Proceedings of the 10th Annual

TRU Undergraduate Research & Innovation Conference

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Introduction to the Proceedings of the 10th annual TRU Undergraduate & Innovation Conference

The common thread that unites the rich variety of submissions in these proceedings of the 10th TRU Undergraduate & Innovation Conference could be expressed as "exploring our world from microcosm to spiritual connection." On this path of exploration, we encounter sub-themes such as chemical analysis, the evils of war, the quest for justice, indigenous issues, the student experience, and finally, the spiritual and cultural roots which bind us to our world. The papers could be seen to progress through these themes collectively, yet each individual presentation is also, in its own way, a journey from the microcosmic to the spiritual.

Devin Chattu, Riley Endean, and Kevin Cooley set the microcosmic stage by examining various chemical substances that impact our daily lives. Devin Chattu enquires into the occurrence of Triclosan, a commonly used antibacterial, in places where it might have unintended environmental impacts. Riley Endean seeks to bring a nuclear magnetic resonance technique within reach of undergraduate chemistry students, and Kevin Cooley explores improved ways to analyze the cooking oils humans use for nourishment the world over.

But another element calls our attention the world over: war. Tyler Pineau and Eric Maher address this pervasive evil, raising our awareness by examining the too-often-neglected story of women in war (Pineau) and bringing to light facts about the resurgence of mercenaries in today's military conflicts (Maher).

This focus on strife and how we deal with it carries over into the submission of Rachel Lepage and Kirsten Roche, as well as that of Jennifer Friend, who respectively shed light upon the plight of transgender sex workers in B.C. and enquire into fairer justice practices in cases of gendered violence in indigenous communities. The roots of these inequalities are further examined by Nicole Vance in her analysis of Janet Campbell Hale's *Bloodlines: Odyssey of a Native Daughter*.

The quest for a better world circles back to the microcosm of the university campus, with three papers that explore the student experience. Debra Andrews, a 10-year veteran of the TRU Undergraduate & Innovation Conference, draws attention to the connection between undergraduate research and student engagement, while Felicia Girouard enquires into the motivations underlying student volunteer activities. Meena Balachandran's research offers a student perspective on effective feedback techniques for improving ESL writing.

Completing the circle of reflection from the concrete to the spiritual, from the broad to the personal, are three submissions that examine the intimate ways in which we find connection with our world—or indeed our worlds. Leif Douglass journeys back to his childhood home to find a very different "Applespring", while Ariel Little explores how food connects us to our heritage. Jason Charlie's reminiscence of a children's powwow leads to reflections about ways of knowing that reach deeply into his culture and traditions.

Many of the papers in this publication cross over between the sub-themes identified here. Riley Endean is are working to provide a heightened student experience for chemistry majors—a goal that Debbie Andrews would share. Jason Charlie's reflections tie in with the indigenous issues explored by Nicole Vance and Jennifer Friend. And the quest for justice--in both peace and war--pervades many of these papers. Thus, though richly varied, the submissions in these proceedings offer common threads of reflection that remind us of our interconnectedness with each other and with our world. Congratulations are due to the researchers whose work is presented here as part of a rapidly growing tradition of undergraduate research excellence at Thompson Rivers University.

Determination of Triclosan in Personal Care Products and Swimming Pool Samples by Liquid Chromatography-Mass Spectrometry

Devin Chattu

Chemistry
Supervisor: Kingsley Donkor

1. Abstract

Antibacterial agents are extremely common in everyday personal care products, such as toothpastes, facial cleansers, hand soaps, body washes, cosmetics, and numerous other products. Due to their widespread use, the active antibacterial agents in these products have been detected in public water samples, such as from pools and rivers. One antibacterial agent under scrutiny at this time is triclosan. Although its effects on human health are controversial and largely unknown, it has been reported to have an effect on the endocrine system. It should also be noted that industries are now avoiding the use of triclosan since very minute quantities can pose a severe risk to marine life in aquatic ecosystems. The purpose of this research was to develop a sensitive, rapid liquid chromatography-mass spectrometry (LC/MS) method to detect triclosan in personal care products and public water samples. The experimental conditions, such as column temperature, solvents, flow rate, analyte extraction methods, and experimental procedure, were all optimized to find the best experimental conditions for detecting triclosan in the samples. The ability to detect triclosan in personal care products, as well as in pool and river water samples, will hopefully encourage consumers to reduce or avoid the use of triclosan containing products. Using the optimized method developed, the average concentration of triclosan in the personal care product samples ranged from 10 ppm to 4741 ppm. The average concentrations in the pool water and river water samples were 49 ppb and 72 ppb, respectively.

2. Acknowledgements

I would like to thank my supervisor, Dr. Kingsley Donkor, for giving me the opportunity to conduct research under his guidance, as well as for proposing research that is in an area of my personal interest. I would also like to thank him for all of his support, patience, and ideas. I

would like to thank the Department of Chemistry for their resources and for allowing me to present at the TRU Undergraduate Research Conference. A thank you to Mr. Dave Pouw for maintaining the LC/MS. And lastly, I'd like to thank Amna Farooq and the Kamloops Tournament Capital Center for providing pool and river water samples.

3. Introduction

3.1 *Triclosan*

Triclosan, also known as 5-chloro-2-(2,4-dichlorophenoxy)phenol, is a synthetic compound that has been used for decades. As an active antibacterial agent and preservative, it has been incorporated into a huge number of widely used household and personal care products.[1] These products include footwear, carpets, plastic toys, kitchen wear, toothpastes, deodorants, creams, lotions, bath gels, shampoos, cosmetics, face cleansers, hand soaps, dish soaps, and even wound sprays. With such widespread use, it's no wonder that there is concern about triclosan's long-term effects on human health and the environment.

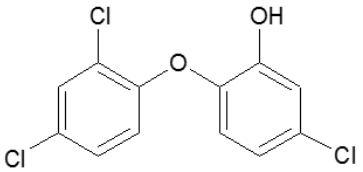


Figure 1. Chemical structure of triclosan

The mechanism of triclosan's antibacterial action involves the selective binding of triclosan to the active site of the enzyme enoyl-acyl carrier protein reductase (ENR).[2] This enzyme is responsible for fatty acid synthesis within bacterial cells. These fatty acids are required for cell membrane synthesis and without the ability to synthesize new cell membranes, cells cannot proliferate. The complex that actually disables the enzymes is a stable ENR-NAD+-Triclosan complex at the active site (NAD+ is nicotinamide adenine dinucleotide). This enzyme is not present in human cells so triclosan is generally regarded as safe. However, recent studies have shown that high concentrations (50 – 100 μM) may impact human hormone regulation by altering steroidogenesis.[3] Steroid based hormones include estradiol and progesterone, which are secreted by the placenta during pregnancy. The effect of triclosan appears to be to increase the secretion of these two hormones. Other adverse health effects are largely unknown at this time. Triclosan does not appear to bioaccumulate in humans, as it is quickly metabolized and excreted. This property allows the assumption that triclosan is safe for large scale use.

Although triclosan is so far known to be benign with respect to its effects on human health, the main concern lies in its huge potential to be an environmental and ecological hazard. Over 95% of triclosan use is in consumer products that are disposed of in residential drains.[4] Most wastewater treatment plants are capable of removing 72 – 94% of triclosan.[5] A considerable amount is still left remaining, and that unremoved triclosan makes its way into lakes, rivers, soils, sediments, and swimming pools. Since only one molecule is needed to permanently inhibit an ENR enzyme, triclosan is effective at extremely low concentrations. The minimum inhibitory concentration as an active bactericide in store products is 500 ppb, but concentrations lower than that can still pose a severe risk to marine life in aquatic environments.[6] Triclosan is also very stable for long periods of time. Its presence and long term exposure to bacteria in the environment can promote environmental antibacterial resistance, which is an issue of great concern.[1] Lastly, triclosan may become a more toxic chlorinated dioxin upon exposure to UV light, which is generously provided by the sun in the environment, further increasing its hazardous potential.[1,5]

3.2 *Liquid Chromatography – Mass Spectrometry*

Liquid chromatography-mass spectrometry (LC/MS) is the coupling of two separate instruments for the separation, quantification, and detection of analytes. Liquid chromatography acts to separate all of the molecular components of a sample based on their polarity. This technique involves the use of a liquid mobile phase and a stationary phase. The mobile phase and stationary phase are either polar or non-polar, with each of the phases being of opposite polarity to each other. The length and width of the column, as well as the packing, influence the properties of the column. In reversed phase-liquid chromatography, the liquid mobile phase consists of a polar solvent, and the column consists of a non-polar packing. Non-polar species that are carried through the column will interact with the non-polar packing of the column to a greater extent than polar species, which will pass through the column uninterrupted. The greater the interaction with the column, the longer the species will be retained, resulting in a longer elution time. The component separation characteristic of liquid chromatography is the result of this varying elution time for each species. The separated components are then transferred to a detector, such as a mass spectrometer.[7,8]

A mass spectrometer operates by performing a number of functions. Molecules that enter the mass spectrometer are first vaporized, then ionized, and then sorted into their mass-to-charge ratio (m/z) before being detected. There are numerous ionization techniques, such as electrospray ionization (ESI). The liquid eluent from an LC/MS is ionized and discharged in a fine spray. The droplets evaporate off solvent, allowing the ionized analyte ions to condense, thereby concentrating the charge within an aerosol droplet. Eventually, a critical point is reached, resulting in a “coulombic explosion” of ions. These ions are accelerated towards a mass analyzer.

The mass analyzer used in this work is a quadrupole time-of-flight (Q-TOF) mass analyzer. The Q-TOF couples the use of an oscillating electric field, and varying flight times of projected ions, to separate the ions (and fragments) based on their m/z ratios. An electron multiplier detector then detects these separated ions and plots them on a mass spectrum, showing relative abundance against m/z ratio.[7,8]

The purpose of this research was to develop a sensitive and rapid method to detect and quantify triclosan in personal care products, as well as in river and swimming pool waters, using reversed phase-liquid chromatography-mass spectrometry. The fact that triclosan is present and can be detected, in these products and water samples will, it is hoped, encourage consumers to consider reducing, or avoiding the use of triclosan-containing products.[7,8]

4. Experimental

4.1 *Instrument and Optimized Instrumental Parameters*

The instrument used in this research was an Agilent 1200 Series High Performance Liquid Chromatography Instrument coupled to an Agilent 6530 Accurate-Mass Quadrupole-Time of Flight (Q-TOF) mass spectrometer with electrospray ionization (Figure 2). The instrumental parameters are outlined in the table below (Table 1).

