that. I did not want my hair to be natural because I was ashamed of that. My mom said that pressed hair was easier to manage. It came as a convenience. Going natural meant not being "white-enough."

This narrative spoke of the social construction of white beauty born of racial and gender ideologies that shape what black women think about beauty culture (Banks, 2000). Echoing Shirley Tate (2009), beauty's scale of worth is racialized and, consequently, no one in the racialized group can ever measure up.

Anne Ducille's (2003) assertion that black hair has been both culturally and commercially constructed as "ugly," "nappy," "wild," "woolly," and in constant need of taming, straightening, cropping, and cultivating allows us to examine alteration practices used in daily grooming as a response to ideological racism. Excluding medical and dermatological reasons, black hair and skin alteration is related to everyday and normative racism. The social conditioning to alter the natural state of hair and the belief that lighter skin is more valued is an ingrained reality in the lives of black women. Black women "spend millions each year on a variety of products that promise to straighten, relax or otherwise make more manageable kinky black hair" (Ducille, 2003, p. 343). Additionally, the internet holds hundreds of websites of the "best" skin-lightening products and strategies (Hunter, 2011). For decades now, such grooming practices have been normalized in North America.

For a study about the beauty perceptions of African Canadian and Caribbean populations in Toronto, it is important to consider the influence of U.S. popular

media. Black-beauty product advertisements, black media, celebrities, and music videos show diverse images of black women whose grooming decisions are influenced by the market in order to follow a trend. Not only do media platforms reinforce beauty standards but they also create divergent pressures to navigate a standard of black beauty in the workplace setting, a space where hair may be covertly judged by colleagues. Althea Prince (2009) explained that the Toronto marketplace demands a certain appearance of black women and that black women are sensitive to the societal implications of what is required of them. Indeed, black women in Toronto are subject to potential barriers against them that indicate that their hair requires assessment, attention, and action.

CONSEQUENCES OF RACIALIZED AESTHETICS

Internalized racism

In *Race and Well-Being: The Lives, Hopes and Activism of African Canadians* (James et al., 2010), manifestations of racism highlight that some African Canadians accept the negative imagery associated with African-descended peoples and the manner in which it results in the hatred of their physical appearance. When a black woman devalues her racialized aesthetics because of imposed ideological racism, this constitutes *internalized racism*. Internalized racism occurs when "the individual internalizes limits and begins to limit themselves" (James et al., 2010, p. 128). Internalized racism can be expressed through sadness, helplessness, lack of confidence, and anger.

When reviewing YouTube clips of talk show discussions on skin alteration, one can witness black women stating that verbal attacks reinforced their choice to apply hazardous bleach to lighten dark skin. Some black women define themselves by the limits hair alteration can create. In response to this, one interviewee shared the following:

> Creamy crack [hair relaxer], a chemical that changes your hair DNA and changes you**,** eventually. Some women cannot live past their new growth of their natural hair. They don't know how to handle it and that must change because it is society who says that relaxing your hair makes you a better person. You should not let the hair relaxer define you and take over your life.

This type of definition takes place when a woman defines her beauty primarily based on her hair and skin shade and when she uses skin/hair-altering products in order to become what she is not.

Frantz Fanon (1967) analyzed the effects of colonialism from an economic and psychological point of view; he claimed that *inferiority-guilt complexes* as relational experiences defeat and inferiorize a subjugated group of people. The *inferiority complex* is an individual's acceptance of hegemonic views, followed by acts that

indicate taking on the cultural ideal and accepting the normalcy of the oppressor. The *guilt complex* is another manifestation, which Fanon defines as members of a racialized group, gender, or class position who continue to identify with their original culture but who feel guilt for leaving it behind in order to assimilate into the dominant ideal. Applying the inferiority-guilt complex to beauty, socialization, and everyday language descriptors against dark skin and with reference to good and bad hair (e.g. loose and flowing versus hard, tough or coarse) reinforces neo-colonial ideologies that are then embodied by the next generation of the ethnic group in question. The paradox here is that black people use negative language descriptors as everyday racism against one another or on themselves. In the context of this research, the inferiority-guilt complex operates when black women grieve over how they were never taught how to care for, love, and style their hair in its natural state or when they express resentment toward their hair altogether.

Examples of internalized racism involve black mothers authorizing the choice on behalf of their daughters to use chemical relaxers at young ages based on their fears and beliefs. As a participant recalled: "You just had no choice—my siblings and I were doing it." Here, internalized racism was reinforced by the opinions of others and their own resistance against unaltered measures of beauty. Consequently, family members may resist those who decide to transition to natural hair texture because it challenges the normalized practice of altering hair. One interviewee remembered her mother's disdain when saying "That is not you at your best."

Internalized racism is also at play when parents use skin-bleaching creams on their children (Hunter, 2011). Bleaching skin gains popularity, in part, because some women see its use as a solution when they face judgements from some black boys and men, rationalizing that they should seek lighter-skinned females as mates over darker-skinned females. This topic triggered a past judgment an interviewee heard from the opposite sex when she was told, "You're pretty, for a dark-skinned girl." Consequently, internalized racism persists throughout generations. An early sign of this inherited notion is witnessing "a little kid who talks about 'You're too Black' or 'Your hair is too knotty'" (James et al., 2010, p. 128).

Colourism and consumerism

Colourism is a perceived hierarchy formed when lighter-skinned men and women become privileged over darker-skinned people. It is important to keep in mind, however, that women are disproportionately more discriminated against based on their skin tone, since it is considered an important element in defining women's beauty (Hunter, 2007). Indeed, beauty is a form of *social capital* (Hunter, 2002) and the act of employing skin-bleaching products to achieve social networks is buying *racial capital* (Hunter, 2011), which in turn is associated with phenotype and the forms in which others perceive individuals. The following is a participant's initial reaction to seeing skin-bleaching cream:

> I used Ambi and she lied! It did not fade any spots on my skin. It is a great "lotion" [sarcastically]. I have problem spots that I am not comfortable with and would love to have a full complexion [even tone], but there is no product that can achieve that so I accept what I have.

The mass-marketing of hegemonic representations of white beauty demonstrates that colonial ideologies continue to have a profound effect on women of colour.

Colourism reinforces the use of skin-bleaching products because it reflects a desire to achieve the ideal of physical attractiveness, external recognition, social capital, and economic advantage that lighter-skinned women have in employment, education, dating, and marriage. Interestingly, skin-bleaching is on the rise beyond North America: communities in Asia, Africa, Latin America, and the Caribbean also aspire to a standard of beauty based on whiteness.

Altered and artificial hair as a social norm

Interviewees shared their peers' reactions after they proceeded with hair straightening, hair extensions, weaves, or putting on a lace-front wig. According to Thompson (2009), straighter hair has become normative as "the image of Black beauty in popular Black magazines gives the impression that Black hair is only beautiful when it is altered" (Thompson, 2009, p. 847). Habitually women face extremely positive reactions after hair alteration. For example, a change to relaxed hair received the compliment, "You are so beautiful!"; on the other hand, the tone of reactions changes to critical dissension when natural hair texture is "downgraded," with comments like "You are SO brave." Although white women and other ethnic groups have concerns with their hair, only black women's cultural consciousness is questioned (Banks, 2000).

Chris Rock and Jeff Stilson's documentary *Good Hair* (2009) outlined how South Asian women's sacrificial ritual of shaving their hair is intended as a means to elevate their relationship to their god. The beauty industry consumes their hair and threads it together to sell to black women globally. An important consequence of using synthetic hair is that the black beauty industry increasingly accepts the pathology of taking hair from another ethnic group and placing it onto black women's bodies rather than loving the natural hair textures growing from their own scalp.

Health concerns

Chemicals found in hair relaxers not only cause burns and scalp lesions but the toxic ingredients are absorbed by entry from the scalp. There are medical concerns that hair relaxer use is associated with uterine leiomyomata (fibroids), a condition that is two to three times more likely among black women than any other group (Wise, Palmer, Reich, Cozier, & Rosenberg, 2012). This product is not approved by the

United States Food and Drug Administration (USFDA) so its chemical properties are unclear. However, it is known that ingredients such as sodium hydroxide, calcium hydroxide, and thioglycolic salts have estrogenic effects. Furthermore, skin-whitening and bleaching creams often contain mercury, topical steroids, and hydroquinone that can lead to skin cancer and that can damage internal organs such as the adrenal glands, liver, and kidney (Hunter, 2011). Frequent use of hair relaxers and braiding with synthetic hair can lead to damaged hair follicles, thinning hair, a receding hairline and hair loss if the chemical solvent is not washed out entirely from the scalp. Aside from the side effects listed, there are some women who are private about health issues such as alopecia or scalp conditions; therefore, it is also important that their space be respected and that they be understood for their choice to wear synthetic hair or wigs.

Anti-racist aesthetic strategies

I incorporated Diana Turk's (2006) methodology of presenting skin-bleaching cream, hair relaxer, a hot comb, an afro pick, lace-front wig and samples of synthetic or human hair as material objects to evoke personal dialogue around hair or skin alteration. Overall, interviewees indicated that hair and skin alteration is not only powerful and systemic but internalized within them as individuals. Interestingly, several interviewees countered ideological and internalized racism by taking an action-oriented, anti-racist approach to change.

Discussions revealed that individual and collective responsibility are required in order to use multiple positionality and differential locations of power, privilege, and social disadvantage to decentre the root cause and destabilize racism (Dei, 2000). Interviewees indicated that today there is wider use of organic products (pure shea butter, black soap, or cocoa butter), adjustments to diets to improve even tone of skin, and reduced use of chemical products. Their informed responses consciously omitted negative language descriptors commonly used to describe black hair. On a regular basis, they self-reflect and promote self-encouragement in order to unpack self-doubt and negative external reactions in their daily lives. They are self-confident about their difference and challenge white beauty by loving their own features. They educate themselves about the historical discourse and natural hair-care techniques so that they are living examples of what they preach. They create or are part of support circles (e.g. natural hair networks and events) and style each other's hair and share natural hair-care strategies that they were never taught as children. Conversations with their mothers heal past grievances and help educate women in their families about accepting natural hair and skin tone in the present. Open dialogue with men is encouraged in order to stop perpetuating the light skin/straight hair preference. A few mothers even sanction themselves to impose hair straightening practices (use of relaxer, hot comb) and introduce natural hairstyles periodically with their children until their child decides her own future hair-grooming practice.

Personally, I have rejected all forms of hair or skin alteration and I feel liberated to enjoy who I am as well.

CONCLUSION

Critical Race Theory demonstrates links between ideology, social structures, and racism that promote white aesthetics; it also helps us to interrogate how beauty is a form of ideological racism passed on from colonialism and now internalized within the black community. We learn from Shirley Tate (2007) that racialized aesthetics involve a process of self-discovery that is mediated between the internal and external judgments of one's skin colour and hair. This means that a personal decision of how to negotiate one's beauty is always at hand. Nevertheless, much work in combating racialized aesthetics is yet to be done since young girls continue to be erroneously driven into the trap of hair and skin alteration and now even some black men use skin-bleaching creams in order to better approximate perceived notions of black beauty.

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[1] "Locs" is an abbreviation of "dreadlocks," when tightly coiled afro-textured hair naturally joins together to form a twisted grouping of hair.

[2] Material aids included: an afro pick, synthetic hair, lace front wig, hair relaxer, skin-bleaching soap or cream, and a hot comb.

PRIYA REHAL

Intersectionality, Sexuality, and the Exploration of Racialized Gender Identities in HBO's *True Blood*

This paper considers the degree to which two recurring black queer characters on HBO's True Blood series reflect the actual experiences of North American people of colour who are not heterosexual. Through a close reading of the program's discourse, visual cues, and constructed environment, this paper will examine selected instances where accurate portrayal is achieved as well as where the series falls short of an accurate representation.

Keywords: *True Blood*, queer representation, vampires, intersectionality, racialization, HBO

HBO's television series, *True Blood*, has been praised for its inclusion of queer and racialized characters. By employing a visual and textual content analysis, this paper will explore the contradictory representations of racialized gender identities while making reference to contemporary research on intersectionality and vampire culture. My research identifies the sexually progressive and successful ways in which the show disrupts certain stereotypes, but amplifies others. The process of appropriating multi-dimensional identities in popular culture is particularly challenging, and the challenge is magnified at the intersections of race and non-heteronormativity. My analysis focuses on two of the recurring characters, Lafayette Reynolds and his cousin Tara Mare Thornton. I also consider discourse in the show that is vocal about non-heteronormativity. Lafayette and Tara are the only two important non-white [passing] characters on the show.

The tension surrounding vampire issues appears to be a metaphor for queer "issues," and *True Blood* codes the fear of homosexuals as definitive homophobia. For example, creator, executive producer, and occasional writer of the show, Alan Ball, explains, "the police raid on the Shreveport vampire bar, Fangtasia, in the fourth episode of season 1 . . . was meant to resemble similar raids on gay bars in the 1960s"

(Curtis, 2010, p. 68). The main focus of this paper is to explore racialized queer identities, beginning with Lafayette. He is presented as a black gay man in southern Louisiana embodying traditionally male *and* female coded characteristics. The show's website (a true-to-life portrait of a fictional town) describes this character as

> the eyes and ears of Bon Temps. He knows just about everything there is to know about everyone. He's Merlotte's short-order grill cook but he's definitely got his hands dipped in many shady sideline businesses. Some locals say he accepts sexual favours in exchange for V-blood (*Welcome*, n.d.).

The silence about his sexuality could be to keep this website either spoiler-free or conservative. Alternatively, as I argue here, this could also imply that Lafayette is defined by more than his sexuality. Stanford University professor and researcher J. M. Tyree's (2009) essay about vampire narratives in film and television, describes Lafayette as a "V-dealer," that is a person who illegally traffics vampire blood (p. 34). Tyree explains that V functions "for humans [as] a sort of magic mushroom Viagra" (p. 34). Aside from drug trafficking, Lafayette also works in construction alongside Jason Stackhouse, the Southern beau and brother of *True Blood*'s main character Sookie Stackhouse. Jason Stackhouse is a white, cisgender, heterosexual, and hypersexual character. As the seasons unfold, Jason becomes Lafayette's foil. Jason eventually goes to Lafayette to acquire Viagra, at which point Lafayette urges him to use V instead. Lafayette is also an online sex worker who runs a website. When Jason can no longer afford his addiction, Lafayette asks Jason to dance for his website. Jason strips down to his briefs and Lafayette swings his hips side to side as the erotic music plays: "Do you know how much money you would make if you had your own website? Queens all over this world would pay good money just to watch you jack off" (Ball & Dahl, 2008). The lyrics in the background music go, "I like to do manly things . . . but I want to do something dirty with you."

These lyrics are from artist "Gay Pimp" and the original music video takes place in a locker room, in which the singer asks a guy in his towel to go for soccer practice, because the man says he only likes to do "manly things." In the end, the man realizes that military training, track and field, and soccer practice were never his concern and Gay Pimp bends him over. HBO is known to employ a different song for closing credits of their shows, and the song is always related to the episode. Using the song "Soccer Practice" in the episodes creates an allusion for those who know the song. Jason's hegemonic manliness is being shattered, but only because he is desperate for drugs.

He tries to walk away when Lafayette admits that there are "a lot of pervs in this town" (Ball & Dahl, 2008). When Jason expresses concerns that someone in Bon Temps may see this, Lafayette offers him a mask to conceal his identity. The mask allows for Jason to subvert his white, manly, construction-worker identity. Jason is

"manly" by Bon Temps' definitions, as well as the man in Gay Pimp's video that says "Bro, I only do manly things." The mask functions as a contextual liberator, as though he had entered the carnivalesque (Bakhtin 1968). Putting on the mask is almost like blocking out all gender prescriptions. The mask reminds audiences that the dancer is not Jason Stackhouse, but a desperate junkie. With the mask over his face, Jason opens up, he comes towards the camera, teases in a "come here" motion, and then walks away, slapping his butt cheeks and thighs a few times. Although Tara, Lafayette's cousin, has a crush on Jason, he sees her as nothing more than a friend. It is very likely that race is Jason's barrier. I argue this because Jason casually and exclusively sleeps with white women.

It seems as though while Jason can be friends with a black woman, he cannot date a black woman. Laws of proximity should suggest that they could and should end up together in some capacity. Especially considering that Tara is Jason's best friend. But Tara, a dark-skinned black woman, is figuratively invisible in this moment to both men, Jason and Lafayette. She walks in and goes unnoticed while watching Lafayette filming Jason dancing. This is until she eventually exclaims "what the fuck?," which evolves into a nod of approval towards Jason.

Lafayette eventually pays Jason in V, and does not act on what he finds visually pleasurable. Lafayette is not uncontrollable, and he can maintain himself because he is not an animal and he is not a beast. Patricia Hill Collins's (2004) research on black masculinity and black sexual politics is relevant here. In this scene, it is the white man, not the black underpaid working-class individual, that is being exploited (Collins 158). Lafayette exploits Jason by demanding labour for a commodity; thus, racial roles are being transgressed and reversed.

The problem with *True Blood* is its inconsistency of challenging hegemony. Lafayette is described by Dustin L. Collins (2011) as being somebody who "may wear hoop earrings and [gold] eye shadow, but he is both mature and assertive, and more than willing to stand up for himself and those he cares about even in the face of violence. He also has the muscle to hold his own against such violence if necessary" (32). This is a side of Lafayette that comes out as well, though in order to understand why, one must explore his background. Lafayette's daytime construction and restaurant positions are his legal jobs. All of which are necessitated by his sick mother, Ruby Jean, who told his nurse, Jesus Velasquez, that her son is dead. Ruby repeatedly exclaims, "God killed him, 'cause he a faggot." His mother's rejection of him on the grounds of sexuality is a reflection of the dominant ideology in Bon Temps, and offers insight into the growth and development of Lafayette. HBO is not making a progressive statement here, only reflecting a stereotype about anything that is not heteronormative. In the culture of Bon Temps, Lafayette's mother's description of her son as a "faggot" carries a much different implication than if it had been used by a black man about a straight man in The Bronx (Pascoe, 2005, p. 332) because context helps define the term. His mother uses it as rejection—in the mind of Ruby

Jean, Lafayette is not "normal," and therefore is to be scorned by God and society because of who he wants to sleep with. Lafayette is dead to her because of his sexuality. Due to the nature of this show's debated allusions, it is important to note that Ball and HBO could have used this opportunity to portray Ruby Jean as a liberal mother, and thereby signal how society should treat their non-heterosexual or non-gender-conforming children, rather than amplifying the kinds of messaging the Westborough Baptist Church (WBC) disseminates. The aforementioned church's motto is "God hates fags," which the show also later applies to vampires with signage in front of a local church that reads, "God hates *fangs*."

Lafayette's character was meant to expire at the beginning of the second book in the series on which *True Blood* is based (Crowder, 2014). Nelsan Ellis has been praised and criticized for his portrayal of Lafayette despite the fact that the actor is a heterosexual ex-marine (Hiltbrand, 2010). As both the Gay Pimp song and the writer of the article suggest, being a marine is associated with heterosexuality; when Hiltbrand writes that Ellis is "a marine nonetheless," it underscores his masculinity. Producer Allan Ball admits, "Whenever you have a character in which one of his defining qualities is his sexuality, it's always challenging because you don't want to bring in someone who's going to play that in a phony way." This is praise of Ellis, but to reduce a character to their sexuality is unfair and oblivious to the fact that that a character has more depth than their sexuality. Ellis's real-life concern about Lafayette's sexuality deserves mention, as well. He mentions that when considering taking the role, "my fear at first was that my family is going to hate this. There are homophobic people in my family. They're deeply religious." On the one hand the show illustrates the harm that such attitudes can cause, but on the other hand normalizes heteronormativity, and squanders an opportunity to show family love, acceptance, and attitudes towards non-heteronormativity in an alternative, if not positive light. Not only is Lafayette racially and sexually othered, he is also blood-related to the only other people of colour in the show: his mother, cousin Tara, and Tara's mother.

Sabrina Boyer's (2011) article deals with the issues and employment of the "Other" in *True Blood*. Boyer argues that Lafayette's identity "occupies the border between a human and a 'monster' who deals in the world of vampires as a job, and a sexual and racial 'monster' that has historically been a social outcast, often 'captured' and 'annihilated'" (Boyer, 2011, p. 35). Vampires can retract their fangs, and Lafayette's shape-shifter boss, whose bar he works at, is a white male shape-shifter; however, he can take the shape of a human, of normalcy in Bon Temps. This is the politics of Sam Merlotte's bar, named "Merlotte's," as it is described by Boyer:

> While [Sam Merlotte] keeps his shapeshifter status a secret, Lafayette's working for Sam as a cook in a small Southern bar is difficult to detach from a slave/master relationship, especially since Lafayette and his cousin Tara,

> named after a plantation, are the predominant people of color in the town of Bon Temps. (Boyer, 2011, p. 37)

Thus, the show can be said to redefine and amplify racialized gender identities. In one instance, Lafayette prepares a burger, and a table of seemingly uneducated, small-town white customers sends the plate back, "because the burger might have AIDS." The discourse is as follows:

> LAFAYETTE: "Scuse' me, Who ordered the hamburger*, with AIDS*?"
> CUSTOMER: [snickering] "I ordered the hamburger *deluxe*."
> LAFAYETTE: "In this restaurant, a hamburger deluxe come with french fries, lettuce, tomato, mayo *and* AIDS. Does anybody have a problem with that?"
> CUSTOMER: "Yeah, I'm an American and I got a say in who makes my food."
> LAFAYETTE: "Well baby, it's too late for that. Faggots been breeding your cows, raising your chickens, even brewing your beer long before I walked my sexy ass up in this motherfucker. Everything on your goddamned table got AIDS." (Woo, 2008)

Cornell University's Hanson Ellis (1991) argued, "Whether by strategy or by error, the media have a commonplace tendency to collapse the category of 'gay man' with that of 'person with AIDS'" (p. 325). This is the same ideology that HBO continues to amplify with Lafayette in *True Blood*. However, Lafayette's ability to stand up for himself galvanizes audiences because he challenges hegemony while threatening the borders, positions, and rules about being masculine, of being black, and of being Southern, all the while maintaining his sass (Boyer, 2011, p. 38).

Media and Communications Professor Frederik Dhaenens's (2011) work on queer representations on television suggests that Lafayette "embodies stereotypical feminine traits while he also subverts them via performance of masculinity." Audiences also perceive the contradictions between his flamboyant outfits and his confrontational skills in this particular scenario (Dhaenens, 2011, p. 35). While the representations of subaltern characters challenge the status quo, it is also challenging for creators. In order to avoid perpetuating stereotypes and visualizing progressive and inclusive ideologies, HBO needs "to keep this imagery from slipping into a spectacle or into reductionist representations of queerness or blackness, [and] the show would need to include more diversity and critical consciousness surrounding these identity markers" (Boyer, 2011, p. 38). An addition of main characters with racialized identities, beyond Lafayette and Tara, would be a starting point.

Lafayette and Tara, the only regular people of colour on the show, are also often portrayed as hot-headed, confrontational individuals and are relatively contrasted against other characters, including their boss Sam. The website for the fictional town of Bon Temps describes Tara as follows: "If you hear a loud, cursing voice working

behind the bar at Merlotte's, that's Tara. Don't worry her bark is worse than her bite. She built up a tough exterior taking care of her alcoholic mother" (Welcome, n.d.). Tara is described as a bitter malcontent whose speech is ineffective, like the bark of a dog. Cultural historian and journalism professor Roger Streitmatter (2009) argues that the reason why lesbians were invisible in television in the 1960s to 1970s was because they were stereotyped as "angry, man-hating 'dykes'" (p. 147). Tara's character fits this characterization of the situation of over fifty years ago because she is portrayed as aggressive and constantly man-hating. When Tara escapes an abusive relationship with a man, she falls in love with a woman at a kickboxing ring. Her nature has been described as aggressive and bestial by *True Blood*'s copywriters. Thus, the show fails to be counter-hegemonic; rather, "these attempts at carving out and problematizing notions of difference and otherness are lost within a sea of reductionist representation that . . . likely reinforces and reinscribes stereotypes surrounding race and sexuality instead of troubling them" (Boyer, 2011, p. 38). Streitmatter (2009) points out that in the 1950s, magazines and newspapers represented homosexual men as emotionally unstable (p. 10). This was a weakness portrayed by being either extremely feminine or hysteric and physically violent (p. 10). Again, these ideologies from the 1950s are evident in *True Blood*, and are amplified through Lafayette. Boyer argues that Lafayette's race and sexuality are reminiscent of the Jungian shadow; Tara's character is similarly portrayed in a way that is suggestive of the shadow. The Jungian shadow "is the most powerful and dangerous of them all, because it contains those avatars of a primitive and bestial nature that defy rational boundaries and restraints" (Boyer, 2011, p. 38). It is in this way that Lafayette and Tara are reduced to yet another historical black stereotype: primitive and bestial in nature. Tara, played by Rutina Wesley, was actually originally cast to be played by Brooke Kerr, a lighter-skinned actress. This was discovered when HBO released the unaired pilot episode. However, I would like to theorize that the change happened in order for there to be a more obvious contrast between Lafayette and Tara versus the rest of Bon Temps, and also so that Wesley's skin tone "represented" the kind of role that Tara has in *True Blood*: dark, bestial, and primitive.

Black feminist academics Jacqueline Bobo and Ellen Seiter (1991) have argued, "within the narrow range employed by the media showing black women, three features are familiar," of which, "her relationship to white people as domestic servant" applies best to Tara because of the politics of her workplace (p. 181). Lafayette is ever-present in *True Blood*, but as previously mentioned, Lafayette's character and Ellis's contract were meant to expire at the beginning of the second book in the novels (Crowder, 2014). On paper, he was killed by characters who had regular vampire orgies where they fed and drained victims; on HBO, Lafayette is shot in the leg and held captive in the basement of the vampire bar, Fangtasia. The bar is owned by the vampire sheriff, Eric Northman. Eric is of Swedish Viking descent with a lean, tall stature, blue eyes, blonde hair, invisible eyebrows, and pale white skin.

Eric finds out that Lafayette is illegally distributing V and imprisons him with the intention of killing him. The white sheriff leaves the black victim, who was working because of personal tragedies, in his own filth in the basement of Fangtasia. Sookie finds out and uses her otherworldly powers to find out where he is, because no one else knows that he is being held captive. Thus, Lafayette is captured by the white man (Eric) then shot in the leg by his white employee (Ginger) and is only freed by the negotiation between a white man and a white woman (Sookie). The visualization of the relation between race and captivity is absurd and loud. Even when he almost manages to escape, white authority dominates. Even the white female employee is more powerful than the black muscular captive. This experience traumatizes Lafayette, and he becomes a victim of post-traumatic stress disorder (Buckner, 2009). These representations of Lafayette highlight that HBO is only reinforcing history, and ignoring the opportunity to be able to do something different with race, gender, and sex. Tara and Lafayette are similar in many ways, however whereas Lafayette is aware, shameless, and comfortable with his sexuality, Tara is still struggling to learn hers.

Sex is one thing the show does not lack—at least heteronormative sex between white men and white women, that is. Lafayette maintains a long-term relationship with his mother's nurse, Jesus, and Tara leaves behind her life in Bon Temps after an abusive relationship with a man to start a new life in season 4. The way non-heterosexual sexuality is presented in *True Blood* is problematic. This is evident when one considers the frequency of sexual activity in the show. Culture website *Vulture* delineated thirteen categories of sex among thirteen characters from *True Blood* (Cotton & Zalaznick, 2011). Jason has the most sexual encounters and these are primarily heterosexual relations. Sex with a vampire and other mythical beings is also more frequent than queer sex. Remarkably, Lafayette is never shown having sex. In their *most* intimate scenes, Lafayette and his boyfriend are shown passionately kissing. There are two different symbols on the chart for non-homosexual sex: graphic and non-graphic. But the accounts that have been included in the infographic are inaccurate since there is nothing beyond kissing and verbal seduction. It is also important to note that apart from the case of Tara and Lafayette, homosexual sex is visualized only while under the influence of V. The infrequent visualization of intimacy between Jesus and Lafayette is usually in a darker space, making it more difficult to see.

Tara is an exception. She and her partner (Naomi) are seen wrestling in bed. Tara and Naomi are in a same-sex partnership, and met at the kickboxing club. But even in their most intimate scene, they are not completely topless or bottomless, whereas Sookie, the white, heterosexual lead, is always nude during intimacy. Sookie's scenes, moreover, involve (nearly) full frontals, and her romances happen almost anywhere, even in unusually well-lit graveyards. By contrast, Naomi and Tara's bedroom is dim, and they keep their bras on. Lafayette and Jesus do not ever remove

their shirts, but the two active women can be almost nude. This double standard is for the audience to enter the male gaze with the lesbian relationship.

Although HBO is known for promoting sexual liberation, with *True Blood* this is largely limited to heteronormative sexual binary. Ron Becker argues that this show's gay characters "conform to the demands of a commercial medium steeped in hetero-centric genre formulas," which cater to their advertisers (pp. 125-126). Yet, *True Blood* should be exempt from this as HBO is a premium paid subscription service. Despite that fact, however, the show remains grounded in hegemonic and historical racialized gender identities. Anything within the binary is acceptable on the show, even lesbian sex, because that is often attractive to straight men, but gay sexuality must be kept clothed and in the dark. In this way, HBO falls short of the mark when presenting intimacy in non-heterosexual relationships. If *True Blood* would like to be all-accepting, then one might expect its racialized and queer characters to be presented in a less stereotypical manner. The other homosexual encounters occur either during dreams or within vampire royalty—but only with one gay King and his consort. The dreams occur when a human has taken in a sufficient amount of vampire blood, usually in an effort to survive. The blood has regenerative qualities that are operative, prior to turning a human into a vampire. In one instance, Sookie's love interest, Vampire Bill, and Sam Merlotte have a homoerotic scene, with explicit language, but it is limited to discourse and does not portray any actual sexual activity (Buckner, 2010). This would be a remarkable deviation from the heterosexual sexuality that *True Blood* generally portrays, except for two points: first, Sam's cell phone rings and wakes him from a dream, thus rendering this intimacy something unreal; second, lighting is used here to signal licit and illicit sexuality, and provides Sam the satisfaction of "it was just a dream". They use lighting as a vehicle to gauge allowed and inappropriate sexuality. The closeness between the two men in this homoerotic dream sequence is barely visible, suggesting HBO may be inadvertently catering to the more conservative and even homophobic audiences. Why is there a distinctly visual double-standard between the portrayal of heterosexual intimacy and non-heterosexual intimacy? HBO's *True Blood* does not fully embrace the staging of non-hetero-normative relationships.

True Blood presents and re-presents queer people and relationships in ways that are contradictory. This occurs in two ways. In Bon Temps, there is actual homosexuality and homophobia, discussed above, and then there is the underlying allegory of "coming out of the coffin" and "coming out of the closet." Vampires are presented as having the same challenges as people who openly declare their sexuality. Yet, there is no mention of transgender or transsexual individuals in Bon Temps. The writers appear to be equating vampire rights to civil rights, and more specifically LGBTQ rights. The term "fanger," and "fangbanger" are thrown around as the word "faggot" in a derogatory way because such identities are not hetero-normative or appropriate. HBO flaunts its progressiveness, but "Admittedly, True

Blood's tones often clash, using the vocabulary of gay rights to serve a central heterosexual love affair, although probably the show desires a more universal view of civil rights" (Tyree, 2009, p. 34).