Table 1: Optimized LC/MS parameters

Injection volume	5 µL
Flow rate	0.4 mL/min
Solvent composition	A: 40 % Water (0.1 % acetic acid) B: 60 % Acetonitrile (0.1 % acetic acid)
Run time	30 min
Column type	C-18
Column temperature	40 °C
Gas temperature	300 °C
Drying gas flow	8.0 L/min
Nebulizer	8 psig
Sheath gas temp	350 °C
Sheath gas flow	10 L/min
Vcap	3000 V
Ion polarity	Negative

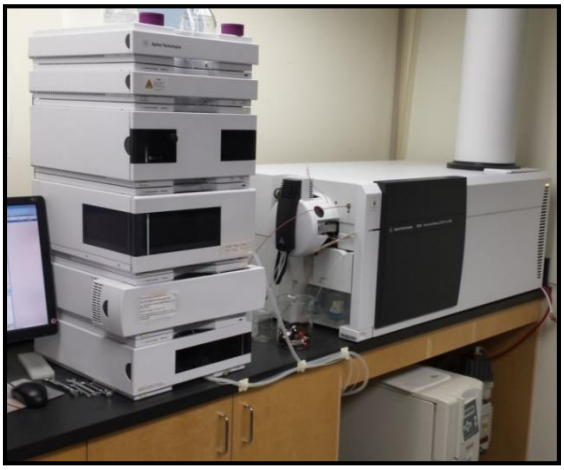


Figure 2. Agilent LC/MS Instrument

4.2 *Materials and Reagents*

Triclosan, bisphenol A (BPA), and sodium hydroxide, were purchased from Sigma-Aldrich (Oakville, ON, Canada). Methanol, acetonitrile, and acetic acid, were purchased from Fisher Scientific (Fair Lawn, NJ, USA). Any water used in standard or sample preparation was deionized 18 mΩ water. All reagents were of analytical grade.

The samples analyzed were Dial® coconut water hand soap, Dial® spring water hand soap, Dial® fresh pear hand soap, Dial® body wash, Solarcaine® first aid spray, Colgate Total® gel toothpaste, Colgate Total® paste toothpaste, Trisan® facial skin cleanser, Life® orange citrus dish soap, Kamloops Tournament Capital Center swimming pool water, and Kamloops Riverside river water. All the manufactured products were purchased from Shoppers Drug Mart® (Kamloops, BC, Canada).

4.3 *Preparation of Standard Solutions and Solvents*

A 1000 ppm triclosan stock solution was prepared by weighing out 10 mg and dissolving it in methanol to a volume of 10 mL. This 1000 ppm solution was diluted to 10 ppm in methanol. The triclosan standards were prepared in 1.5 mL LC/MS vials to concentrations of 50 ppb, 100 ppb, 200 ppb, 400 ppb, 600 ppb, 800 ppb, and 1000 ppb. BPA was used as an internal standard, and was added to these standards to a concentration of 600 ppb. The standards were run in duplicate on the LC/MS to produce a standard curve.

Solvents were prepared by adding 0.250 mL acetic acid to two 250-mL volumetric flasks and diluting to the mark with 18 mΩ water in one flask, and diluting to the mark with acetonitrile in the other flask. Both solvents contained 0.1 % acetic acid by volume.

4.4 *Preparation of Samples*

Approximately 0.15 g of each toothpaste, body wash, facial skin cleanser, dish soap, and coconut water hand soap, were weighed out in Erlenmeyer flasks. A 0.01 M NaOH solution was prepared by dissolving 0.1 g NaOH in 18 mΩ water to a volume of 250 mL. A 10 mL aliquot was pipetted into each of the sample contained in Erlenmeyer flasks. The samples were then sonicated for 10 min in an ultrasonic water bath. The samples were transferred to centrifuge tubes where they were subsequently centrifuged at 3000 rpm for 15 min.[9] The supernatants were collected and filtered using 3 mL 0.45 µm Luer-lock syringes. The samples were pipetted into 1.5 mL LC/MS vials. Then, BPA internal standard was added to each sample vial to a concentration of 600 ppb.

Less viscous consumer products, such as the first aid spray and three hand soaps, were simply diluted with methanol. The first aid spray was diluted 1:5, whereas the hand soaps were diluted 1:10. After dilution, the samples were filtered into 1.5 mL LC/MS vials using 3 mL 0.45 µm Luer-lock syringes. BPA internal standard was added to each sample vial to a concentration of 600 ppb.

The water samples were filtered with 3 mL 0.45 µm Luer-lock syringes, and had BPA added to a concentration of 600 ppb within 1.5 mL LC/MS vials.

All samples were then run on the LC/MS with the instrument parameters set to the parameters listed in Table 1.

5. Results and Discussion

5.1 *Analysis of Standards*

Upon running the triclosan standards through the LC/MS, the produced chromatograms were evaluated. An extracted ion chromatogram (EIC) was used to identify the peaks belonging to triclosan and BPA. For triclosan, an EIC mass range (m/z) of 288.00000 to 290.00000 was used. For BPA, an EIC mass range (m/z) of 227.00000 to 229.00000 was used. All of the EICs showed large definitive peaks within the specified mass ranges. Upon analyzing these peaks for mass spectrum data, all of the standards' mass spectra contained a very prominent peak at the m/z of 287.95, which is only 0.60 less than triclosan's molecular weight of 288.54 g/mol. In other studies, the observed mass peak for triclosan was an identical 287.95.[1] This value is

expected as the MS was operating in negative mode, so a value of (M-1) is expected. All of the standards' mass spectra also contained a very prominent peak at the m/z of 227.11 as well, which is about 1 mass unit less than BPA's molecular weight of 228.29 g/mol.[10] Again, since the MS was operating in negative mode, a value of (M-1) is expected. The EICs and mass spectra for both triclosan (Figure 3 and Figure 4) and BPA (Figure 5 and Figure 6) are shown below.

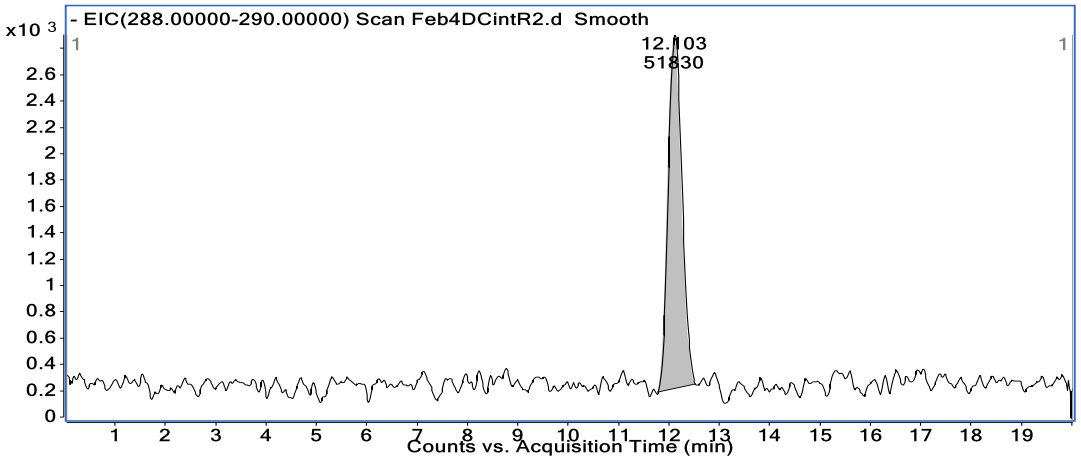


Figure 3. Triclosan EIC of the 1000 ppb standard.