The second season of *True Blood* focuses on the Fellowship of the Sun, an extremist conservative church that seeks to "[protect] humanity from the iniquity of vampires," and showcases the dominant ideologies of the WBC, in the vampirical context. On the analogy of vampires with the LGBTQ community, entertainment journalist Maxine Shen (2009), in an article on the then-upcoming second season, cites the author of the book series, Charlaine Harris: "When I began framing how I was going to represent the vampires, it suddenly occurred to me that it would be interesting if they were a minority that was trying to get equal rights." The journalist juxtaposes that statement with an opinion from the show's creator and Executive Director, Alan Ball: "to look at these vampires on the show as metaphors for gays and lesbians is so simple and so easy" (Shen, 2009). Ball continues, according to Shen, by suggesting that the metaphor could be seen as homophobic because vampires kill. He argues that this is problematic, a position shared by many queer theorists: "The 'good vampires,'" describes Lauren Gutterman of the City University of New York's Center for Lesbian and Gay Studies, "are those that are able to contain their appetite for blood and sex and the 'bad vampires' are those who kill people, drink their blood and are hyper-sexual" (as cited in Shen, 2009). Boyer suggests, "placing the story of revealed vampires and other supernatural beings within the South does not seem without intent. Rich with a cultural and political history of repression, racism, and a steep rejection of outsiders, it is meaningful then that the vampires we engage in the show are situated within this context." This is how the writers end up creating vampires striving for rights and integration into society in a way that mirrors the struggle of black and LGBTQ rights movements (Boyer, 2011, p. 38).

There is also the problem of the fear of vampires intersecting with homophobia itself. Reverend Steve Newlin's father was murdered by vampires and he seeks to avenge his death through the extreme Fellowship of the Sun church. Throughout season two, he recruits members with a message of vampire-hating and equates that with God-loving; he equips and trains these followers with silver bullets and weapons for vampire destruction. They set up a giant stake and actually succeed in killing one of the oldest vampires, who turns out to be Sherriff Eric's maker, Goderich. It is more of a martyrdom (or suicide) than murder, however, because thousands of years old, Goderich is exhausted with the church and vampire-phobic society.

Eventually, Reverend Newlin is kidnapped and disappears until the first episode of season five. Presumed to be dead, he returns as a vampire and visits Jason and explains, "now that I've been blessed with immortality, I've finally got the strength to say it: I am a gay Vampire-American, and I love you, Jason Stackhouse" (Buckner, 2012). Jason thanks Newlin for the "nicest 'I love you'" he has ever received, but

does not reciprocate the sentiment. Unlike Lafayette's own mother, Jason, also a resident of Bon Temps, is able to be open-minded and accepting. Although this seems progressive, the black queer characters continue to miss out on character development in relation to their own relationships.

Political economist Eileen R. Meehan (2002) evaluates gendered audiences and finds that from the 1950s until now, despite the feminist movement, men continue to be an overvalued audience. This is unjust in a world where women continue to strive for equality. All of this suggests that HBO should better reflect audiences by embracing a more contemporary direction by developing characters that are more layered and complex. Not simply because of the premise that representation matters, but also in their best capitalist interest, because racialized, trans, disabled, and/or queer people not only exist, they are consumers too.

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PAIGE RICHARDSON

Redefining Motherhood

How reproductive technologies change the way we think about motherhood

This paper examines some of the discourse surrounding notions of motherhood, which, though considered a universal term, is defined by a specific set of characteristics. Traditionally, motherhood is culturally and legally established through genetic kinship claims based on a nuclear family structure, at least in developed countries. Today, however, reproductive technology, such as in vitro fertilization and surrogacy, offers greater opportunities to have a child not only to infertile couples but also to same-sex couples, single parents, or women past childbearing age. These technologies have allowed for a new legitimatization of motherhood, fostering an emerging kind of parenthood, and thereby widening the scope of motherhood to include a wide range of possibilities that no longer rest on simple biological claims and the traditional nuclear family model. This paper therefore challenges what motherhood encompasses and examines how this definition has shifted away from simple genetic ties to more varied and complex structures. Indeed, while the new parents themselves continue to value genetic links, society as a whole must review its conception of the normalcy of "natural" reproduction through the nuclear family structure and embrace motherhood in the only universal definition possible, that of its commitment to raising a child.

Keywords: childbirth, IVF, motherhood, reproductive technologies, surrogacy

Traditionally, in most societies, a man and a woman marry and procreate with the approval of society, raising their children in a structure known as a nuclear family. Thus, motherhood has been defined as a "natural" process: giving birth to and raising a child in the context of a heterosexual and state-legalized union. Couples who were unable to have children because one of the partners was either unable to provide the genetic material needed to create an embryo or unable to carry a child either remained childless or adopted. However, recent technologies, such as *in vitro* fertilization (IVF) and surrogacy, have not only made it possible for these couples to

have children, but have also benefited non-traditional families, such as same-sex couples or single adults, or older women. Since conception occurs in a clinic and surrogacy means that any woman may carry another's child, a variety of combinations are possible to achieve the desired outcome—a baby—and these technologies have recourse to a variety of willing contributors. While some might be genetically related, motivated by kinship, and continue to be involved after the birth, others are strangers whose active role is temporary and often remunerated. This challenges the normative family model and destabilizes societal understandings of motherhood because the "mother" may involve an egg donor or a surrogate, or be two fathers or a grandmother, or involve more participants than the intended parent. It is evident, therefore, that motherhood may no longer be defined solely by having birthing rights over the child. Rather, it can be felt as the embodiment of an idea: a willingness to take on the legal, physical, and emotional rearing of a baby, regardless of how the child came to be. Society, therefore, must revisit its narrow definition of motherhood to include models outside of the traditional heterosexual and genetic kinship claims and adapt to these new claims.

Motherhood, in its traditional acceptation, is understood in two ways: first, as a woman creating a child from her body's ovum fertilized with her husband's sperm, in her own womb, and thus sharing all genetic, biological, and blood relations with the child, and secondly, as the act of raising that child. Reproductive technologies, however, have divided the two meanings. Those involved in the creation of the child may not be those for whom it has been created, and the child may not be genetically related to its intended parents. Thus, the nature of this kinship is called into question by assisted reproductive technologies, as they destabilize the "natural" process—now done clinically through the assistance of technologies and third parties—and the biological relationship understood in motherhood (Inhorn & Birenbaum-Carmeli, 2008, p. 182).

Emerging biotechnologies have indeed provided more options for heterosexual infertile couples and women to try to bear a child. According to the U.S. Centers for Disease Control and Prevention, the estimate of the prevalence of infertility in North American couples is 15%, with causes ranging from blocked or damaged fallopian tubes, endometriosis, and failure of ovulation, fibroids, and hostile cervical mucus in women, to failure of sperm production, low sperm mobility, and production of antibodies to spermatozoids in men, all of which make fertilization through the blending of gametes impossible (Health Quality Ontario, 2006, pp. 13-14). Gametes are the reproductive cells of both men and women, i.e. the women's eggs and the men's sperm. Many people of both sexes are unable to produce gametes to help in the creation of an embryo, and so they look to donation. Sperm banks have been in existence for some time and have been most commonly used for artificial insemination and for IVF for women with male partners who are unable to produce

sufficient sperm to fertilize the egg (Norris, 2006, p. 1). Egg donation is also possible, but is not as common an occurrence as sperm donation.

IVF is a method in which the egg is fertilized outside of the woman's body and then reintroduced. It was first elaborated for the treatment of bilateral tubal obstruction when other treatments had not worked. The medical procedure of IVF involves four steps: retrieval of the egg from the ovaries by placing a needle into the ovarian follicle and removing the fluid that contains the egg; exposure of the egg to the sperm outside of the body where the fertilization then takes place.; culturing the egg for a period of three to five days; and transfer of the embryos into the female's uterus through the cervix using a catheter (Health Quality Ontario, 2006, p. 18).

Surrogacy is an option, often used in combination with IVF, that responds to various situations in which natural insemination is not viable. The most typical form is called traditional surrogacy, which consists of the surrogate mother being artificially inseminated with the intended father's sperm, thus using the surrogate's egg to create an embryo. The next most common form is gestational surrogacy, in which an embryo is created via IVF using the intended mother's egg and the intended father's sperm, making the baby genetically related to both the mother and the father (Norris, 2006, p. 4). The surrogate is seen to have provided no genetic contribution, just the womb in which to grow the baby.

Surrogacy can be commercial or non-commercial. Non-commercial surrogacy means that a friend or family member offers to be the surrogate mother, typically with no contract or financial compensation required. The surrogate mother may or may not be involved in the rearing of the child. Commercial surrogacy means that a couple would contact an established business and develop a contract with a surrogate mother, which would include a monetary payment for her service, often in developing countries. Indeed, some researchers argue that surrogacy can be seen as an important form of reproductive labour for women in these countries. For some poor Indian women, for example, surrogacy has become a form of employment and a survival strategy for themselves and their families (Grebeldinger, 2013).

The financial realities of assisted reproductive technologies make accessing them prohibitive for all but the wealthy. The average cost of one cycle of IVF in the United States in 2003 was approximately $12,400 USD, and, as a result, only about 36% of infertile women there sought medical assistance, and only about 1% sought help from some form of assisted reproductive technologies (Inhorn & Birenbaum-Carmeli, 2008, p. 179). These examples represent statistics from a wealthy country; the numbers in the developing world would be even lower. Ironically, then, poor women donate their eggs or become surrogates to earn money, but poor infertile women cannot access these technologies.

While living in a technologically enhanced society gives a woman an increasing number of options and choices for having a child that she can socially or legally claim as her own, regardless of the degree of biological ties, it greatly unsettles our

understanding of what procreation means (Hostiuc, 2013, p. 67). As Marcia Inhorn and Daphna Birenbaum-Carmeli (2008) state, the ramifications are profound because "assisted reproduction has diversified, globalized, and denaturalized the taken-for-granted binaries of, inter alia, sex/procreation, nature/culture, gift/commodity, informal/formal labor, biology/sociality, heterosexuality/homosexuality, local/global, secular/sacred, and human/nonhuman" (p. 178).

Charis Thompson explores what constitutes the claim to motherhood, given the many ways in which a child may be created, in an essay provokingly entitled "Quit Sniveling, Cryo-baby, We'll Work Out Which One's Your Mama." To illustrate some of the basis of that claim, Thompson interviews several women who are using reproductive technologies, such as IVF and surrogacy, as a means to have a child, and considers three major areas as defining the legitimacy of a mother: the social, biological, and legal. Each of these possesses characteristics that allow these women to define themselves as mother (2007, p. 638). Interestingly, in every case, genetic relatedness is still central. Each woman interviewed has expressed the need to feel that she has some sort of genetic claim to the child for it to be her own. Some mothers, she finds, put more emphasis on the idea of genetic contribution because they wish their child to inherit desirable characteristics that are designated as familial and socially valuable but would be missing in the case of donor gametes. At the same time, however, characteristics that are deemed culturally "undesirable," which might put the child at a social disadvantage, are not inherited in the case of donor gametes (Harrington, 2008, p. 405).

In one of these case studies, a woman named Ute, who used both egg donation and surrogacy, defined her rights as a mother in several ways: she was biologically related to the baby through her daughter's donor gametes, which were similar enough to stand in for her own genetic contribution; she was married to the person who provided the sperm; and she had signed a legal contract that stipulated that the surrogate would play the role of nothing more than a temporary caring environment for the fetus (Thompson, 2007, p. 637). Thus, Ute had redefined motherhood in compliance with her situation; she defined herself as the mother through biological claim (through her daughter's eggs), through legal and social claims (being the wife of the sperm donor), and through legal power (the contract with the surrogate mother). New technologies have allowed Ute to define her claim as a mother through her own parameters. Not only has she staked her claim to motherhood through biological, social, and legal claims of kinship, but her willingness to resort to these expensive and sophisticated technologies speak to her desire for the child, and her commitment to caring for it.

Similarly, a woman named Flora used her daughter's donated ova, which were fertilized *in vitro* with the sperm of Flora's husband (her daughter's step-father), but the embryo was implanted in Flora's uterus instead of in a surrogate's (Thompson, 2007, p. 632). Thus, Flora's claim to be the mother also rested on genetic, legal, and

social legitimacy, but she felt that the pregnancy was primordial: she believed that because the baby was growing in her own womb, she had kinship rights because she was using her own body to nourish and to grow the child until birth, a gestational relation. Moreover, she intended to raise the child herself, as did Ute (p. 633).

Sometimes, however, the genetic claim to a child is based on a much wider field. Belonging to the same culture is deemed sufficient in the case of one mother, Giovanna, who defined her genetic claim over the child because a friend who was of the same nationality as her donated the eggs (Thompson, 2007, pp. 625-26).

Different societies have different norms for defining the family unit and for raising their young. A woman named Paula, who was using donor egg IVF, expressed a strong preference for using a donor from her own community (Thompson, 2007, p. 627). She did not think that using a donor meant that she was any less the child's mother, as she believed that, in her community, it was not unusual for women to "mother" or "second-mother" their sisters', daughters', or friends' children (p. 627). Paula defines motherhood as a way of legitimizing socially shared motherhood, as she believes that it already exists within her own community and culture.

These technologies, then, have bent the rules of what may be traditionally considered as biological relation. By providing an egg for an embryo, or providing a womb for an embryo to grow in, women have legitimized their biological claims to motherhood in a way that traditionally would not have been possible. Thompson concludes that "from the heart of biomedicine they are changing and extending the reference of the word mother" (p. 628).

But technologies do not develop in a vacuum; they have been conceived for a receptive and sophisticated market, one that is constantly adapting and changing with its circumstances. Industrialized wealthy societies have become "postmodern" in recent years, in Nancy Levine's (2008) words, and this has led to a shift in domestic life, generated by diverse social and economic changes (p. 377). Some of the effects include the shift in the prototypical modern family, which ultimately created alternatives to this family type. Levine asserts that these new alternative families have come to include "families headed by never-married or divorced mothers, unmarried couples raising children, families with more gender-egalitarian roles, and gay and lesbian families" (377). Levine discusses the idea of motherhood in relation to the new postmodern idea of the family, and of the impact that new reproductive technologies have had on this family model. She observes that industrialized nations with access to new technologies have allowed for alternatives to the prototypical American family to surface.

It is evident that reproductive technologies have changed how we think about motherhood. Not only are these reproductive technologies enabling an evolution of the idea of motherhood, but they also allow for an emerging kind of parenthood to be accepted in society. Assistive technologies, for example, are displacing traditional notions of heterosexual parenthood through creating previously inconceivable

offspring for single-sex and same-sex couples (Inhorn & Birenbaum-Carmeli, 2008, p. 183).

So how does one legally define motherhood? Malina Coleman (1996), in her article "Gestation, Intent, and the Seed: Defining Motherhood in the Era of Assisted Human Reproduction," posits that there should be three areas that help to determine legal motherhood (focusing specifically on gestational surrogacy). These areas are determining intent, genetic contribution, and gestation (p. 505). Genetic contribution places some value on the idea of being biologically related, and gestation focuses on the pregnancy, but "intent" is the most important, though also the most abstract, factor in determining the legal mother. Coleman defined intent as the "preconception intentions of the two women who contribute a reproduction function" (p. 499). Thus, the woman who carried a child does not become its legal mother, even though she gives birth to it, as she was contracted to be the surrogate, while the woman who hired her or uses her services remains the legal mother. However, people who use these technologies are motivated by one factor: their wish to have a child. Their general intention, then, has a final and definite goal, and in itself legitimatizes their claims to motherhood, regardless of gender, family structure, etc.

The challenge of accepting or rejecting societal norms can be felt throughout all cultures. Society places a value on defining motherhood and therefore pressures women with deeply embedded cultural expectations about biological reproduction. Because of emerging reproductive technologies, however, the definition of motherhood is being redefined to encompass all aspects of the idea. This paper demands that we rethink the notions that used to be taken for granted, from the most intimate, the examination of the self as progenitor, to its broadest impact on society. Gay Becker (2000) states that she did not "anticipate just how profound those changes would be or how deeply new reproductive technologies would affect the ways in which people think about fertility" (p. 5). What remains universal, however, is the love, attachment, and responsibility that one feels for the child. Elizabeth Butterfield (2010) explains, "I experienced a devastating loss of self. […] But in the same moment, I also recognized that a profound commitment had taken root inside of me, and it was beautiful. I felt a duty that ran deeper than any I had known before" (p. 66). How one might become a mother has been transformed by technologies, and our social understanding of what constitutes a mother needs to be more inclusive, but the pillars of motherhood still stand strong: the desire for a child, and the willingness to do whatever is necessary, and to undergo profound change in oneself in order to nurture an offspring.

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MARIO MORELLO

Voices from the Land of Eagles

Utilizing musicological language for the analysis of Albanian folk polyphony

The original study that this paper is based on investigated shared musical elements of a form of traditional multipart singing, also known as "iso-polyphony" (Ahmedaja 2008; Jordania 2006) found in southern Albania, northwestern Greece, and southwestern Macedonia. Borrowing models from established scholars who have been engaged with polyphonic vocal practices on an ongoing basis, the investigation focused on the musical transcription and analysis of select regional styles that are unique dialects of a common musical language. This paper draws from the original and centres on two Albanian musical dialects of iso-polyphony that serve as the framework for a case study concerning the advantages and challenges of using the language and approaches of Western music theory and ethnomusicology for the analysis of traditional music.

Keywords: Albania, Balkans, ethnomusicology, iso-polyphony, musical languages

INTRODUCTION

Albanian and Epirote polyphony, commonly referred to in recent scholarship as iso-polyphony (Ahmedaja, 2008; Shetuni, 2011), is a part of the folk polyphonic singing tradition of the southern region of the Balkans, commonly associated with the historical territory of Epirus. This style of folk singing can be described as primarily a musical dialogue between soloists with the support of a choral drone. Although iso-polyphony is primarily identified with the folk musical culture of Albania, often as a result of its utilization as a propagandist tool in Albanian nationalism during that country's Socialist era (Shetuni, 2011), it is essentially a transnationally disseminated style of multipart singing with variant manifestations of the same foundational polyphonic structure. These variants are defined by different ethnolinguistic and regional divisions in northern Greece, parts of Albania, Macedonia, and southwestern Bulgaria. Thus, iso-polyphonic singing, in terms of its geographical

distribution, is not a tradition that belongs to a specific people or musical culture, but instead to a region of the Balkans cohabited by multiple peoples who have developed their own distinctive expression of it. Scholarship in English dealing with the practice of iso-polyphony focuses primarily on Albania and approaches the topic from the perspective of nationalism, framed in anthropological and cultural studies theory. Albanian scholars, for example, sometimes suggest romantic and difficult-to-prove claims regarding the origins of iso-polyphony, insisting on a unique, inherited musical language that dates back to their Thraco-Illyrian ancestors (Shetuni, 2011) and on how multipart folk singing traditions functioned as a symbol compatible with the nationalist ideals of Communist Albanian identity (Shetuni, 2011). An important fixture in festivals and broadcast media, this symbol was elevated to the status of a nationalist avatar of Albanian culture.

In the analysis that follows, I will utilize a linguistic model of musical styles commonly found in scholarship dealing with iso-polyphony (Jordania 2006, 2010; Shetuni 2011) to explore the notion of "dialects" of shared musical traditions.

THEORETICAL MODELS FOR ANALYSIS OF SELECTED MATERIAL

A theoretical framework is central to musical analysis, and in this forum I have chosen to employ Western concepts and theory, despite the debate regarding its use in the study of folk music, particularly for some ethnomusicologists and anthropologists who sometimes have a more vested interest in contexts for performance practice and other matters. In "Who Asked the First Question," an online analytical survey of global folk polyphonic traditions, Joseph Jordania (2006) discusses the suitability of his analytical model. My position echoes that of Jordania in scrutinizing, for example, the use of the term polyphony, a concept in Western art musical practice that refers to musical texture with two or more independent melodies, but is limited in its use for the many diverse styles of folk polyphony that are often partially improvised.

Some ethnomusicologists have made efforts to reform the musicological language to describe such traditions from an "insider" or emic perspective. One excellent example is the function of pedal, choral drones which will be addressed further in the paper. A musicologist, for example, could argue that a pedal drone has no independent melodic role and should not be considered a separate musical line, but rather a means to enrich a main melody. An ethnomusicologist, however, would modify the analytical constructs so that their work might be more comprehensible to a broader circle of scholars.

My understanding of musical texture in this paper is not that of "polyphony" in the Western sense with its "independent" voices, but rather of a "multipart" texture or structure with "interdependent" voices where the different components are given their melodic quality only in the context of the musical lines being synchronous. I do not entirely discount the use of the term polyphony, but concur with Jordania

(2006), who suggests the recognition of subgenres of folk polyphony or multipart singing that denotes specific traditional structures more precisely.

Because the folk music being investigated is strictly a vocal tradition, analysis of the central components of vocology will be examined, such as vocal placement and extended vocal techniques (glottal stops and pulsations, yodelling, and outcries), styles of ornamentation and timbre, and melodic modes that enrich the style. An examination of the horizontal and vertical characteristics of melodic lines will contribute to an understanding of differences and similarities in the interdependent relationship between the voices as they align in performance. As both a performer and researcher of the traditions under investigation, I should point out that I am in favour of using the language of Western musical theory for conveying certain musical concepts that will become clearer in the paper.

THE BASIC THREE-PART STRUCTURE OF ISO-POLYPHONY

Iso-polyphony refers to a form of three-part singing with soloists accompanied by a chorus who sustain a continuous tone, commonly known as a "drone" or "pedal drone," to one syllable throughout. Three-part iso-polyphony is composed, naturally, of three structural components. These include the *marrës* or "taker," the *kthyës* or "turner," and the iso or "choral drone." The terms "taker" and "turner" describe the imitative dialogue that occurs between the two soloists who are supported by the iso sung on the tonic or tonal centre. Iso as a structural element is similar to the ison of the Byzantine chant. Although the similarities between the two are recognizable, further research is required to substantiate clear connections (Koço, 2012).
Vocal timbre is often nasal, frontally projected, and embellished with various levels of vibration.

The modes or scales used for Albanian and Epirote iso-polyphony are pentatonic (five tones) and vary according to the ethnographic regions in which they are found. The aforementioned three-part structure acts as a foundation not only for Albanian and Epirote iso-polyphony, but also as a defining attribute of multipart singing styles in the Balkans that are part of one greater tradition. Variants of this greater tradition form musical dialects with their own particular features.

TOSK-ALBANIAN MUSICAL DIALECT

Albanian scholars (Ahmedaja, 2008; Jordania, 2006, Koço, 2004, Shetuni, 2011) distinguish between two main forms of iso-polyphony as practiced by two of the most notable subcultures of southern Albania, the Labs and Tosks, who are located in the regions of Labëria and Toskëria, respectively. Although the Tosk style is more widespread, more attention has been paid to the four-part styles among the Labs. I will begin with the Tosk style of iso-polyphony as it serves as a foundation for other styles of multipart singing as practiced by ethnic minorities that sometimes reach beyond Albania's borders.

In Tosk three-part iso-polyphony, a musical dialogue between two voices is supported by a sustained, choral pedal drone on the tonic, sung to one syllable. Variant styles are not common and performance practice is highly gendered in the sense that mixed-gender group singing does not occur (Sugarman, 1997) with the Muslim population. Ethnomusicologist Jane Sugarman (1997) observed a phenomenon she refers to as "engendering" while conducting research with Muslim Albanians and their traditional folk music in the Macedonian region close to Lake Prespa. There she noticed that when performing polyphonic songs, Muslim women sang with more vigour than men when they aged in comparison to their youth when they were more subdued.

In Tosk iso-polyphony, the "turners" and "takers" engage in a dialogue that is stylistically diverse, imitation being the most dominant strategy. Lab and Greek styles are more vertically oriented in contrast to the horizontal dimensional alignment of voices in Tosk polyphony. In the simplest style of musical dialogue, the "turner" sings the text rhythmically to the tonic drone, which is also sounded by the chorus as a pedal drone (Appendix, Figure 1). The "taker" executes a melody that consists of a short melodic motif that is repeated several times, with the drone sung underneath the motifs. The "turner" performs the drone with greater freedom than the choral drone resulting in the development of independence in the roles of both the "taker" and the "turner."

The widespread canonical style of diaphonic musical dialogue between the two main voices more clearly exemplifies the aesthetic of responsorial imitation that is central to the tradition. Canonical dialogue can be described as the weaving of a simple melodic motif between the first and second soloists while the remaining one sings the drone on the tonic (Appendix, Figure 2).

A third widespread style of imitative dialogue is the use of call-and-response exchanges between the two soloists over the drone, in which the voices are not synchronous but are continuations of each other's melodic phrases, which are highly ornamental and expressive. This imitative model is the basis for distinctive variants formed from it.

LAB-ALBANIAN MUSICAL DIALECT

Lab polyphony, despite being limited to a fairly small area, is a living and well-known tradition. This is true even among Albanians outside of the traditionally southern domain of iso-polyphony who were part of a cultural arena in which Lab song, with its ideals of cultural capital and Albanian identity, was widely circulated through the propagandist media promoted by Enver Hoxha. Hoxha, a Lab, grew up in a culture with songs in praise of significant Albanian historical figures and commissioned songs to be "composed" in traditional style in his honour. He was particularly fond of the urban folk style of Gjirokaster, his place of birth, which is an important cultural

hub of Lab polyphonic song. The development of the Gjirokastrian expression of Lab song during this time can be attributed to his personal connection to it.

The Lab style of polyphony is notably different from the Tosk style. The musical dialogue takes on a different form, which is mostly contrapuntal. This results in a musical texture where the two voices move in contrasting fashion in such a way that they are not necessarily independent of each other. This dialogue is performed in two different melodic modes with the *iso* as the binding element between them. Lab polyphony is very strophic, rhythmic, and recitative-like, with less elaborate ornamentation executed by the "taker." Most commonly, the song form is ABAB with the A section often in free rhythm, the *iso* performed as a pedal drone, and the "launcher," or fourth voice, sliding frequently between the third degree of the scale and the tonic. Simple or additive meter is found in the B section which is in direct contrast to the melodic and rhythmic quality of the previous section. This contrast between slower, held-out phrases and brisker, rhythmic phrases is widespread throughout most documented styles of Lab polyphony.

The regional Lab style found in the villages of Lepardha (southwest, inner Albania) was quite isolated and unknown in the past, but is now one of the most recorded and performed styles of Lab polyphonic song. Although typically the "turner" voice is placed on the dominant degree below the *iso*, in the Lepardha style it is performed with an expressive head voice on the same degree of the scale in the upper octave, rendering the counter-melody of the "taker" as the highest voice, and the *iso* as the lowest voice in the texture. This uniquely Lab form of alignment and vocal exchange is quite distinct and not particularly widespread outside of this sub-region. Appendix, Figure 3 displays the unique Lab component of a "launcher" voice on the third degree, as well as the "turner" with a counter-melody in the upper octave.

Appendix, Figure 4 is one of the most frequently performed examples of the Lepardha regional style, a historical song that tells of three Albanian rebels who strike down a *pasha* (a high-ranking Ottoman official) in the city of Ioaninna (capital of present-day Epirus, Greece). In this example one can observe an aesthetic that differs considerably from those associated with other Lab regions and is characterized by a more subdued vocal quality and dense, dissonant, and sustained chords.

Lab polyphonic song is at its most developed form in the urban folk styles of Gjirokaster and Vlorë. Four-part Gjirokastrian polyphonic style is essentially five-part, for there are two main "taker" voices, always performed by a woman and a man who take turns going between the drone and main melody in sequence, much like the canonical dialogue present in the Tosk style. The vertical dimension is highly active because of the presence of three, rather than two solo voices. The iso in Gjirokastrian song is typically performed by a very large group to support the main soloists.

What has become clear in the course of formulating the key contrasting characteristics between Lab and Tosk polyphonies is that the role of each individual

part plays a decisive role in the analysis. The main differences stem from the horizontal and vertical alignments within which the polyphonic structures operate. Tosk polyphony, for example, is characterized by sequential phrases, and diaphonic musical dialogue overtop a pedal drone that is horizontally aligned. This constitutes an aesthetic that favours the melodic quality of one or two elaborate and expressive standalone melodies. Lab iso-polyphony, on the other hand, is vertically aligned, exhibiting an aesthetic that favours the melodic quality of simpler or less-elaborate melodies only in conjunction with other melodies. In fact, Ahmedaja (2008) noted the interdependent relationship of Lab singers when attempting to record songs in the field without sufficient people for all the parts. The singers then refused to sing because they were unable to successfully recreate the traditional mode of performance (Ahmedaja, 2008).

CONCLUDING THOUGHTS

It has been the aim of this paper to illustrate that there is value in analyzing multipart folk music with terminology and models developed by theorists in the Western art music canon. Although the concepts were developed for a different aesthetic and purpose, the use of such language, with its related theoretical constructs, can extend beyond the scope of Western art music and be applied to folk polyphony in order to facilitate a sound theoretical analysis of traditional music. I support the notion of not only a theoretical, but also a culturally sensitive analysis of folk polyphonic styles that can begin at the regional level and then serve as the foundation for further studies that contribute to a broader understanding of such unique sonic phenomena.

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APPENDIX

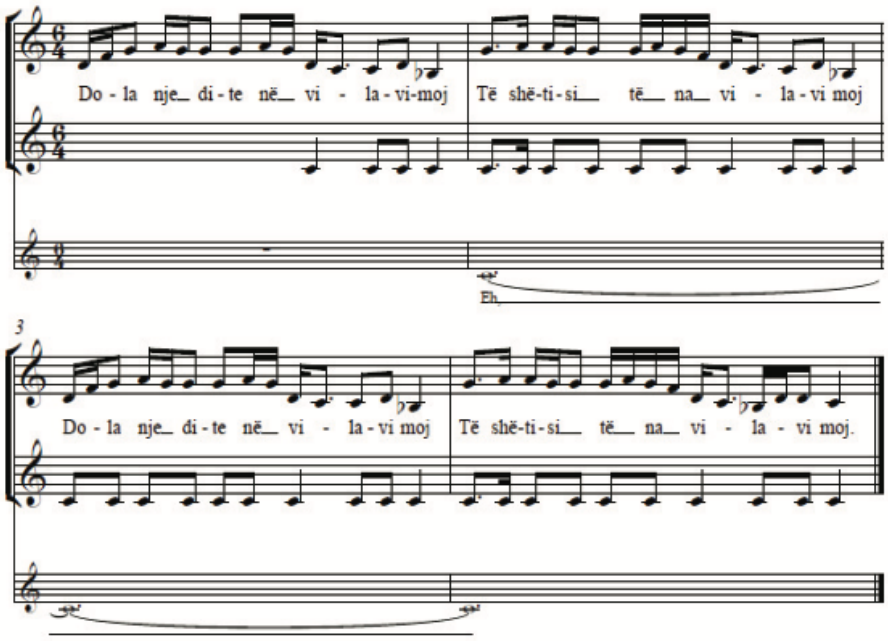

Figure 1. "Dole nje dite." Women's song, Tosk musical dialect. Typical Skrapar style with limited, repetitive melodic motif and *turner* voice limited often to a drone on (or predominantly on) the tonic. Oblique motion.

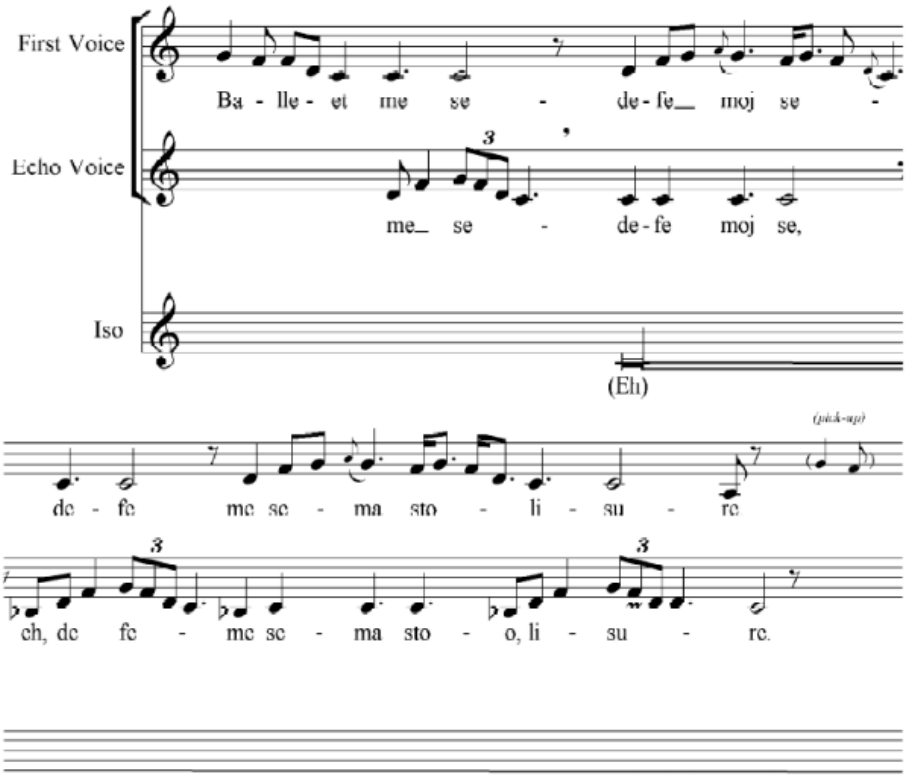

Figure 2. "Ballet me Sedefe." Women's song. Tosk musical dialect. Widespread canonical style all throughout southwest Albania as well as the Prespa district in Macedonia. Imitative, responsorial musical dialogue.