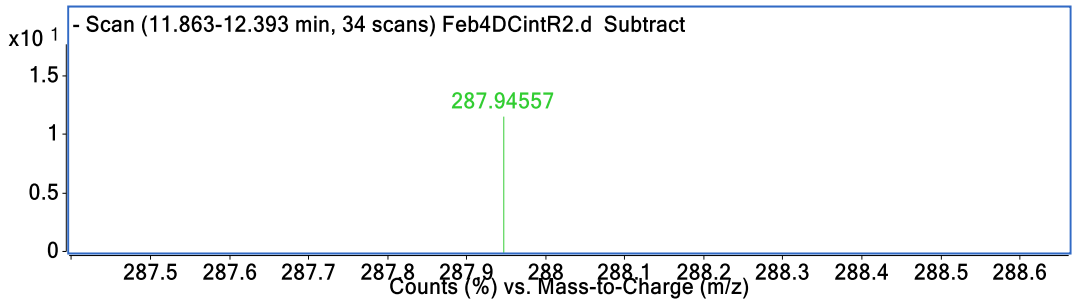


Figure 4. Triclosan mass spectrum of the 1000 ppb standard

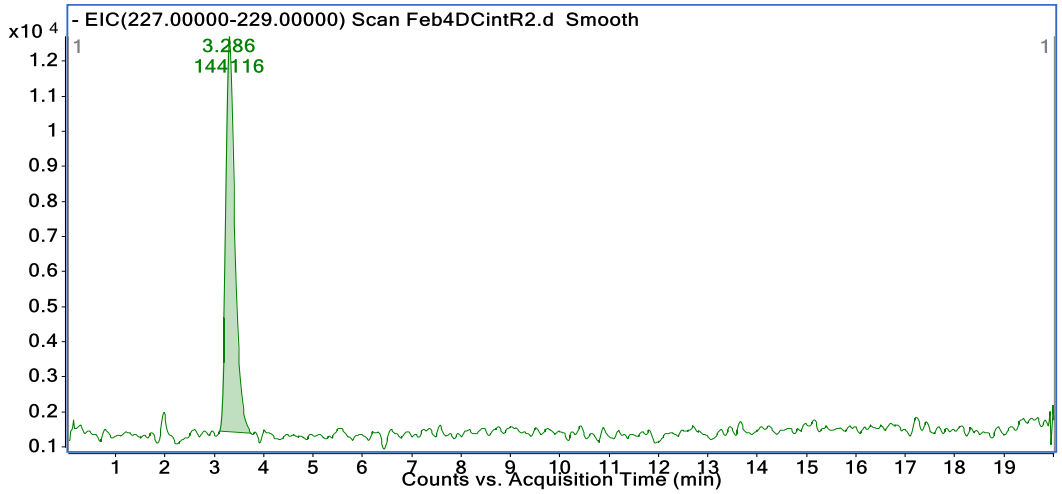


Figure 5. EIC of 600 ppb BPA in the 1000 ppb standard

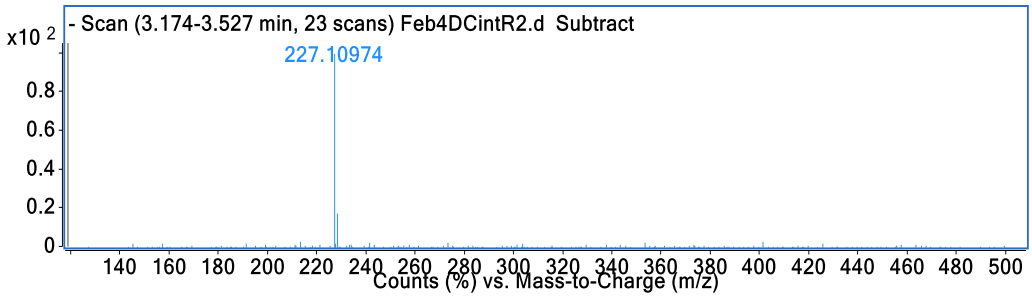


Figure 6. Mass spectrum of 600 ppb BPA in 1000 ppb triclosan standard

In order to determine the concentration of triclosan in the consumer products and water samples, a standard curve had to be generated from the standards. Using the instrument's Mass Hunter software, the peak areas of the triclosan and BPA peaks within their respective EICs were determined. The internal standard approach was used so that a triclosan/BPA peak area ratio was plotted against triclosan standard concentration to generate the standard curve (Figure 7). A coefficient of linearity (R^2) value of 0.96 was obtained. Although this value was fairly decent, a better value could have been achieved if lower concentrations of the internal standard had not been used. This is because baseline signal noise was beginning to become an issue at the 50 ppb level, which may have contributed to a less than desirable R^2 value.

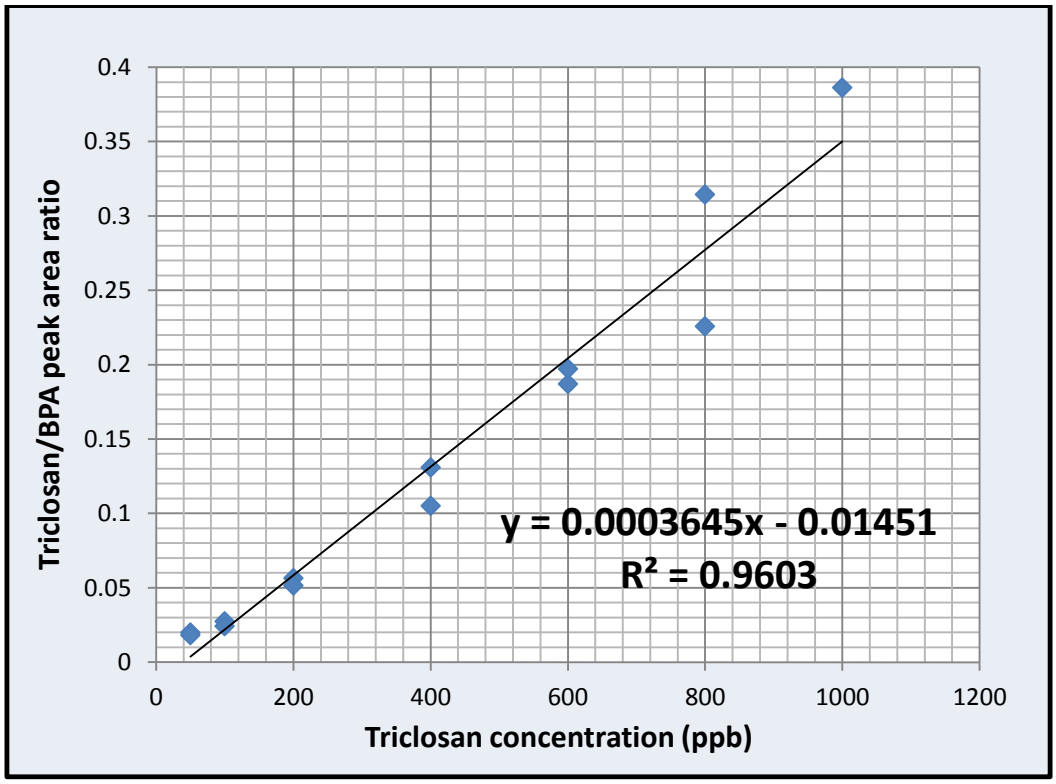


Figure 7. Triclosan with a BPA internal standard calibration curve

5.2 *Analysis of Samples*

The run time, along with the rest of the experimental parameters, was kept the same throughout the entire experiment due to the varying elution time of triclosan in the sample runs. Every sample was run in duplicate, just like the standards. EICs for each sample were analyzed in the same mass ranges as the standards to detect triclosan (m/z range of 288.00000 – 290.00000) and BPA (227.00000 – 229.00000). Prominent peaks for both triclosan and BPA were found in almost every sample run. The Solarcaine® First Aid spray EICs and mass spectra are shown below (Figures 8, 9, 10, and 11). One of the two toothpaste runs did not show a triclosan peak. A possible reason for this could be due to temporary column clogging. A triclosan peak was also not detected in one of two Riverside river water samples. This could likely be due to extremely low triclosan levels, rendering the triclosan peak indistinguishable from the baseline signal noise peaks.

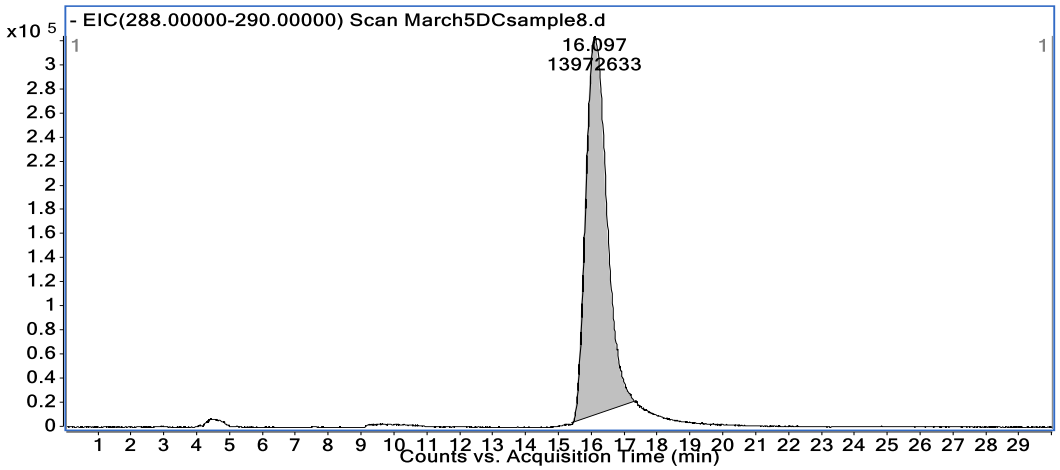


Figure 8. EIC of triclosan in a Solarcaine® sample

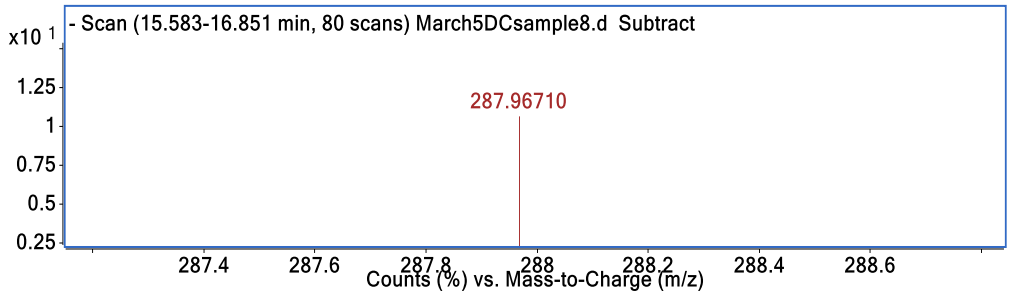


Figure 9. Mass spectrum of triclosan in a Solarcaine® sample

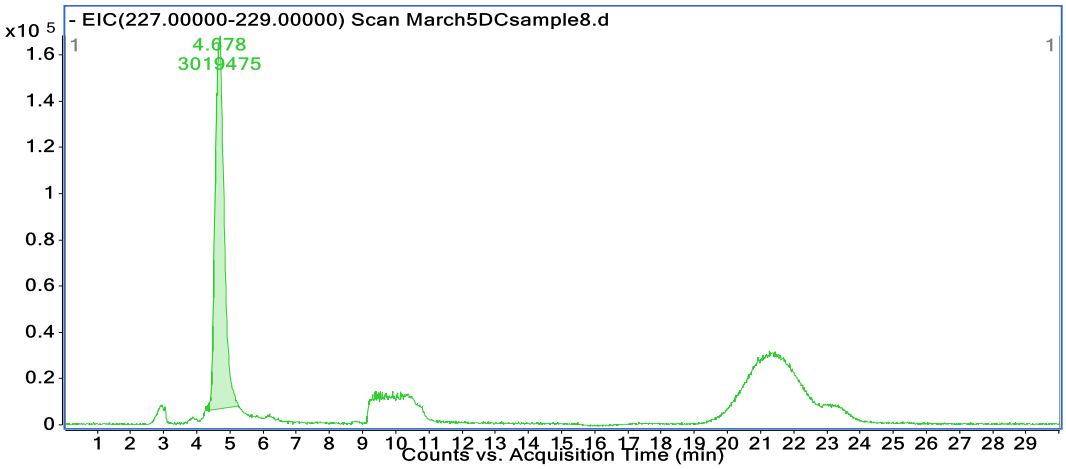


Figure 10. EIC of 600 ppb BPA in a Solarcaine® sample

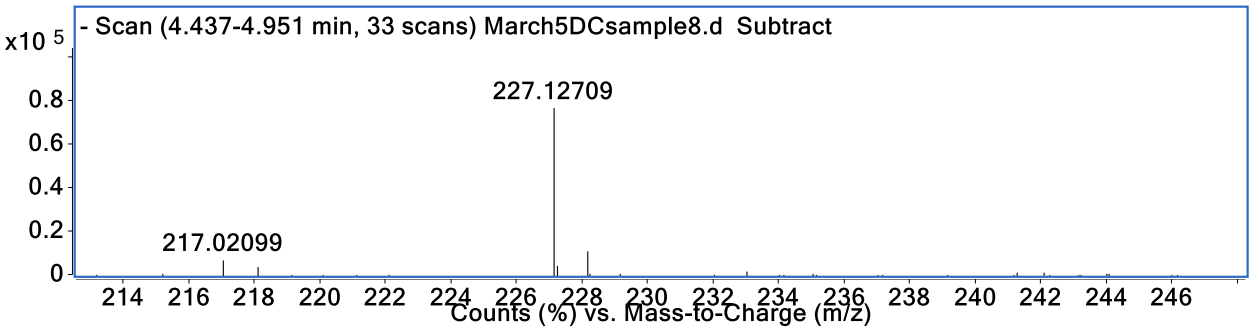


Figure 11. Mass spectrum of 600 ppb BPA in a Solarcaine® sample

Mass Hunter software was again used to determine the EIC peak areas of triclosan and BPA in each sample. The triclosan/BPA peak area ratio and the equation of the standard curve were used to determine the triclosan concentration. Working backwards through the dilution calculations, the original sample triclosan concentrations were determined. The table below shows the average of obtained original sample concentrations.