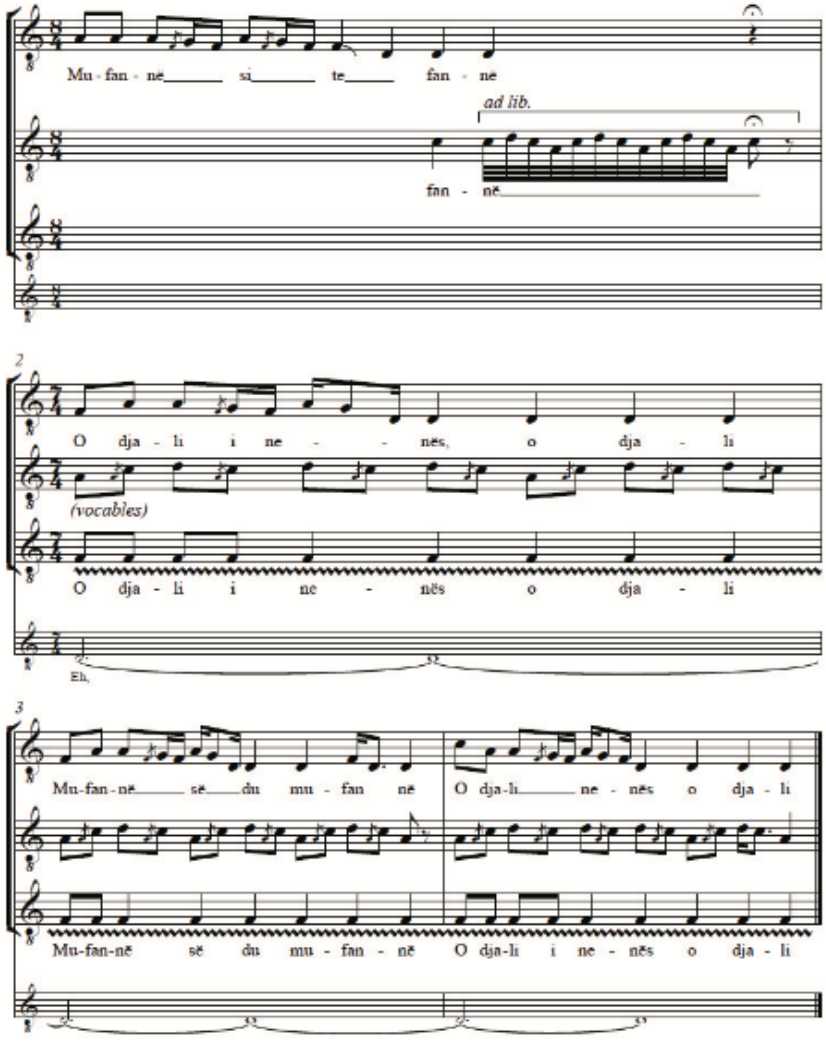

Figure 3. "O Djali I Nenca." Men's song. Lab musical dialect. 4-part style of Lepardha; counter-melody to the *turner* in upper octave. Presence of a second drone voice with the added 3rd soloist to the iso-polyphonic 3-part structure, the glottal, voice-shaking *launcher*. Bimodality between the primary pentatonic mode based on the tonic iso and *taker*) and pentatonic mode on the dominant (*turner*).

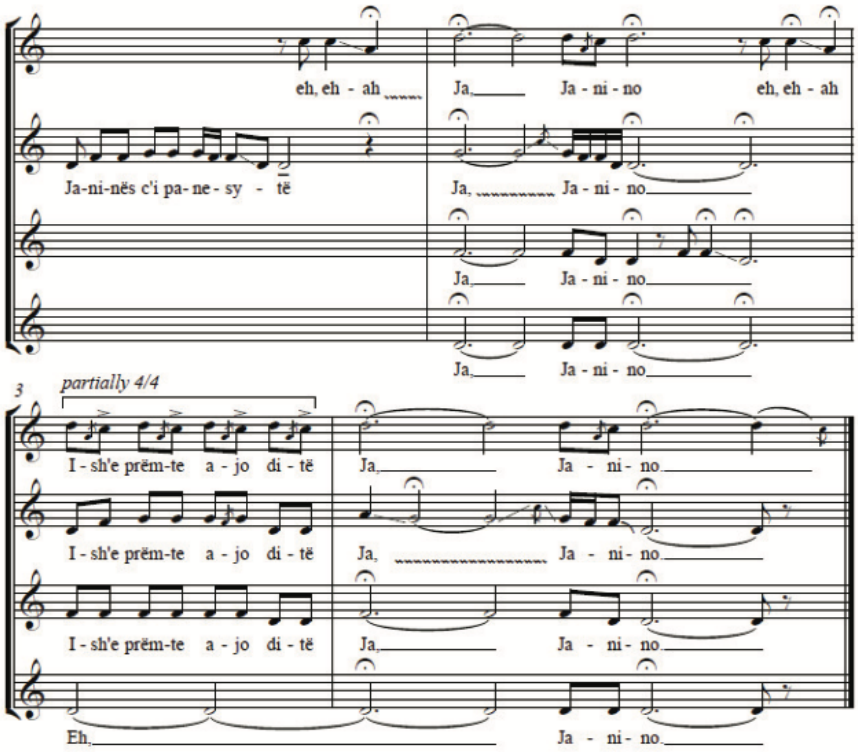

Figure 4. "Janines c'I pane syte." Men's song. Lab musical dialect. 4-part style of Lepardha; held, lingering dissonant chords contrast brisk phrases. Upper octave counter-melody again, cadences with fromata in octaves on the tonic.

NICK ZABARA

Origins of Human Behaviour

The psychology of good and evil

This paper contrasts the beneficence and malevolence often seen in human behaviour. A review of psychology literature, as well as historical accounts of good and evil behaviour, was conducted to explore factors that influence altruistic and malicious behaviour in humans, and to examine ways in which societies can promote pro-social behaviour. The review revealed the importance of both personality and situational factors in both pro- and anti-social decision making. The review revealed that situational variables are better predictors of behaviour in familiar situations, while personality variables are better predictors in novel ones. Studies also consistently demonstrated that seemingly negative traits like low interpersonal trust, high judgement, and low conventionalism can all promote socially beneficial behaviour in some situations. Other factors such as birth order, developmental environment, stress, proximity, and authority were all revealed to be important moderating factors for socially determined actions. A review of social engineering projects aimed at the promotion of pro-social behaviour on large scales was also conducted. This revealed that while pre-existing factors could influence human behaviour, psychoeducation and shifting social norms could help facilitate pro-social behaviour.

Keywords: psychology, behaviour, altruism, selfishness, personality, social engineering

The once only-philosophical debate over altruism and malice in human nature has, over the past forty years, moved into the realm of social psychology and empirical experimentation. Scholars have established that no single factor causes pro- or anti-social behaviour. Instead, a combination of both nature and nurture—personality and situation—determines whether we choose to help or hurt others. This paper presents examples of such differences in human nature, a short gloss on foundational psychological studies into human behaviour, and then shows how new organizations are influencing human behaviour for good. Effectively, these new organizations

marry the past research done by social psychologists with a goal of improving the way we behave in social settings.

History shows us startlingly different kinds of human behaviours even in similar situations. For example, on the morning of March 13, 1964, Kitty Genovese—she was a 28-year-old barmaid working in Queens—arrived back at her New York apartment before being robbed, raped, and murdered by an unfamiliar man (Krajicek, 2011). It was alleged that 38 witnesses saw or heard some part of the assault and none offered help or called the police. In contrast, between 1941 and 1944 residents of the French village of Le Chambon actively resisted Nazi occupation and elected to hide and protect Jews and other political refugees at grave risk to themselves, acting out of pure compassion to save over 5,000 lives (Rochat & Modigliani, 1995, pp. 198-201).

Psychologists have determined that what governs human behaviour in these cases is the nature of the actor and the situational circumstances (Wilson, 1976, p. 1084). While situational variables better predict behaviour in familiar situations such as waiting in line at the store, personality traits better predict behaviour in atypical situations such as when someone attempts to rob the cashier at the store (Benjamin & Simpson, 2009, p. 16).

Psychologist Stanley Milgram ran a controversial yet classic study that tested people's behaviour in situations of harm to others. Milgram wondered what caused Nazi war criminals like Adolf Eichmann to commit their atrocities; he sought to answer whether people like Eichmann were regular people thrust into bad situations or true monsters that relished their evildoing (Benjamin & Simpson, 2009, p. 12). Milgram's initial experiment—there have been many subsequent variations of Milgram's work since—recruited volunteers for a study on, he said, learning (Milgram, 1965). In the experiment, participants had the power to control a machine that shocked learners if learners answered questions incorrectly. All of this was a ruse, however, and Milgrim asked learners to answer incorrectly on purpose and scream in pain, demand release, and eventually fall silent.

The results showed interesting human behaviour. In fact, a meta-analysis of 21 unique iterations of the experiment (n = 740) showed that over 43% of participants gave the full range of shocks (Haslam, Loughnan, & Perry, 1991). What, then, is responsible for making us feel so secure in our own beneficence while simultaneously driving us to hurt others at the command of a man in a lab coat?

It turns out that the lab coat—and the rest of the situational setting—played a significant role in participants' behaviour (Blass, 1991, pp. 402-403); that is, the perceived authority of the institution and of the experimenter played a major role in determining how many people obeyed until the end. Other mitigating factors included the physical proximity of the experimenter and the distance of the learner (pp. 400-401). But personality factors of the participants came into play as well—after all, each variation of the experiment saw a minority of individuals disobey

orders (pp. 402-403). Analysis of this dissenting group's personality characteristics revealed that traits such as low authoritarianism, low conventionalism, low interpersonal trust, high moral judgement, and high social responsibility produced subversive results.

Not all psychological experiments focus on harmful behaviour. Though the original claims surrounding the number of witnesses and their inaction pertaining to Kitty Genovese's murder have since been dismissed (Manning, Levine, & Collins, 2007), the original controversy sparked interest that generated decades of psychological research into human helping behaviour. Darley and Latané (1968, pp. 378-379) staged a series of experiments to determine what influences our choice to help others in distress. Participants were led into separate rooms and told to anonymously discuss troubling aspects of their lives over intercoms. Soon after the conversations began, one of the speakers—an associate of the experimenters—demonstrated difficulty speaking, noting that he or she was prone to epilepsy. They would then plead for help and later go silent, with sounds of thrashing being audible over the intercom.

Experimenters found that when participants believed themselves to be the only listener, 85% actively sought help, whereas of those who thought that four others were also listening, only 31% did so (Darley & Latané, 1968, p. 380). This phenomenon has since been dubbed the Bystander Effect, which dictates that one of the most important situational influences on helping behaviour is the diffusion of responsibility within groups (Bereczkei et al., 2010, p. 238; Wilson, 1976, p. 1079).

Other situational variables that influence our chances of helping include how likeable and attractive we perceive the other to be, how physically similar we are to them, and whether we interpret the situation as an actual emergency (Batson et al., 1986, p. 216; Daley & Latané, 1968, p. 383). Researchers have also uncovered a number of personality characteristics, such as high empathy, high contentiousness, high agreeableness, and low masculinity, that all contribute to a greater probability of helping (Bereczkei et al., 2010, p. 240; Tice & Baumeister, 1985, p. 424). Other studies have since found that later-born individuals and people raised in urban environments are consistently more helpful than first-borns and rural-raised people (Batson et al., 1986, pp. 218-219; Weiner, 1976, p. 120).

These studies raise questions about how we can increase people's chances of helping others in need and reduce the likelihood of them falling prey to ways of thinking that can injure their fellow citizens. Already, numerous organizations have sprung up to take charge of reinstating humankind's humanity. Some charitable organizations, such as Amnesty International and the Red Cross, focus on providing relief to those in dire need through material aid obtained through donations.

Other organizations focus on changing attitudes and behaviours of those living comfortably in the first world. Improv Everywhere is an American group that stages comical situations all over the world, getting people to laugh and play with events

like pants-less subway rides and boardroom meetings held in Staples showrooms. In addition to the fun, it seems to recognize the ill effects of high conventionalism and authoritarianism, which they challenge by "break[ing] store policies or park regulations" (Improv Everywhere, 2016). People for Good is a Canadian organization that is using ads and social media to increase our emotionality and empathy:

> When was the last time you saw someone give up their seat, or hold a door open? When was the last time you looked up from your phone and had a conversation with a real person? We get so caught up in our own lives that we forget about each other. We're out to change that.

Improv Toronto is trying to establish interpersonal closeness and a norm of reciprocity by doing good deeds for Torontonians, such as providing umbrellas on rainy days and handing out snacks to hungry commuters.

The concept of group pressure is being used by Copwatch, an organization "intended to both promote public safety and to ensure that police officers remain accountable for their actions." They operate by asking the public to film or simply watch any arrests that they witness in order to deter police misconduct. Many other organizations are also promoting the concept of mindfulness—teaching people to enter into a state of "awareness that arises when paying attention to the present moment" (Mindfulness Everyday, 2016). This way of thinking helps people develop attitudes such as "acceptance, patience, non-judgement, and compassion" (Mindfulness Institute, 2015), augmenting altruistic and caring qualities and limiting negative thought patterns that may lead to harmful behaviour.

Though past research has shown that people often lack empathy and embody authoritarian attitudes, there have always been pockets of resistance. The difference today is that these new organizations, beyond the laboratory experiment, are working together to turn such resistance into the norm. In the past, researchers first discovered the "banality of evil" (Jones, 2009, p. 280), but soon developed the complementary concept of the "ordinariness of goodness" (Rochat & Modigliani, 1995, pp. 204-205). In the same way today, psychologists have revealed to us the dual influence of personality and the situation over both helpful and harmful behaviour, and it now falls to those who have listened to institute a union of science and action—to challenge our mindsets and replace vice with beneficence.

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Abstracts

Résumés

The following abstracts accompanied posters presented at the second annual multidisciplinary Undergraduate Research Fair held at York University (Toronto, Canada) in February 2014. The poster images can be viewed by clicking on the abstract titles or by visiting the Revue YOUR Review *website:*

http://yourreview.journals.yorku.ca

Ces résumés accompagnent les affiches qui ont été présentées lors de la deuxième foire annuelle de recherche pluridisciplinaire des étudiants de premier cycle de l'Université York (Toronto, Canada), qui a eu lieu en février 2014. Pour voir les affiches, veuillez cliquer sur le titre du résumé ou bien visiter le site Web de la Revue YOUR Review *:*

http://yourreview.journals.yorku.ca

SIDNEY ABU SAWAN

Protein Timing and Distribution Following Resistance Training

Skeletal muscle hypertrophy occurs when muscle protein synthesis (MPS) exceeds muscle protein breakdown (MPB). The most efficient way to increase MPS and thus result in muscle accretion can be done through resistance training (RT) and consumption of dietary protein. However, the quality, quantity, and timing of dietary protein are key variables that can influence MPS and muscle hypertrophy. With regard to protein quality, milk proteins (whey) seem to be superior to plant proteins such as soy. Furthermore, the maximal quantity of high-quality dietary protein to stimulate MPS following RT in young men is 20 g, whereas, in the elderly (age>65 years), at least 35-40 g of high-quality dietary protein maximizes MPS. There is no difference in MPS following RT in women compared to men despite having lower testosterone. The leucine content of a dietary protein source can also influence protein quality and quantity and is a potent stimulator of MPS. However, the timing and distribution of dietary protein following RT seems to be equivocal. Therefore, the focus of this review is to examine protein timing (pre-workout, post-workout, throughout the day) on maximizing muscle anabolism in various populations: untrained, trained, elderly, and different genders. Based on the literature, more research is needed on protein timing in women and the elderly following RT. Finally, a proposed study on investigating the chronic effects of protein quantity and distribution following RT is suggested to fill the gaps in the literature as most of the studies on this topic are acute in nature.