Table 2: Original triclosan sample concentrations

Sample	Concentration
Dial® coconut water hand soap	4741 ppm
Dial® spring water hand soap	41 ppm
Dial® fresh pear hand soap	92 ppm
Solarcaine®	68 ppm
Colgate Total® gel toothpaste	609 ppm
Colgate Total® paste toothpaste	728 ppm
Dial® coconut water hand soap extract	3303 ppm
Trisan® extract	2833 ppm
Dial® body wash extract	3037 ppm
Life® orange citrus dish soap extract	10 ppm
TCC swimming pool water	49 ppb
Riverside river water	72 ppb

One of the original sample concentrations obtained for the coconut water hand soap was discarded as the value was vastly below that obtained for a second sample. The value that was discarded was 12 ppm. This is significantly lower than the 4741 ppm value obtained by a duplicate sample run. The same coconut water hand soap was used in the extraction method as well, and the average original concentration obtained using that method was 3303 ppm. This is much closer to the 4741 ppm value than it is to the 12 ppm value. To further verify that the 12 ppm value was incorrect, it would be necessary to analyze the coconut water hand soap using another analytical technique, such as capillary electrophoresis, and comparing the results.

A comparison to the manufacturers' claim was not possible for the majority of the samples as the triclosan content was not listed. In fact, the only consumer products that did list the triclosan content were the toothpastes. Both Colgate Total® gel and paste toothpastes had a listed triclosan content of 0.3 % w/w (3000 ppm). With obtained values of 609 ppm for the gel, and 728 ppm for the paste, this would equate to a percent recovery of 20.3 % and 24.3 %, respectively. These low recovery yields indicate that a better extraction method needs to be implemented. Perhaps the use of a solid-phase extraction cartridge could help increase the extraction efficiency and triclosan yield.

Analyzing the pool and river water samples, ppb level values (49 – 72 ppb) were found. Although these levels don't appear to be high enough to raise immediate concern, it is important to remember that very minute quantities are needed to be an active bactericide. The fact that triclosan is detectable in these public water samples is enough to raise concern that widespread triclosan use needs to be restricted.

6. Conclusion

A sensitive and rapid method was successfully developed to separate, detect, and quantify triclosan in personal consumer care products and public swimming pool water and river water samples, although the extraction method could likely be improved. Triclosan was successfully detected in all samples. The content was determined to range from 10 ppm to 4740 ppm for consumer products and 49 ppb to 72 ppb for the water samples. The detection of triclosan in public water samples indicates that its industrial scale use in everyday products needs to be reduced, restricted, or avoided. This also signals a need for better wastewater treatment to successfully remove or destroy triclosan before it is released back into the environment.

7. Future Work

There are several things that could be done in future work. Implementing solid-phase extraction could very likely increase the triclosan sample extraction yields dramatically. Running more replicates for each sample would also increase the precision of the obtained data. Improving solvent composition may also help by allowing for better detection of triclosan at lower ppb concentrations. Also, analyzing these same samples using a different analytical technique, such as capillary electrophoresis, and comparing the results, could be a possible future project.

8. Literature Cited

1) Gonzales-Marino, I., Quintana, J. B., Rodriguez, I., Cela, R. *Rapid Commun. Mass Spectrom.*, **2009**, 23, 1756 – 1766.

2) Hua, W., Bennett, E. R., Letcher, R. J. *Environment International*, **2005**, 31, 621 – 630.

3) Honkisz, E., Zieba-Przybylska, D., Wojtowicz, A. K. *Reproductive Toxicology*, **2012**, 34, 385-392.

4) Glaser, A. Beyond Pesticides. The Ubiquitous Triclosan. *A common antibacterial agent exposed*, **2004**, 24, 12 – 17.

5) Lee, D. G., Cho, K., Chu, K. *Chemosphere*, **2015**, 125, 9 – 15.

6) Assadian, O., Wehse, K., Hubner, N., Koburger, T., Bagel, S., Jethon, F., Kramer, A. *GMS Krankenhhyg Interdiszip*, **2011**, 6, 1-7.

7) Donkor, K. CHEM 3100, *Instrumental Analysis Notes*, **2014**. Thompson Rivers University, Kamloops, B.C., Canada.

8) Cinel, B. CHEM 3230, *Organic Spectroscopy Notes*, **2015**. Thompson Rivers University, Kamloops, B.C., Canada.

9) Lu, H., Ma, H., Tao, G. *Spectrochimica Acta Part A*, **2009**, 73, 854 – 857.

10) Bisphenol A MSDS, Sigma-Aldrich. (*Accessed April 20, 2015*). http://www.sigmaaldrich.com/catalog/search?term=bisphenol+A+MSDS&interface=All&N=0&mode=partialmax&lang=en&region=CA&focus=product

Development of a Student Lab Experiment: ^{1}H NMR Characterization and Synthesis of Substituted 2,2'-Bipyridines

Riley T. Endean

Chemistry

Supervisors: Sharon E. Brewer and Bruno Cinel

Abstract:

This paper describes an undergraduate research project focused on the creation of a laboratory experiment that crosses the fields of green, biomimetic, inorganic, organic, and organometallic chemistry. Research involved investigation of the synthesis and NMR characterization of a series of Water oxidation catalysts for providing a rich learning experience for students. A goal of this project was to consider the implementation of a greener student laboratory where learning outcomes across multiple years of undergraduate laboratories could be proposed. The experimental progress and results to date will be presented.

INTRODUCTION

Greener sources of energy production are in high demand due to negative global impacts from producing energy through the combustion of fossil fuels. The production of hydrogen-fuel through water splitting is one environmentally friendly energy alternative. In nature, an inorganic oxygen evolution catalyst (OEC), present within photosystem II, can split water into hydrogen and oxygen molecules. Water oxidation catalysts (WOCs) are of great interest due to their ability to mimic this naturally occurring process. The synthesis of ligands is an essential process that occurs during the development of drugs, polymers, and catalysts such as WOCs, that contain a central metal atom. Bipyridines comprise a family of ligands with the formula $(C_5H_4N)_2$. Specifically, the 2,2'-bipyridines are popular ligands in coordination chemistry.[1] For example,

the ligand synthesis of 6,6'-dimethoxy-2,2'-bipyridine was an essential process for the development of a copper water oxidation catalyst.[2] The synthesis of bipyridines involves the coupling of two pyridine rings. Recently, a synthetic approach using nickel-catalyzed reductive couplings of 2-halopyridines without the use of an external ligand for symmetrical 2,2'-bipyridines was reported (Figure 1).[1]

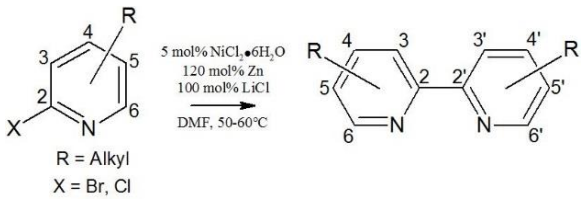
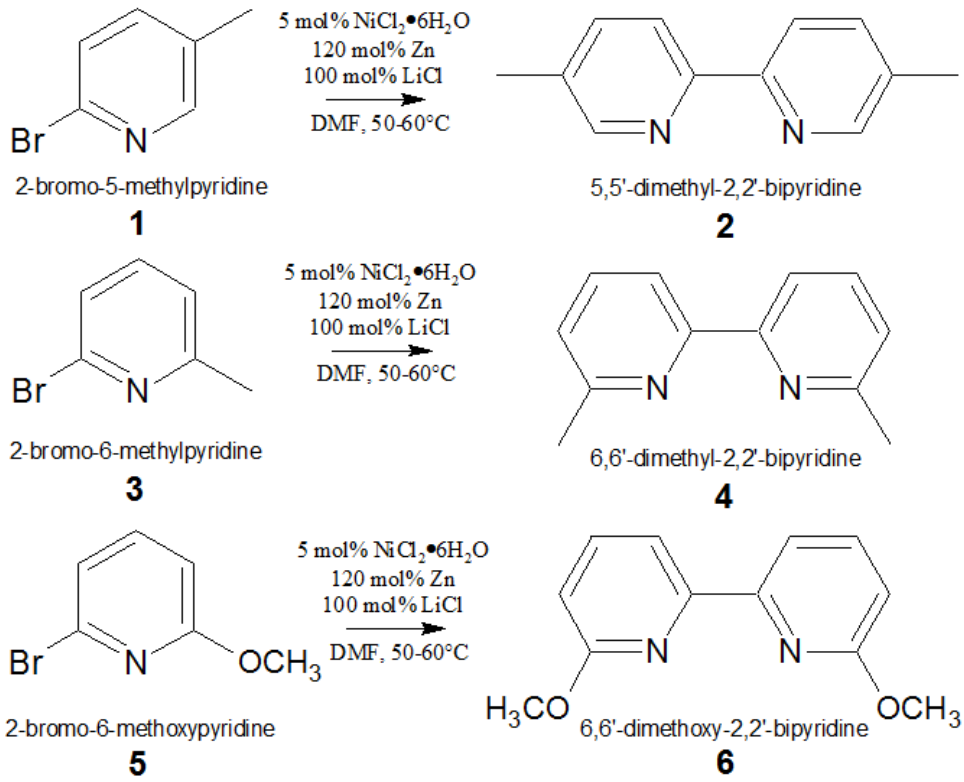


Figure 1. Ni-Catalyzed Reductive Homocoupling of 2-Halopyridines1

It is important in synthetic studies to be able to support that the correct ligand has been synthesized. One major technique for chemical identification is NMR spectroscopy. NMR spectroscopy is an extremely powerful analytical technique used to determine the structure of a compound by examining the unique environments of each nuclei. Many different nuclei can be observed in an NMR experiment. The majority of studies utilize ^{1}H nuclei, as it is present in most chemical compounds.

A practical experiment is presented here and in Scheme 1 for the synthesis of symmetrical 2,2'-bipyridines and their characterization by ^{1}H NMR spectroscopy. The experiment can have two or three parts, which can be performed during two or three lab periods, respectively. The symmetrical 2,2'-bipyridines are synthesized during the first lab. The 2,2'-bipyridines can be purified through flash chromatography during an optional second lab period. The final lab period involves hands-on ^{1}H NMR spectroscopy experience.



Scheme 1. Relevant substituted 2-bromopyridines reactions and subsequent 2,2'-bipyridine products from this study

EXPERIMENTAL PLAN

The goal of this project was to create a multi-week experiment for students to synthesize a symmetrical 2,2'-bipyridine via reductive cross-coupling and characterize their product by ^{1}H NMR spectroscopy. This project was part of an undergraduate semester long directed research endeavour, during which seven syntheses, three purifications, and nine ^{1}H NMR characterizations were performed.

MATERIALS

Reagents

The 2-bromopyridines selected for experimental development included 2-bromo-

5-methylpyridine (**1**), 2-bromo-6-methylpyridine (**3**), and 2-bromo-6-methoxypyridine (**5**). The reagents necessary for experimental development included nickel chloride hexahydrate ($NiCl_2 \bullet 6H_2O$), N,N-dimethylformamide (DMF), anhydrous lithium chloride (LiCl), zinc dust, iodine, acetic acid, hydrochloric acid (HCl), and ammonia. All reagents were of reagent grade.

Products

To help confirm product formation, respective 2,2'-bipyridines were purchased. These included 5,5'-dimethyl-2,2'-bipyridine (**2**) and 6,6'-dimethyl-2,2'-bipyridine (**4**). All products were purchased from Sigma-Aldrich and were of reagent grade.

Other Chemicals

Dichloromethane (CH_2Cl_2) and anhydrous sodium carbonate (Na_2CO_3) were required for liquid-liquid extraction and drying steps in the experimental procedure. To monitor formation of product, by thin layer chromatography (TLC), hexane and ethyl acetate were used as the developing solvent. For the flash chromatography purification, clean sand and silica gel 60 were required in addition to the hexane and ethyl acetate mobile phase.

Required Equipment

This experiment required access to a standard organic chemistry kit, a UV lamp, a rotary evaporator, flash chromatography glass wear, and a ^1H NMR spectrometer.

EXPERIMENTAL OVERVIEW

Synthesis of Symmetrical 2,2'-Bipyridines

A general procedure was modified and utilized.[1] A 25 mL round-bottom flask (RBF) was charged with $NiCl_2 \bullet 6H_2O$ (0.01g) and DMF (2 mL), and a stir bar. The RBF, with a condenser attached, was stirred and heated to 40 °C on a hot water bath (Figure 2). At 40 °C, the 2-halopyridine (1 mmol), anhydrous LiCl (0.04 g) and zinc dust (0.08 g) were added. When the temperature rose to 50 °C, a grain of iodine and a drop of glacial acetic acid was added. During this addition, a colour change occurred. The reaction mixture went from blue to green to brown to black. The reaction mixture was stirred at 55 to 60 °C for a 2 h period. During this period,

product formation was monitored by TLC using a 5:1 hexane:ethyl acetate solution. The reaction mixture was cooled to room temperature and 1 M HCl aqueous solution (1.5 mL) was added. The mixture was then made alkaline with 25% aqueous ammonia. The alkalinity was monitored by red litmus paper. The mixture was then transferred to a 60 mL addition funnel for liquid-liquid extraction. The mixture was extracted with three 15 mL portions of CH_2Cl_2. The organic layers were collected, combined, and dried over anhydrous Na_2CO_3. After drying, the organic layer was filtered into a 100 mL RBF. The organic layer was then concentrated on a rotary evaporator. This procedure was also attempted with the DMF being substituted for acetonitrile.

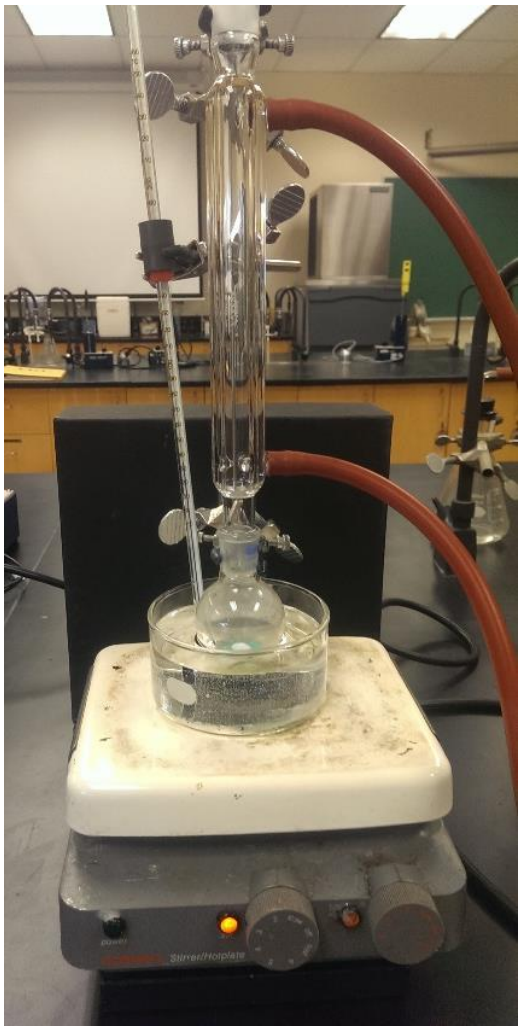


Figure 2. Synthesis apparatus

Purification of Products

Flash chromatography columns were prepared in 60 mL addition funnels (Figure 3). A small piece of cotton wool was added directly above the stopcock of an addition funnel. An approximately 1 cm layer of clean sand was added on top of the cotton wool. In a fume hood, a silica gel slurry was formed with silica (8 g) and a 5:1 hexane:ethyl acetate solution (60 mL). This slurry was stirred until it appeared homogenous and was then added on top of the clean sand. The crude sample was dissolved in a minimum amount of 5:1 hexane:ethyl acetate and added to the top of the silica gel, where it was allowed to soak into the silica. A small layer of sand was then added to the top of the silica gel column. Three elution solutions (60 mL) were then added in the following order: 5:1, 3:1, and 1:1 hexane:ethyl acetate. Fractions were collected in ten 18 mm test tubes. Thin layer chromatography was used to monitor for the presence of product in the fractions. Fractions containing product were combined and the solvent was removed on a rotary evaporator.

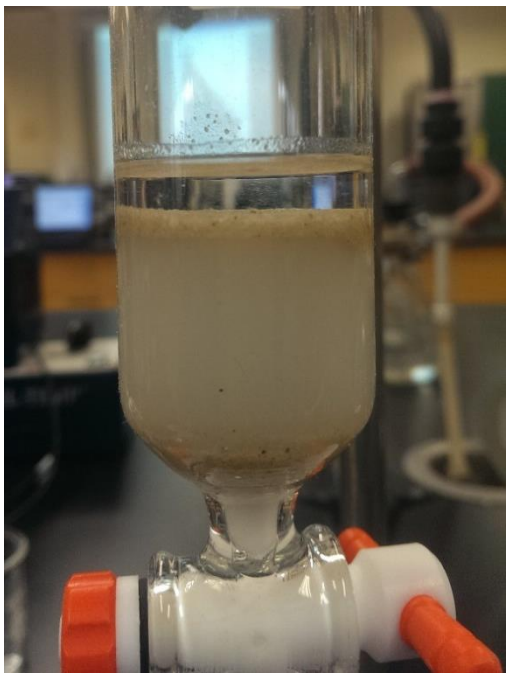


Figure 3. Purification apparatus

^{1}H NMR Measurements

All samples were dissolved in approximately 1 mL of deuterated-chloroform ($CDCl_3$). The dissolved samples were then transferred into NMR tubes. All ^{1}H NMR spectra were

acquired with a Bruker AVANCE III 500 MHz NMR spectrometer. Spectra were recorded at room temperature with 160 scans at a spectral width of 20.6 ppm.

HAZARDS

Proper protective equipment should be worn at all times throughout the experiment. The hazards for each compound used, in this experimental development, are located in the current material safety data sheets (MSDS).

RESULTS

Purchased 5,5'-dimethyl-2,2'-bipyridine

The NMR spectra of the purchased product **2** was acquired (Figure S1; figures S1 to S8 are provided below, in the Supporting Material). ^{1}H NMR (500 MHz, $CDCl_3$) δ 2.41 (6H, s), 7.63 (2H, d), 8.26 (2H, d), 8.51 (2H, s).

Purchased 6,6'-dimethyl-2,2'-bipyridine

The NMR spectra of the purchased product **4** was acquired (Figure S2). ^{1}H NMR (500 MHz, $CDCl_3$) δ 2.67 (6H, s), 7.18 (2H, d), 7.73 (2H, t), 8.22 (2H, d).

Purchased 2-bromo-5-methylpyridine

The NMR spectra of the purchased product **1** was acquired (Figure S3). ^{1}H NMR (500 MHz, $CDCl_3$) δ 2.32 (3H, s), 7.34 (2H, m), 8.23 (1H, s).

Reactions

In all, seven reactions were performed using different reagents and reaction conditions to optimize the syntheses. The conditions of each reaction are listed in **Table 1**.