JASMINE MARYAM AGHAJAN

Violence against Women

Breast implantation in neoliberal–capitalist patriarchal society

This paper examines the decision to undergo breast implantation in North America, placing it within the broader neoliberal-capitalist patriarchal context in which it is taken. The relationship between hegemonic gendered expectations of femininity in neoliberal-capitalist patriarchal society and women's decision to undergo breast implantation is explored and analyzed through an overview and contrasting of feminist theories of empowerment, feminist theories of contextualized agency, and a gendered application of a Foucaultian analysis of social control. It is argued that these expectations and pressures constitute a symbolic violence that entices women to undergo breast implantation. The dialectical relationship between the symbolic and the "hard" violence is revealed through a literature review of women's physical and emotional experiences of breast implantation, further exacerbated through the medico-legal complex. It is argued that the symbolic and "hard" violence enacted against women through breast implantation in neoliberal-capitalist patriarchal society can only be mitigated once it is named as such. The expansion of and contextualization of understandings of violence is imperative.

DEBORA ALCIDE

St. Etienne, Auxerre

Gothic innovation in Burgundy

Early in the thirteenth century, the Burgundy region of France spawned a unique interpretation of the Gothic style reaching its epitome in Auxerre's St. Etienne cathedral. The innovations at St. Etienne have been proven to have sprung from French and further-afield sources. This essay delves into the oft-neglected importance of patronage in design. The spread of ideas in medieval Europe was more effortless than we presume, and through a careful study of numerous cathedrals, churches, abbeys, and their individual features, I have speculated on the source of inspiration for Auxerre and tried to demonstrate it with precise examples. I delved into French and English sources spanning many centuries, and conducted on-site explorations in France. One of my findings questions the starting date of the cathedral's eastern end, discovered while searching through translations of contemporary thirteenth-century chroniclers. If I am correct, and Professor Thurlby believes that I am, it broadens the inspiration sources because of the earlier start date than previously supposed. Five years is a substantial amount of time, when ideas are being adopted for building. I also speculated that the presence of the older Romanesque buildings in the region had more of an influence on Auxerre than previously surmised by the experts: Branner and Titus had pointed out the similarities existing in Canterbury Cathedral, England, and Lausanne Cathedral, Switzerland, but missed some local features, deriving from Romanesque regional designs. This helped to broaden the base for innovative thirteenth-century architects and patrons, beyond what was previously believed.

JEREMY BONHAM

Are Shopping Malls Private or Public Space?

The effects of hanging out at the mall

Public space is a topic of great interest these days as it is extremely limited. The concept of space that is open to all and allows for the proliferation of social interaction is an ideal. Shopping malls have tried very hard to be the new town marketplace or public square and have often promoted themselves as such. However, their private nature does not allow for the full spectrum of social interaction that true public space offers. This understanding is important as it has serious effects for those who hang out at the mall for extended periods of time, particularly young people. By defining "public space," it can be shown that shopping malls, while they may present themselves as public spaces, are not true public spaces. An examination of how malls as private spaces limit access to certain individuals emphasizes how shopping malls are not the new town square as all are not welcome. As well, how shopping malls control the usage of their space shows that these spaces are only available for use for what the private owners deem appropriate social behaviour and ideas. Any activities that are contrary to their list of appropriate uses is not allowed. By limiting who uses the space and what uses are made of the space, shopping malls effect individuals by stunting their social interactions and activities within these spaces.

PATRICK CALINGO

Candidate Spending in the 41st Election and its Implications

Elections are an expensive exercise of democracy, often requiring vast amounts of money to fund candidates, parties, and officials, etc., to make the system work. However, this very same process can affect voter behaviour and eventual election results. Using the 2011 Canadian Federal Election, I compiled the financial data of all candidates from the three major federal parties (Liberal, Conservative, and New Democratic) from the Elections Canada database and investigated who gave money (how many donors, and how much was the average donation), how much in loans the candidates took out, and how much they spent. I then assessed the data's correlation to winning, as well as external influences such as media, geography, Canadian federal laws on election spending, and other intangible qualities such as a candidates' likability.

Evidently there were a few problems with the methodology, among the presence of "outliers" (candidates who spend excessively higher or lower than average), which may skew the results. There were also a few cases where candidates did not disclose their finances (such as Nancy Charest).

In the end, one can conclude that money donated and spent makes a slight difference in the election results. However, there are other factors which affect a candidate's chances outside of money: 1) Perception of candidate/party/leadership; 2) Candidates' background (race, gender, locale); 3) Media coverage and "spin"; 4) Incumbency; 5) Geographical location of the riding; 6) Demographic makeup of the riding.

MIRELA CANELLARI

El Caribe Hispano en el ámbito internacional

Sobrevivencia en enajenación, travestismo y desplazamiento

[The Hispanic Caribbean in the International Sphere: Survival in Alienation, Transvestism, and Migration]

This essay centres around the novel Sirena Selena vestida de pena *[*Sirena Selena Dressed of Sorrow*] (2000) by Puerto Rican author Mayra Santos-Febres with the objective of shedding light on the transformation of Hispanic Caribbean society under the influence of globalization and the expansion of capitalism. By analyzing descriptions of places evoked in the story as well as the characters' behaviour and perspective on life, it becomes clear that Caribbean society has undergone a gradual adaptation to resemble "first world" societies. The developing tourism industry that has appropriated almost entirely this part of the world, has "imposed" a sort of transvestism on the physical appearance of Caribbean cities and its people, as well as on the mentality of the latter.*

Survival in today's globalized setting is therefore measured by the degree of adaptation on the part of Caribbean citizens to the capitalist economic system and the degree of displacement (migration) they undergo in an attempt to exploit all angles of the free market. However, these "imposed" conditions do not allow for a truly radical transformation on Hispanic Caribbean society, resulting in a superficial change. This has led to the creation of a hostile and alienating society where principles of solidarity and camaraderie that have historically defined Latin American essence and relationships, are replaced by the individualistic mentality proper to Western societies where only the fittest survive.

HALIME CELIK

Black Residents of Toronto and the Police

Members of the Toronto Police Services serve and protect Torontonians. They engage in "carding," which is the act of randomly stopping people and getting their information to create a database that later helps in police investigations. The Toronto police contend that these random stops alleviate crime and keep residents of Toronto safe. However, the outcomes of carding are grossly disproportionate with the aims of the practice. Studies reveal that 44% of people of colour reported being stopped by the police at least once whereas only 12% of white people reported being stopped by the police. The overrepresentation of people of colour in these procedures shows that racial profiling occurs in the system. Black Torontonians are stopped and questioned by the police not necessarily in relation to a crime, but based on assumptions and stereotypes about people of colour. This research is founded in various scholarly secondary sources as well as news articles on the topic. The goal of this research was to explore the broader implications of racial profiling in the daily lives of people of colour and how this might contrast to the dominant group in society. This research examines gender, race, and social class in relation to police carding.

OLIVIA CHANDLER

SLUTS

From one comment to a global phenomenon

The SlutWalk movement turned into a massive global feminist movement no one saw coming. SlutWalk's aim was to challenge the social normative blame of sexual assaults, and discourses that have historically imbued negative connotations to the term "slut." This paper argues that the movement's message has become undermined by the powerfully patriarchal hegemonic mass media, and focuses on analyzing and investigating the representation surrounding the participants of this movement in the Toronto Star. *This paper uses a feminist perspective and Gramsci's hegemony framework as lenses for critical analysis. The first section of the paper explores the historical and social manifestation of patriarchy, and how previous feminist movements have challenged its unequal oppressive and subjective nature. The section notes that despite the decades of past women's movements to gain greater gender equality, sexual assault is still a prevalent issue today and presents the issue that sparked the SlutWalk movement, the movement's message, and what it set out to accomplish/challenge. The second section explores Antonio Gramci's theory of hegemony between the mass media and the public sphere. It focuses on different theories and strategies of manipulation, and the framing of various representations of groups and individuals by the mass media. The third section focuses on the chosen methodology, a relatively small qualitative discourse analysis, utilizing non-random sampling to gather three* Toronto Star *articles. The discourse analysis solely focuses on the discourse of the* Star*'s descriptions of the participants of SlutWalk. The findings suggest that the* Toronto Star *does misrepresent the SlutWalk participants and their messages, by undermining them through the use of a particularly narrow discourse that emphasizes their appearance, while diluting the key social issues they are challenging.*

MARISSA CHASE

North Versus South

Neocolonialism in the world of climate change

The current discourse surrounding climate change politics includes many aspects that continue ideals of colonialism. This neocolonialism is most obvious in terms of the geopolitics within the Kyoto Accord and carbon trading systems, along with many other green mechanisms. By examining the discourse surrounding climate change in many recent texts on the subject, inequalities become increasingly evident. This paper provides a basis for the discovery of neocolonial ideas by providing the definitions of colonialism and neocolonialism and giving examples of these practices throughout history. Current examples of neocolonialism are then examined in the division of nations into Annex I, Non-Annex I, and Annex II nations under the Kyoto Accord, resulting in the continuation of colonial ideals by producing a new form of the "white man's burden" in climate politics. The notion of carbon trading is also examined as a new form of colonialism, allowing developed nations to take advantage of developing nations by utilizing their low carbon emissions to make up for developed nations' own increasingly large carbon emissions. The notion of responsibility for climate change and the vast differences between those who create the emissions and those who suffer for them are examined in terms of two case studies which detail the different approaches to, and impacts of, climate change based in Australia, an Annex I nation, and India, a Non-Annex I nation. The paper concludes with a call for more to be done to limit climate change by making global climate policy more equal for all nations.

VANESSA DEL CARPIO

Mapping Labour in the Creative Industries

The "creative industries" is a hotly contested and debated concept in policy and academia. While defining this concept has been a popular topic in scholarly and policy work, the people who make up the creative industries, that is, creative or cultural workers, have been relatively ignored by the research. In this paper, I aim to closely examine the complex nature of creative labour. In the first section, I will define the key terms and concepts that I will be using throughout the paper, specifically creative labour, creative industries, cultural labour, cultural industries and the information society. In the second section I will discuss the key themes and issues present in the literature on creative labour. In the third and final section, I will complicate these ideas by examining qualitative research that engages with specific groups and subgroups in the creative industries, speaking directly to creative workers about their lived experiences. I argue that creative labour is more complex and nuanced than the perspectives that view creative work as wholly negative and submissive to neoliberal considerations claim it to be: creative labour is a complex, contradictory process that can alternatively, even simultaneously, conform to, resist, and negotiate neoliberal ideologies and market imperatives.

BARLU DUMBUYA

Developing Community Resilience to Manage Disaster Risk in Post-Conflict Sierra Leone

This paper applies the Pressure and Release (PAR) model (Wisner et al. 2004) to understand the progression of vulnerability and to identify the root causes and pressures that may have been responsible for creating those vulnerabilities among the people of Sierra Leone over the past decades. The objective of this study is to construct a framework based on theoretical knowledge to release the identified pressures, to enhance resilience and capacity, and to develop strategies to reduce disaster risks. It is hoped that policy and decision makers will be able to use this study to benefit the population and governance of Sierra Leone.

SUMEET FARWAHA

A Critical Examination of the Multidimensional Anxiety Scale for Children (MASC)

The objective of this paper is to evaluate the Multidimensional Anxiety Scale for Children (MASC). Four major areas of the assessment are evaluated: test development, norm development, test reliability, and test validity. Research in the area supports that the highly structured test format and excellent application of principle component analysis with varimax rotation allows the MASC to successfully discern between anxiety disorders and affective disorders among youth. In terms of the norm development for the MASC, it is evident that there are clear signs of sampling error. More specifically, the MASC uses inaccurate stratified sampling for the Hispanic population (according to the U.S. national census), which reduces the overall reliability and validity of the assessment. Even though this sampling error reduces confidence in the reliability of this tool, the MASC still produces fairly high reliability coefficients. After measuring test-retest reliability, the MASC produces intra-class correlation coefficients of 0.785 (three-week interval) and 0.933 (three-month interval) using Caucasian participants. However, since only a Caucasian sample was used to measure test-retest reliability, these findings must be further validated by more testing using a representative sample. In terms of overall test validity, the MASC produces excellent results, showing strong convergent validity with other tests measuring childhood anxiety such as the Screen for Child Anxiety-Related Emotional Disorders (SCARED) and the Revised Children's Manifest Anxiety Scale (RCMAS). Overall, this review suggests that even though the MASC generates adequate validity and reliable coefficients, it is recommended that this test be administered concurrently with other diagnostic tools to ensure reliability of its clinical evaluation.

MICHAEL FUSCA

York University Students Perceptions of Influenza and the Influenza Vaccine

The purpose of this study is to investigate perceptions regarding seasonal influenza immunization among university-aged students. The study aims to explore students' insights, opinions, and views regarding seasonal influenza immunization and the possible motives or obstacles that either incite or prevent students from getting an influenza vaccine. The study was carried out at York University's Keele campus, a densely populated commuter school situated in a large metropolitan area, and involved York University students as participants. The study sought to determine whether the recommendation by Canadian Public Health Agencies that getting a flu shot remains the primary step to be taken in preventing the spread of the influenza virus, is a shared view among York University students. University-aged students' perceptions and beliefs about the benefits or risks associated with the flu shot may therefore be considered important information among public health policy makers in understanding students' compliance with this official advice.

KRISTOPHER HARVEY

The Internet and Alternative Copyright

YouTube as a starting point

In the contemporary state of intellectual copyright online, there is a gravitation towards restricting consumer access to maintain corporate profit. Using video-sharing site YouTube as a case study, I argue that a more creative approach to policing copyright infringement is needed; otherwise, both consumers and producers lose a considerable amount of freedom in the ways they choose to interact with creative works online. YouTube's policy of giving content owners the options to block, monetize, or track their protected content allows consumer access to subsist, while simultaneously appeasing corporate interests. Despite this, YouTube's copyright policy may lead to a more commercialized setting, in which professionally generated content dominates over the amateur content that YouTube's slogan—"Broadcast Yourself"—claims to offer. Consequently, YouTube's copyright policy should be thought of as a step in the right direction, but not a viable solution to restrictive copyright altogether. The Internet's current designation as a setting for copyright infringement is part of a historical trajectory. New technological media are often thought of as safe-havens for copyright infringement, and must often struggle to find legal grounding on which their survival may be secured. Alongside the VCR, the phonograph, and the portable MP3 player, the capabilities of the internet to rapidly and cheaply share creative content are likely here to stay. For copyright law to compete with the instantaneousness of peer-to-peer networks, it must be updated to find alternative methods of protecting intellectual property.

NABILA ISLAM

French Colonialism in Algeria and Tunisia

Issues of consolidation and legitimacy and their implications

This paper draws on a number of theories concerning state-building, ideology, and identity construction, as well as evidence from contemporaneous French news reports and editorials and secondary sources, in order to better explicate the significance of French colonialism in the modern North African states of Algeria and Tunisia. Specifically, it seeks to explore how French colonial efforts at consolidating their monopoly on violence within the territories and identity construction later reproduced themselves as potent tools against French colonialism in the twentieth century. The extremely violent and protracted nature of "pacification" of the population that marked the beginning of the French colony in Algeria also marked the regime's end through the bitter, eight-year-long Algerian War of Independence. As a result of the binary construction of identity in the French colonial state, the "native" population in the newly created Algerian state in 1962 steadfastly held to its conviction to expel all French elements regardless of where they were born. The comparatively mild military contestation for Tunisia at the outset of French colonial rule, as well as the more fluid colonial codification of identities, are reflected as much by the gradualist and constitutionalist approach taken by the supporters of Tunisian independence as they are by the population's more appreciative response to the postcolonial hybrid Tunisian identity.