Table 1. Experimental reactions performed

Reaction (#)	Reactant (#)	Solvents	Purification (Y/N)
1	**1**	***DMF***	**Y**
2	**3**	***DMF***	**N**
3	**5**	***DMF***	**Y**
4	**1**	***DMF***	**N**
5	**1**	***Acetonitrile***	**N**
6	**1**	***Acetonitrile***	**N**
7	**3**	***Acetonitrile***	**Y**

Synthesis of 5,5'-dimethyl-2,2'-bipyridine with DMF and purification (Reaction 1)

The ^{1}H NMR spectrum of the product obtained from the attempted synthesis of **2** from **1** using DMF was acquired (Figure S4). ^{1}H NMR (500 MHz, $CDCl_3$) δ 2.44 (6H, s), 7.69 (2H, d), 8.33 (2H, d), 8.55 (2H, s). This attempt included the flash chromatography purification.

Synthesis of 6,6'-dimethyl-2,2'-bipyridine with DMF and no purification (Reaction 2)

The ^{1}H NMR spectrum of the product obtained from the attempted synthesis of **4** from **3** using DMF was acquired (Figure S5). All peaks observed were due to $CDCl_3$. This attempt did not include the flash chromatography purification.

Synthesis of 6,6'-dimethoxy-2,2'-bipyridine with DMF and purification (Reaction 3)

The ^{1}H NMR spectrum of the product obtained from the attempted synthesis of **6** from **5** using DMF was acquired (Figure S6). ^{1}H NMR (500 MHz, $CDCl_3$) δ 0.12 (6H, s), 1.30 (6H, m). This attempt included the flash chromatography purification.

Synthesis of 5,5'-dimethyl-2,2'-bipyridine with DMF and LiCl wash (Reaction 4)

The attempted synthesis of **2** from **1** using DMF and a LiCl wash during extraction was acquired (Figure S7). ^{1}H NMR (500 MHz, $CDCl_3$) δ 2.40 (6H, br), 7.62 (2H, br), 8.25 (2H, br), 8.51 (2H, br). This attempt did not include the flash chromatography purification.

Syntheses of 5,5'-dimethyl-2,2'-bipyridine with acetonitrile and no purification (Reaction 5 & 6)

The synthesis of **2** from **1** using acetonitrile was attempted twice. The ^{1}H NMR spectra of the products obtained from the attempts were acquired (Figures S8 & S9). ^{1}H NMR (500 MHz,

$CDCl_3$) δ 2.32 (3H, s), 7.39 (2H, m), 8.23 (1H, s). These attempts did not include the flash chromatography purification.

Synthesis of 6,6'-dimethyl-2,2'-bipyridine with acetonitrile and purification (Reaction 7)

The ^{1}H NMR spectrum of the product was not obtained from the attempted synthesis of **4** from **3** using acetonitrile. No product was recovered during the flash chromatography purification.

DISCUSSION

Synthesis of 5,5'-dimethyl-2,2'-bipyridine with DMF and purification (Reaction 1)

The ^{1}H NMR spectrum obtained from the attempted synthesis of **2** supported the presence of the desired product (Figure S4). The chemical shifts, coupling, and integration of the peaks in the ^{1}H NMR spectrum correlated with that of the purchased **2** (Figure S1).

Synthesis of 6,6'-dimethyl-2,2'-bipyridine with DMF and no purification (Reaction 2)

The ^{1}H NMR spectrum obtained from the attempted synthesis of **4** did not support the presence of the desired product (Figure S5). The ^{1}H NMR spectrum appears to have only the expected solvent peak.

Synthesis of 6,6'-dimethoxy-2,2'-bipyridine with DMF and purification

The ^{1}H NMR spectrum obtained from the attempted synthesis of **6** did not support the presence of the desired product (Figure S6). The ^{1}H NMR spectrum has unexpected peaks at 1.30 and 0.12 ppm. The ^{1}H NMR spectrum does not contain the peaks expected, from 7 to 9 ppm, for the aromatic hydrogens.

Synthesis of 5,5'-dimethyl-2,2'-bipyridine with DMF and LiCl wash

The ^{1}H NMR spectrum obtained from the attempted synthesis of **2** supported the presence of the desired product (Figure S7). The chemical shifts and integration of the peaks in the ^{1}H NMR spectrum correlated with that of the purchased **2** (Figure S1). The coupling in the ^{1}H NMR spectrum does not correlate to that of the purchased product and the previously

synthesized **2** (Figure S4). The expected splitting was not observed due to the broadness of the peaks.

Syntheses of 5,5'-dimethyl-2,2'-bipyridine with acetonitrile

The ^{1}H NMR spectra obtained from the attempted syntheses of **2** from **1** using acetonitrile (Figures S8 & S9) suggests that acetonitrile is not a suitable solvent for the reaction. The ^{1}H NMR spectra (Figure S9) supported the presence of the starting compound **1**.

Synthesis of 6,6'-dimethyl-2,2'-bipyridine with acetonitrile and purification

The ^{1}H NMR spectrum of the product obtained from the attempted synthesis of **4** from **3** using acetonitrile was not acquired due to the loss of the potential product in the purification process.

Summary

The syntheses of symmetrical 2,2'-bipyridines using DMF were relatively successful. The underlying issue with the syntheses utilizing DMF is the concentration process. DMF may be a suitable solvent for the reactions, but was found to be incredibly difficult to remove due to its high boiling point of 152.8°C[3]. This difficulty is the major problem with possible adoption in an undergraduate lab. The issue with removal of the DMF solvent resulted in attempting the reactions with another polar aprotic solvent, acetonitrile. Acetonitrile was an optimal choice as its boiling point, 81.6°C[4], was much lower than that of DMF. The lower boiling point of acetonitrile allowed for easier removal during concentration, but its usage did not result in the desired final products. A LiCl wash was used, during a synthesis with DMF, to try and assist with DMF removal, butit did not achieve this goal.

Flash Chromatography Purification

The flash chromatography purification may be a necessary step to remove residual reactant from the product and produce a cleaner NMR spectrum. The flash chromatography purification may not be necessary if the reactions are allowed to occur for a longer period of time.

LAB DEVELOPMENT

Structure of Experiment

The experiment developed here can be performed in one of two versions. The first involves the synthesis of a symmetrical 2,2'-bipyridine, purification by flash chromatography, and characterization by ^{1}H NMR spectroscopy. This version can be performed over three lab periods. The second version of the lab, which involves the synthesis of a symmetrical 2,2'-bipyridine and characterization by ^{1}H NMR spectroscopy, can be performed over two lab periods.

Suitability

This experiment is not yet suitable for incorporation during a semester. A method has to be designed to either remove the DMF efficiently, in less time, or to have the reaction occur in a different solvent. One possible method to attempt is to switch the extraction solvent from CH_2Cl_2 to hexane. Substituting this extraction solvent may be ideal, as DMF is immiscible in hexane. Once a method has been devised to solve the DMF issue, the experiment will be suitable for use over two or three laboratory periods, depending on whether the flash chromatography step is desired.

Learning Outcomes and Assessment

The key learning outcomes of this lab experiment are that students acquire knowledge and experience with ligand synthesis and ^{1}H NMR spectroscopy. Students will be able to acquire, integrate, and manipulate NMR spectra. Students will gain experience in determining compound identity based on interpretation of NMR spectra. Students will also acquire experience in predicting the number of signals, splitting patterns, and integrations from a compound's structure. The learning outcomes will be acquired through an introduction at the beginning of the lab, followed by performance of the experiment. Students will be assessed on the learning outcomes through a formal report. The formal report will examine students' understanding of several important ^{1}H NMR concepts, such as spin-spin coupling, multiplicity, and integration.

Future work

The most important future work that needs to be accomplished is to resolve the DMF issue. This will allow the laboratory experiment to occur in a suitable period of time. Other future work can include complexing the synthesized 2,2-bipyridines to metals to form catalysts and adapting product ^{1}H NMR analysis for remote-operation through the British Columbia – Integrated Laboratory Network.

Conclusions

This laboratory experiment would result in a strong learning experience for students. The synthesis of a ligand and the hands-on ^{1}H NMR experience and knowledge will strengthen students' skills for later undergraduate labs.

References

1. Liao, L.; Kong, X.; Duan X. *J. Org. Chem.* **2014**, *79*, 777-782.

2. Zhang, T.; Wang, C.; Liu, S.; Wang, J.; Lin, W. *J. Am. Chem. Soc.* **2014**, *136*, 273-281.

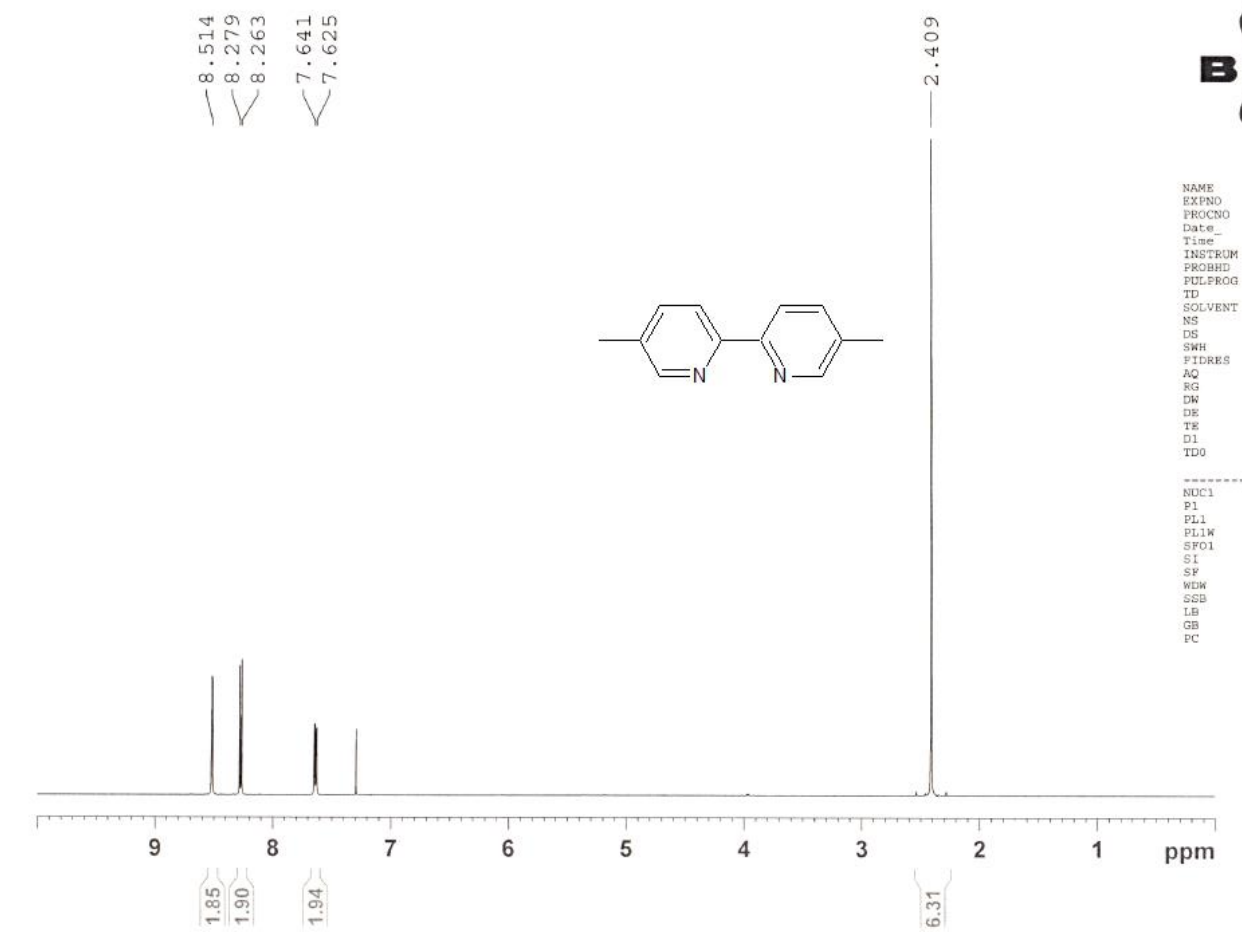
3. CRC Handbook of Chemistry and Physics, 95th Edition, 2014-2015. Section 3: Physical Constants of Organic Compounds, DMF. Retrieved from http://www.hbcpnetbase.com (Accessed Apr-27-2015).

4. CRC Handbook of Chemistry and Physics, 95th Edition, 2014-2015. Section 3: Physical Constants of Organic Compounds, Acetonitrile. Retrieved from http://www.hbcpnetbase.com (Accessed Apr-27-2015).

Supporting Material

The supporting material includes all ^{1}H NMR spectra acquired.

Purchased 5,5'-dimethyl-2,2'-bipyridine



BRUKER

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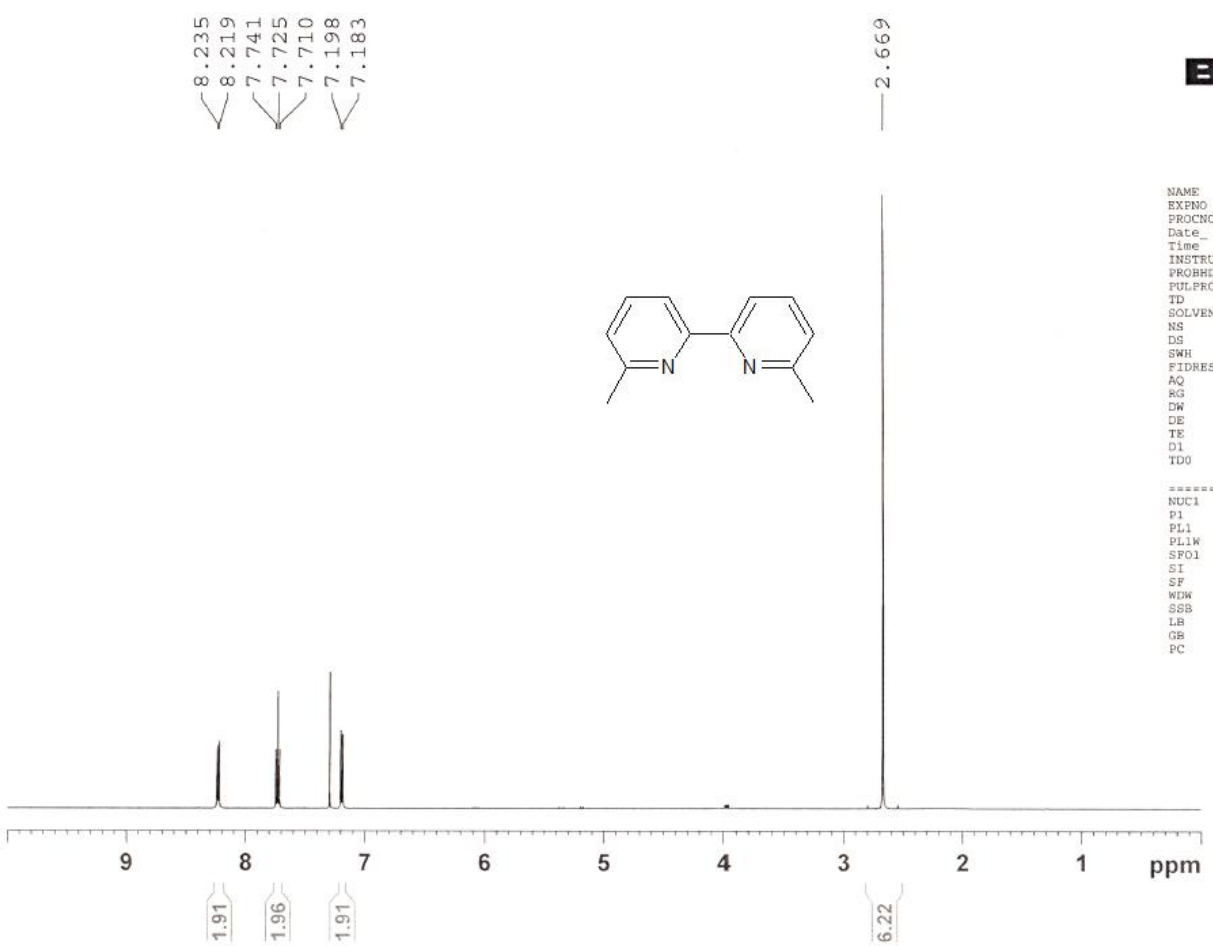
Purchased 6,6'-dimethyl-2,2'-bipyridine

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TE                  298.0 K
D1              1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
NUC1                    1H
P1                   7.74 usec
PL1                  3.20 dB
PL1W            12.62377644 W
SFO1            500.2330691 MHz
SI                    32768
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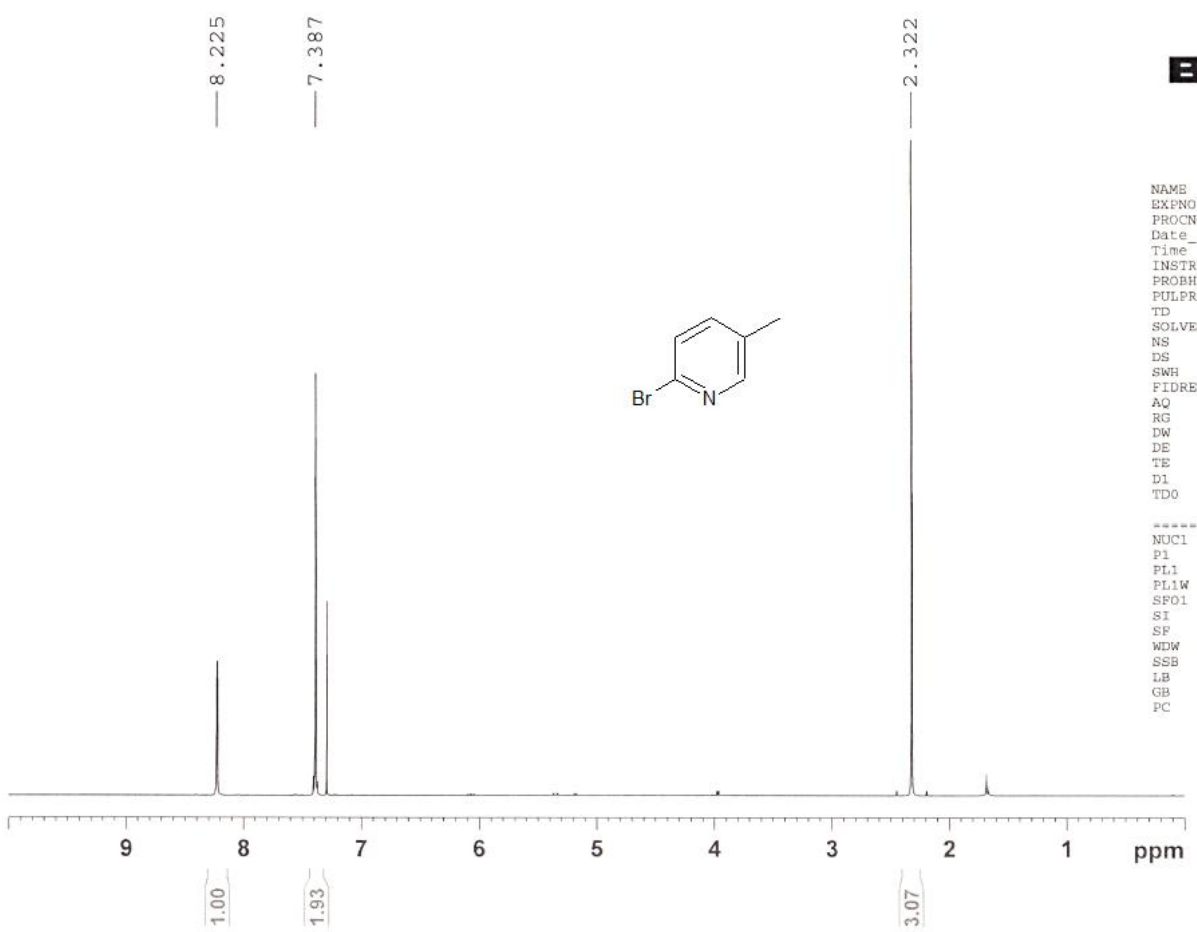
Purchased 2-bromo-5-methylpyridine



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TE	298.0 K
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======== CHANNEL f1 ========	
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SF	500.2300000 MHz
WDW	EM
SSB	0
LB	0.30 Hz
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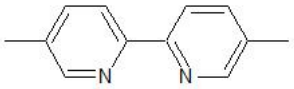
Synthesized 5,5'-dimethyl-2,2'-bipyridine (DMF&FlashC)