HELEN JANKOVSKI

Sorry, We Are Closed

The impact Hurricane Sandy had on local businesses

This study assesses the effects that Hurricane Sandy had on local businesses in the Rockaway Peninsula. Through observation and semi-structured interviews conducted in Rockaway Beach and Beach 67, the researchers analyze how business owners have responded to this natural disaster. The report seeks to suggest that Hurricane Sandy left businesses destroyed, having to build from the bottom up. The study concludes that local businesses suffered from massive flooding causing businesses to have to remodel and renovate their stores, a loss of revenue, and loss of product. However, Hurricane Sandy has also brought the community closer together through this horrific natural disaster.

ROSSANNE KAGAOAN

The Construction of Filipinos as Servants of Imperial America

Filipinas are over-represented as nannies, domestic workers, and nurses worldwide. Socio-economic and political instability in the Philippines partially account for this occupational ghettoization; however, the literature reveals that American imperialism in the Philippines beginning in the late 1800s has greatly contributed to this phenomenon. My research involved a review of scholarly sources and the use of the concepts of imperialism, "race," racism, gender, conditional inclusion, and co-optation. These highlight the ways in which this population's mass recruitment as nannies, domestic workers, and nurses occurred and were perpetuated. As a Filipina, this research has provided me with an insight into this imperial history and experiences of racialization, racism, and conditional inclusion that I share with other Filipinas and Filipinos; however, as a Filipina who is alien to their experiences of working as nannies, domestic workers, and nurses, this research has illuminated some of the factors that have contributed to their occupational ghettoization.

In this paper, I argue that imperial and racist ideologies among many Americans purported that Filipinas and Filipinos were "inferior" beings whose value was restricted to low-skill and low-wage labour in the United States and its former colonies. Furthermore, Euro-American notions of gender were imposed, which influenced the recruitment of Filipinas as caregivers and of Filipinos as plantation workers and military stewards. Although American colonization in the Philippines has ended, the ghettoization of Filipinas and, to an extent, of Filipinos into domestic service- and care-oriented work continues.

JANET KAM

Looking Through the Lens

Changing interpretations of Edward S. Curtis's photographs of Western Canada

Edward S. Curtis was a professional photographer, film maker, and amateur ethnologist who set out on a journey in 1900 to document the last of the "Vanishing Indians" in the North American West. Curtis had spent around 30 years of his life fixated on capturing photographic evidence of the traditional First Nations' way of life, but after his death in 1952, his photographs would not return to the public and academic eye until the 1970s and 1980s counterculture era. Since the late twentieth century to early twenty-first century, historians have heavily debated the authenticity of his ethnographic work in Western Canada due to his tendency to stage the settings or pose the models in his photographs and films. Through the analysis of writings by historians of the mid-1990s, Mick Gidley's work from the late 1990s, examinations of Curtis's work from different perspectives by Professors Pauline Wakeham and Catherine Russells, as well as journal articles from the 2000s, a distinct shift from a singular accusatory and critical view in the late twentieth century has become a relatively more-positive view with analysis by professionals from a multiplicity of disciples in the early twenty-first century.

JESSICA MARINO

Una identidad caribeña

Representada simbólicamente por el sincretismo religioso en la literatura y cinematografía contemporánea

[A Caribbean Identity: Symbolically Represented by Religious Syncretism in Contemporary Cinema and Literature]

This essay analyzes the religious syncretism of the Caribbean and identifies it as an essential part of its multidimensional and syncretic identity. Through the analysis of the two characters, Nancy and Sirena, of the works Fresa y Chocolate *and* Sirena Selena vestida de pena*, we see the religious syncretism characteristic of the Caribbean and its importance in the development of the characters' binary identity, which, in turn, serves to exemplify the syncretic identity of the Caribbean itself. In order to formulate this connection, the religious syncretism of Cuba and Puerto Rico, the homelands of Nancy and Sirena, is first illustrated, providing the reader the necessary background of the interconnectivity and syncretism that exists in the religious practices and beliefs of the Caribbean. From there on, the religious acts of Nancy and Sirena are compared and analysed, depicting a clear example of the discussed religious syncretism, through their combined belief in different religions such as Yoruba, Christianity, and "Santería." Their religious acts lead to the interpretation of the binary identities of the two characters, as we can symbolically compare them with religious figures, important in the Caribbean, who themselves have syncretic identities. Having made these connections, Nancy and Sirena not only illustrate the religious syncretism particular to the Caribbean, but embody its multidimensional and diverse identity, which has developed and become part of its individual and collective character.*

ANGELA MELI

The Youth and Law Project

As children grow older, their birthdays not only mark the completion of another year of life, but can also deem them legally able to participate in certain aspects of society, such as voting or driving, according to Ontario's age-based laws. In this project, I explore the views and perspectives of four children, aged 12-15, on some of the age-based laws in Ontario. In order to inform my research on children's perspectives toward age-based laws, I have drawn on texts that discuss the origin of these laws, and differing perspectives toward the chosen ages for certain laws. Through informal interviews and discussions, I have gained an understanding as to whether the participants view these laws as a form of protection, or a denial of their participation in society, if a particular age-based law has more relevance to the participants, and whether they feel certain legal ages should be reassessed. The collected data have been analyzed using articles in the United Nations Convention on the Rights of the Child, in order to assess whether the participants feel age-based laws are a way for the government to protect or deny children of their rights. Ontario's age-based laws may positively or negatively implicate the lives of children, and it is vital that such implications are analyzed through research with children.

MICHAEL MEYEROVICH

Effects of an Intervention on Maximal Aerobic Power

Objective: to examine the efficacy of a self-paced guided active play (GAP) program in eliciting changes in aerobic power for children and adolescents (8-12 yrs). Methods: girls and boys (n=33) registered in summer camp where recruited to participate in a guided active play program (8 weeks) focused on active playing of self-paced cooperative games (1h/d; 5d/wk). Physical activity participation was assessed daily by attendance and accelerometry (ActiGraph GT3X+; 10s epoch) by vector magnitude (vm counts/min) for children/adolescents. Anthropometric (stature, weight, leg length, and maximal aerobic power [20m MSSR]) were collected prior to and following the program. Maturity status (MS) was estimated from anthropometric variables and used with multiple linear regression equations to predict days from age at peak height velocity (APHV). ANOVA (main effects) and tukey post-hoc test (individual group differences) were performed (p=0.05). Results: prior to the program, children (age: 9.8±1.3yrs; BMI: 20.7±2,6kg/m2; maturity offset: -4.2±1.0yrs) had an estimated aerobic power of 44.1±0.9 mlO2/kg/min; with boys (45.4±1.0 mlO2/kg/min) higher than girls (42.5±0.7 mlO2/kg/min) (p<0.05). In response to the GAP program, aerobic power improved by 4.3±3.8% (p<0.05) for all children, with girls > boys (p>0.05). Maturity status (MS) ranged from -2.4 to -7.0yrs; with the girls averaging (-3.7±1.0yrs) and boys (-4.4±1.2yrs). In general, the relationship between MS and improvement in aerobic performance was moderate (r=0.46), except for the girls that showed a good-very good relationship (r=0.76) (p<0.05). Conclusion: active playing of children's games is associated with improvements in aerobic power and increases in AP are related to maturity status.

ALISON MILAN

"Why Not Stay a Little Longer?"

Mobilities, public space, and commuter culture at York University's Keele Campus

Geographical imagination is fundamentally individualistic and context specific, confined to a given space. Though it has been asserted that the world is experienced by individuals as they move through it and walking has been acknowledged as a powerful method of understanding and valuing space, it is important to recognize how a place can be devalued through constant mobility and become "placeless" (Cresswell, 2006). This placelessness can be achieved through the act of commuting and culture surrounding it, which channels and schedules a specific pattern of mobility (Cresswell & Merriman, 2011). This paper argues that, through the use of an urban intervention, students were enabled and empowered to alter and engage with the York University Campus. The intervention challenged the intended use of Campus Walk, interjected into mundane rhythms of daily commuter life, drew individuals out of their personal technospace into the broader social landscape, and, ultimately, allowed the space to be more than that of "passive mobilities" on a commuter campus.

ASAL MOGHADDASZADEH

Accelerometry of Self-Paced Children's Games During Guided Active Play

Accelerometry (ACC) estimates of oxygen cost from linear regression equations (treadmill calibrated) are limited when assessing children's self-paced active play. The purpose of this study was to determine if the magnitude and direction of ACC estimates were implicated in the poor predictions of children's self-paced active play. Children's (n=15, 9.3±1.2 yrs; BMI 20.5±4.0) cardiorespiratory and metabolic responses to treadmill activity (4, 6 and 8 km/h [0% grade]) and active playing of 6 games were determined using FITMATE. Accelerometers (ActiGraph GT3X) collected PA counts (10sec epochs) for all activities. The linear regression equations (VM for time, VO2) generated for each activity, and relative contribution of each axes, were compared (ANOVA) and assessed at p=0.05. During treadmill activity the linear relationships for VM with speed (at 4, 6, and 8kmh) and oxygen consumption (VO2) were 0.90±0.03 and 0.82±0.05, respectively (p>0.05). The linear relationships (VM with time and measured VO2) averaged over 6 self-paced games were 0.061±0.035 and 0.006±0.002 (p<0.05). Linear regressions for each game resulted in a range of intercepts, for VM and time, from 520±198 cnts/10sec to 1189±196 cnts/10sec (p<0.05) compared to treadmill values of 193±95 cnts/10sec (p<0.05). The measured VO2 values for self-paced games were higher at lower counts (VM) for all games. The percent difference in axis contribution to VM between the dominant and lowest axis was 41±14% and 7±5% for treadmill activity and self-paced games, respectively (p<0.05). This study reveals that characteristics of children's self-paced PA impacts the linear relationship identified by ACC for locomotion activities.

ALEXANDER MOLDOVAN

Labour Relations in Canada in Light of Provincial Cleavages for Migrant Farm Workers

Despite the Seasonal Agricultural Worker and Temporary Foreign Worker programs existing under federal legal jurisdiction, provincial authority encroaches upon many issues that are relevant to the lives of migrant workers. Policy areas like health, housing, and labour codes constitutionally operate under the provincial governments. The asymmetrical standardization of various jurisdictions exacerbates a huge cleavage in the Canadian human-rights regime in relation to migrant workers. Using an array of reports, which vary in their respective source bases from labour unions to academic and government publications, this paper examines inter-provincial differences in the aforementioned areas of issues to demonstrate that the federal/provincial division of powers acts as an impediment for the development of rights for temporary migrant workers under the Seasonal Agricultural Worker Program and Temporary Foreign Worker Program. To advance this argument, this paper also illustrates how various provincial governments have interacted with the governments of Canada and Mexico to limit access to healthcare, housing, and collective bargaining. This paper then proceeds to promote the notion that in the absence of federal uniformity, the dispersed jurisdiction in these areas of issues allows the provinces leverage to experiment with different labour-relations regimes. This paper asserts that although provinces are given room to differ from one another, different provinces have attempted to systematically restrict the rights of migrants to housing, healthcare, training, and collective representation.

JANARTHANY PARAMESWARAN

Differences in the Relationship and Interaction Between Goldenrod Plants and Their Inhibitors in Varying Habitats and Locations

There are many complex interactions between organisms in an ecosystem. This experiment focused on the interactions between the Goldenrod plant, its gall inducer, the Eurosta solidaginis larva and its enemies, the Eurytoma gigantea, Eurytoma obtusiventris, and Morellistena unicomor. The study was done in four sites north of Toronto: Minesing (ditch), Minesing (uphill), Glengarry Notch, and North Glengarry. A total of 15 samples were analyzed for their relationship between plant density and number of galls; the correlation between the height of the plant and the number of galls; the differences in the size of galls that had one gall and multiple galls; and the differences in the size of galls between Eurosta larva and Eurytoma larva. It was found that the number of galls increases with increase in plant density, since the induction of galls increases stem production in plants. The number of galls significantly varied between habitat and soil texture. The height of the plant decreased with increasing gall numbers, due to the damage caused by gall induction. However, this factor was also explained by low availability of resources and presence of high levels of competition in the habitat. The size of the galls were bigger in plants that had multiple galls, due to the host's stress tolerability encoded by genotype; the less stress-tolerant plants were rejected by the gall-inducing insects. Finally, the gall size was determined through a balancing selection between the small gall size preferred by the Eurytoma and the large gall sizes that were more susceptible to predation by birds.

SACHIN PERSAUD

United We Stand, Divided We Fall

The case for a World Environment Organization

The first global response to the impending crisis of climate change occurred with the creation of the United Nations Environment Programme (UNEP) in 1972. Since then, conferences have been convened, agreements have been adopted, and another body has been formed without any substantial global progress on the environment having transpired. I examine how current institutional arrangements have failed and prescribe the construction of a World Environment Organization (WEO) as a normative remedy. Such a body would need to be well resourced, with its mandate expanded to the effect that it could compete against the legally binding edicts of the World Trade Organization (WTO). A WEO could also replace dishevelled inter-state action on climate change with centralized, international agreement, implementation, and enforcement of initiatives. I also explore the moral obligation the industrialized North has to assist the underdeveloped South in actualizing the latter's environmental commitments, and mechanisms that would give the South a greater degree of decision-making power than it presently has. Liberal market environmentalism, an anti-thesis to the proposed WEO, is explained and rebutted. The role of Canada's current administration in the global response to environmental degradation is likewise studied and critiqued. Though the conclusions I draw from my survey of the literature are normative, I utilize various examples in current affairs to suggest that a productive, cooperative WEO can realistically be consummated.

LINDSAY PRESSWELL

Lee Miller's Challenge to Surrealist Objectification of the Female Body

This essay argues that Lee Miller's photography actively criticizes the Surrealist genre for its objectification of women using the genre's own techniques. Her body of work allows for a reflection on the shortcomings of celebrated Surrealist practices such as fetishizing fragmented female body parts. This paper begins by analyzing how Lee Miller's photography can be classified as Surrealism in the first place. Her work is then analyzed chronologically to demonstrate the way that she uses double-image, juxtaposition, and depicting women as outsiders in her photography in order to criticize other male Surrealist artists for their insensitive and uncompromising objectification of the female form. Overall this essay showcases Lee Miller as an expert in her field with emphasis on the way she infiltrates Surrealism to make an attack on its chauvinistic tendencies.

KATARINA PULJAK

Canada's New Residential School

Exploring the impact of cultural racism on federally imprisoned Aboriginal women

By comparing the residential school system to the contemporary prison system, this paper examines the issue of cultural racism in regards to issues Aboriginal women face. This paper argues that the treatment Aboriginal women face under the Correctional Services of Canada (CSC) is an extension of the colonial past, bearing similar goals and principles. To support this, the paper examines Section 12 1 (b) of the Indian Act of 1876, and proceeds to provide similarities between residential schools and prisons, connecting it to cultural racism and its impacts today. Data has been collected from several academic journals ranging in the fields of social science, women's studies, sociology, and criminology, along with a debate and case study. Residential schools promoted ideals of whiteness by viewing children as threats to the white Canadian "norm," taking away traditional practices, and beating children as an attempt to rid them of their Aboriginal identity. In a similar manner, prisons placed Aboriginal women far away from their families, they were denied visitation rights and cultural programs, and dehumanized in an attempt to make them conform to mainstream white culture. This paper ends with criticism of Harper's Bill C-10, the Safe Streets and Communities Act, as well as a case study of Ashley Smith, a 19-year-old Aboriginal woman who died under the de-humanizing treatment of CSC. Suggestions for change are discussed, showing that this issue needs to be recognized in order for the prison system to reclaim its true purpose of rehabilitation rather than a system that destroys identity.

REZA RAEESI

The Silk Road, Bitcoins, and the Global Prohibition Regime on the International Trade in Illicit Drugs

Can this storm be weathered?

The global prohibition regime on the international trade in illicit drugs is a relatively recent phenomenon, which finds its origins in the nineteenth and twentieth centuries. It is a part of the bigger system of international norms and regulations arising from the American hegemony. Historically, one could hardly find any effort resembling the modern prohibition regime on the trade in illicit drugs around the historical Silk Road that traversed much of the ancient known world and connected civilisations through trade. Merchants from across the world travelled safely, for the most part, on this road and took part in a globalized trade, which was unprecedented. Centuries later, a new Silk Road was allegedly created by 29-year-old Ross William Ulbricht, the self-styled Dread Pirate Roberts.

DEAN RAY

A Dialogical Séance with the Void of #socialmedia

Public opinion in American foreign policy towards China

On October 3, 2013 U.S. President Barack Obama cancelled his trip to the Asian Pacific Economic Cooperation Summit due to the government shut-down. This decision came after an intense period of U.S. foreign policy directed at containing China's military ambitions while encouraging its economic rise. Using Twitter as source material and the method of intertextual analysis, this paper gauges public opinion in America towards China in the wake of Obama's cancelled trip amongst both elites (those who practice foreign policy) and the general public. The results suggest that public opinion towards China is negative in the wake of the cancellation, begging the question: was Obama's trip cancelled as a ploy to win sway in domestic politics or was it a foreign policy maneuver? Is there a grand strategy at work or is the so-called pivot towards Asia dead on arrival?

SARA RUHANI

Uncertainty Management

Literature review

The following literature review discusses social psychology theories of uncertainty management, namely the Uncertainty Management Model (UMM) proposed by Kees Van den Bos and the Uncertainty-Identity Theory (UIT) proposed by Michael Hogg. Van den Bos's UMM argues that when individuals feel uncertain, they use fairness judgments to cope with their uncertainty. Conversely, Hogg's UIT argues that when individuals feel uncertain, they identify with groups to manage their uncertainty. The purpose of this literature review is to effectively analyze UMM and UIT and find relevant research that provides explanation for whether UMM and UIT can in fact both be accurate. The research process consisted of gathering literature specifically surrounding UMM/UIT and then broadening the scope to include journal articles that cover topics of fairness judgments, types of uncertainty, and social identity theory. The literature research revealed that while there are fundamental differences between UMM and UIT, the core concepts of both models have been proven accurate thus far and hold under context-specific situations. This is empirically supported by studies conducted by Cremer, Brebels, and Sedikides that have found that under conditions of general uncertainty individuals use fairness judgments to manage uncertainty, while under conditions of belongingness uncertainty individuals use group identification. By asserting that different types of uncertainty account for different procedural effects, Cremer et al.'s work suggests that perhaps it is the type of uncertainty that actually dictates whether fairness judgments or group identification are utilized when managing uncertainty. This line of research suggests that both UMM and UIT can co-exist and the results of the studies are helping to better define the conditions under which each uncertainty management model prevails.

MOIRA SCOTT

Strange Women Lying Around in Ponds Distributing Swords Is not a Basis for a System of Government

How *Monty Python and the Holy Grail* provides a scathing attack upon British culture in the 1970s

This topic was chosen as an "out-of-the-academic-box" approach to examining the volatile nature of British culture in the 1970s. Using satire as political commentary, Monty Python and the Holy Grail *takes one of Britain's best-known culturally referenced myths and attacks it via Britain's almost-nationalistic brand of humour. Better known as comedy-by-embarrassment, this film's use of awkwardness provides a skewed vantage point for investigating the changes lobbed at what constitutes Britishness by criticizing class, sovereignty, and, to a lesser extent, gender; racial tension, however, was glaringly omitted. This omission provided a unique aspect for studying this film as a cultural text.*

The Holy Grail *was definitely a product of its time that deftly used cultural or mythological history to criticize historical events, past and present. Its keen use of anachronism provides an effective mirror that reflects the modern 1970s British* zeitgeist *as a cauldron of confusion and discomfort. It is through this source of friction that one is both amused and somewhat reflective, thus begging the question, was what occurred in the British cultural past really much different from what is occurring here and now?*

NEENA SETHI

Environmental Interest Groups and U.S. Foreign Policy

A case study of the National Resources Defense Council (NRDC)

This paper discusses environmental interest groups' influence on U.S. foreign policy behaviour. Environmental interest groups have long been pushing for state-level responses to transnational environmental problems such as climate change and changes to the marine environment. The nature of contemporary environmental problems is forcing states to act both independently and in collaboration with other state and non-state actors. In the U.S., the prominent environmental interest group, the National Resources Defense Council (NRDC), has become a strong voice for environmental issues. Since its inception in 1970, the NRDC boasts several victories, including the passing of U.S. Public Law 99-500, October 18, 1996, requiring the U.S. government to set up an early-warning system to prevent federal funding of environmentally harmful multilateral bank projects overseas. My objective is to understand if the activities of the NRDC successfully influence U.S. foreign policy behaviour. I identified five case studies from the 2011 NRDC Annual Report and from the NRDC website by applying several filters. I then constructed a timeline and collected information that indicated U.S. foreign policy behaviour including press releases, presidential memorandums, directives, congressional hearings, legislation, and participation in conventions and treaties. Using a methodology inspired by Porter and Gareth (1996) to categorize my results, I conclude that the NRDC does not consistently influence the U.S. to act as a lead state in solving transnational environmental problems.

BISHOI SHINODA

Mirvish Towers in Land Use and Urban Development Context

The Mirvish and Gehry Trio Towers are a currently proposed development that threatens the cultural identity of the entertainment district in Downtown Toronto. The development highlights the role of condofication and new mega projects in reshaping the downtown core as well as in giving an international identity to the city. The research included field observation to the site and its activities. It also included intensive research for primary resources whether newspaper or city planning documents. It can be concluded that the development proposes loss over gain due to the unsolved conflicts. The pressure by the owner and the international architect leaves the city planners hesitant about their decision.

SAMANTHA STEFANOFF

Drivers of Globally Distributed Lake Surface Water Temperature Trends, 1985–2009

Climate change may have profound implications on aquatic ecosystems by increasing lake surface water temperatures. Increasing surface water temperatures have been demonstrated to affect the distribution of fish species, primary productivity rates, and food web dynamics of aquatic systems. It is important to understand how lake surface water temperatures (SWT) are changing globally, and what drivers are influencing these changes. Changes in lake surface water temperatures of 78 globally distributed lakes were assessed between 1985 and 2009. Ninety percent of the lakes studied experienced increasing SWT trends over the 25-year period. Histograms were developed to investigate patterns in various morphological and climatic variables with regards to SWT trends. In addition, a regression tree analysis was performed in order to investigate the drivers of SWT trends. The trend in summer solar radiation was the most important predictor of summer surface water temperature trends of the globally distributed lakes, such that mean surface water temperatures increase with increasing summer solar radiation. Summer air temperatures were also important predictors of surface water temperatures, with little variation explained by lake morphology. This is the first study to provide limnological evidence for the importance of two large-scale phenomena, global brightening/dimming and global climate change, for lakes worldwide.

JESSE THISTLE

Archives as Good Medicine

Rediscovering our ancestors and understanding the root causes of intergenerational trauma

My field research was directed towards tracing back my genealogical history to comprehend the social ills that plague contemporary Cree and Métis communities in Saskatchewan. Moreover, I undertook this research to better understand why I, a reformed addict and homeless person, along with the rest of my biological family, was so troubled in the modern times and why we had so many negative social barriers and problems. Ultimately, however, this paper is a very preliminary work and is incomplete. In the future, I hope to publish a more-detailed body of work in an extended thesis which, I am hoping, will help other Métis and First Nations people understand, combat, and cope with intergenerational trauma. I am basically trying to build a template for Indigenous wellness through historical research. In peeling back the layers of the Métis historical onion, I found that we "Michif" are a nation that both predates Canada as well as suffers from the mechanical processes of colonialism that helped create it.

SIAVASH VATANCHI

Fleeing Brains

An essay on the Iranian brain drain

This paper analyses the Iranian brain drain to the United States—home to by far the largest Iranian population outside of Iran—from the 1960s up to the present. In the first half of the essay, it will be established that the brain drain has for decades been caused primarily by socio-political and economic factors. This trend was only intensified following the Iranian revolution of 1979 as the country experienced war, sanctions, chronic unemployment, and an increase in the overall authoritarian nature of the state. Similar to most other cases of brain drain, Iran's is also a symptom of a more extensive disease that plagues the nation. In 2009, the International Monetary Fund ranked Iran number one in the world for its brain drain with an estimated cost of $40 billion annually.

Thus far, the Iranian government's attempts to reverse the brain drain have been unsuccessful. This is not surprising, however. It would be unreasonable to expect (as the Iranian government repeatedly has) that the brain drain could be curbed through purely economic measures while leaving the corrupt, undemocratic, and centralized political structure intact. Political reform, due to its ability to generate spillover effects onto other branches of society (e.g. economic and social), is the prerequisite to any sustainable, long-term reverse brain drain policy. Finally, due to the scope of this paper and the lack of scholarly information on Iran's brain drain, potential external causes (i.e. globalization) will not be examined—though it is widely agreed upon by scholars that internal factors are the main driving force behind Iran's brain drain.

YANG WANG

Detection of Micro RNA-210 Using Optical Biosensing Platform Based on the Actuation of Discrete Gold Nanoparticle Dimers

In recent medical development and research, people have been challenged on detection of biomarker in diseases via a ready and cost-effective method at early stage of diseases. Micro RNA-210 (miRNA-210) is well known as a sensor for hypoxia as the level of miRNA-210 typically rises in response to low oxygen tension in various cell types. Detection of the level of miRNA-210 during pregnancy could potentially prevent pregnancy-related disorders, such as Pre-Eclampsia. The purpose of this project is to achieve a detection of miRNA-210 using a sensing platform based on the actuation of discrete gold nanoparticle dimers. This sensing platform has been established for the detection of short oligonucleotides, such as single-stranded DNA. The optical response is achieved via a geometrical extension of the dimers upon binding of analyte. The detection signal is a spectral blue shift in the hybridized plasmon mode as measured via single nanostructure scattering spectroscopy. We applied this optical biosensing mechanism to the detection of miRNA-210 in our project. Our experimental results show a spectral blue shift when the dimers were exposed to miRNA-210, which is evidence of successful detection of miRNA-210. The magnitude of this shift was gradually improved by optimizing experimental conditions, including changing salt concentration, buffer type, and incubation time of analyte. In addition, the calibration curve and detection limit of miRNA-210 were also studied. To conclude, our project demonstrates an optical biosensing platform for the detection of miRNA-210 with ultralow detection limits and ability to differentiate interfering molecules, which offers a promising future for prevention of pregnancy-related disorders.

AARON WOLSKI

Understanding Canada's Physician Supply Through the Lens of Distribution, Gender, and Age

Canada currently has more physicians than at any point in its history, yet there is a belief that there is a shortage particularly in the area of general or family physicians. This has been kept in the forefront of public discourse by the mainstream media which fuels public paranoia that the healthcare system is "not what it used to be." Much of this debate stems from a series of policy changes made in the 1980s and early 1990s, which by the end of that decade left the impression that it was a system in peril. Government responded by expanding physician resources, which increased the physician population ratio almost 17% from 1993 to 2011, and 30% compared to 1980. This paper seeks to determine why the perception of physician shortages continues despite the record levels of total and per-capita physicians. To answer this, a critical examination of physician activity in three areas—location, gender, and age—was conducted. The results show a sharp decline in the number of hours available for direct care as a result of an ageing, and increasingly female, work force. Results also indicate that the location of physician practice—urban or rural—has an impact on the perception of physician shortage, with rural populations having access to significantly fewer physician resources. The paper concludes that, from a policy perspective, Canada must move beyond absolute numbers and ratios in the evaluation of physician resources, and instead focus on how many direct-care hours are actually available for patients.

XIAOYONG XIA

Re-Entry Challenges: Bigger Than You Think

An analysis of the difficulties faced by returnee students and coping strategies

In today's increasingly globalized economy, having an international education or experience is a valuable asset in the job market. Therefore, more and more universities and colleges are expanding their exchange, study abroad, or international internship programs. Great effort is put into making sure students smoothly adjust to the new country overseas and succeed in the new environment, both academically and socially. However, while it is important that students be adequately prepared to go abroad, it is also crucial that they receive the same level of assistance upon returning home—something that many schools are not doing enough. This results in students facing numerous "re-entry challenges," such as reverse culture shock, boredom, and identity confusion. The purpose of this paper is to identify and examine some common re-entry challenges that students experience, and to explore and propose some effective coping strategies. This will give students the tool to transform their international experiences into truly meaningful learning opportunities.

TALI YANUKA

El exilio, la guerra y el Judaísmo en la poesía de Marjorie Agosín

[Exile, War, and Judaism in the Poetry of Marjorie Agosín]

In Margorie Agosín's 2006 book of poetry, Mother, Speak to Us of War / Madre, háblanos de la guerra*, her three poems "La frontera / The border," "Durante el bombardeo / During the bombing," and "Perdonar / Forgive" address the topics of exile, war, and marginality with the hope of stirring up a desire in others to bring about change. Basing my analysis of the three poems on articles and books written about Agosín's life and work, as well as on a radio interview with the poet herself, I show how her personal life influenced and inspired her in writing these poems. The three topics of exile, war, and marginality emerge from events with which Agosín had to contend since her childhood as a Latin American Jewish woman and later as an immigrant in the United States. Moreover, these topics are shown to be highly interconnected as marginal peoples, represented through the voices of women and the references to Jewish tradition and history, may endure exile due to the experience of war. In these poems, Agosín addresses the Latin American experience of exile due to civil war and violence as well as the North American experience of war in Iraq, which she sharply criticizes. While no concrete solutions are offered for the harsh experiences introduced in her poems, the artistic expression of these are Agosín's solution since, for her, poetry is a tool for social reform and a weapon in the fight for human rights and liberty.*

UROOJ ZAMAN

Physician Power and Politics

Medical dominance as a barrier to healthcare integration

It is proposed that medical dominance functions as a barrier to achieving an integrated healthcare system through physician neglect of key integration principles. For the purpose of this paper, I will be looking at the following three key areas of integration: consumer-focused approach, continuum of health services, and the use of electronic records. This paper is based on an analysis of various primary sources, such as healthcare research papers and physician anecdotes.

Firstly, medical dominance prevents a consumer-focused care and encourages provider-focused care instead. This is apparent in increasingly high physician remuneration. It is suggested that physician remuneration needs to decrease so that health dollars can be reinvested to better meet the needs of consumers. Secondly, medical dominance has historically hindered the continuum of health services by restricting the autonomy and integration of other health occupations. For example, medical dominance hinders the continuum of care by lobbying against Complementary and Alternative Medicine (CAM). Although other models of payment exist, it is suggested that eventually eliminating the FFS model over time would allow physicians to focus on the quality of service, rather than on the quantity of patients. This would also stop physicians from trying to reduce the role of other healers in society. Thirdly, physician autonomy functions as a barrier to the use of e-health in the healthcare system. Despite its costliness, disastrous clinical decision-making, and the resistance towards e-health technologies continues. It is suggested to provide appropriate non-monetary incentives to physicians that improve work conditions. Physicians must also be educated thoroughly about e-health technologies.

HEIDI ZHANG

Overqualified or Unwanted?

A critical examination of skilled immigrant deskilling among racialized immigrants in Toronto and Vancouver

Recent research on immigrant employment and integration into Canadian society reveals that although economic integration of immigrants has always been held as the key to successful settlement, a gap exists between immigrant skill sets and their employment realities once in Canada. Economic class immigrants chosen from the Federal Skilled Workers Programs are identified as the most likely to succeed since they have been evaluated according to human capital discourses. How do they fare once admitted? This paper explores the social issue of skilled immigrants' barriers upon entering the Canadian labour market and how a racialized labour force has been constructed and perpetuated. Particular focus is on the requirement of "Canadian experience," as foreign work and education experiences has been devalued, leading to immigrant deskilling in the workforce. This paper reviewed literature which focuses on racialized skilled immigrants' structural barriers when finding employment, and it is argued by the researchers that deskilling is one of the ways in which Canada, while maintaining multiculturalism on the surface, goes on to perpetuate a racist status quo in which immigrants are trapped in the bottom of a two-tier labour system. For possible solutions, the paper links the issue of skilled immigrant employment with anti-oppressive social work practices when engaging with immigrant communities. The incorporation of anti-oppressive practices when working with racialized skilled immigrant populations can allow change to happen at macro and micro levels, through identifying barriers as systemic and socially constructed.

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