8.547
8.350
8.334
7.701
7.685

2.435

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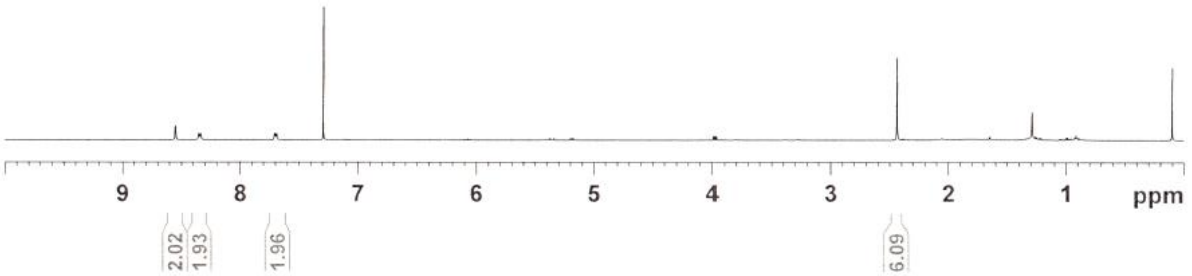

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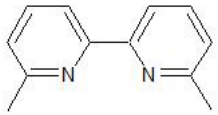

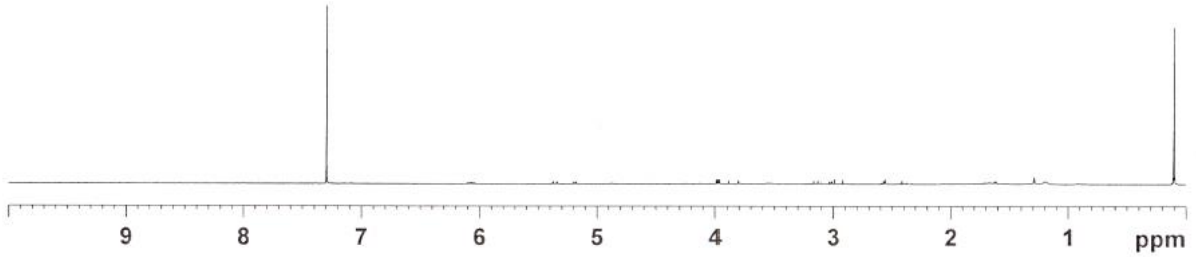

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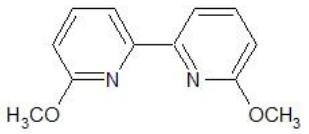

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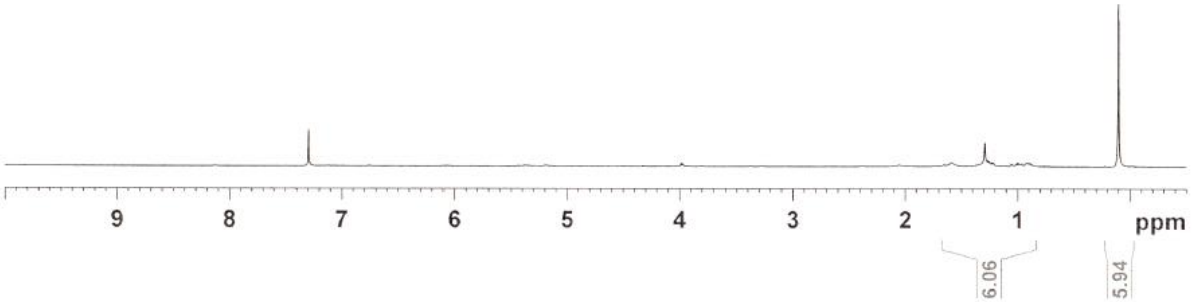
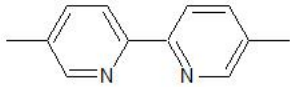
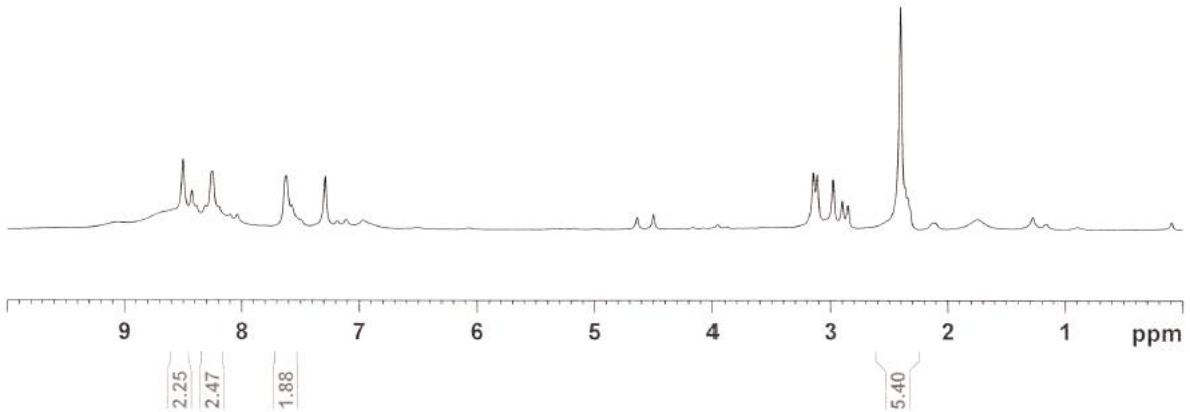


Synthesized 5,5'-dimethyl-2,2'-bipy (NoFlashC)





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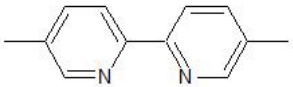

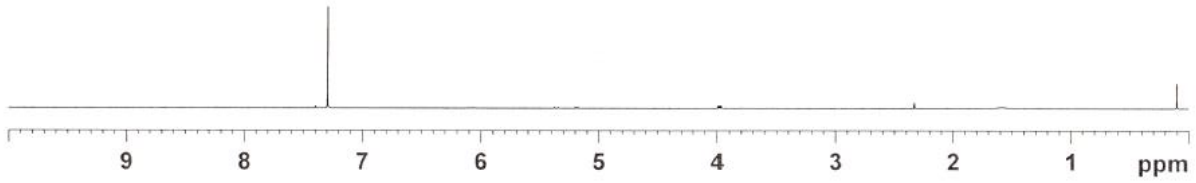

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D1	1.00000000 sec
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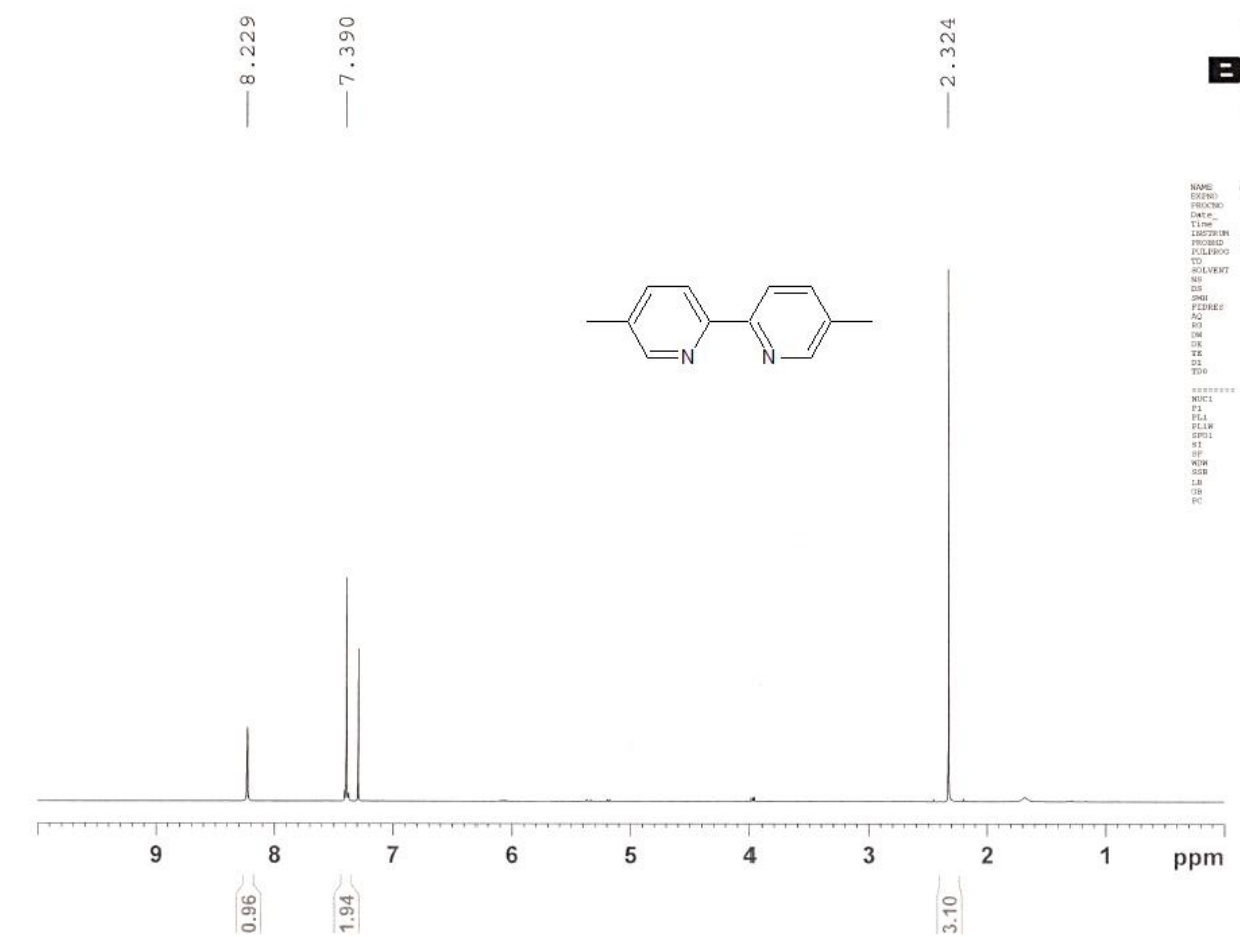


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FIDRES         0.157632 Hz
AQ             3.1719923 sec
RG                   203
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TE                298.0 K
D1             1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
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WDW                   EM
SSB                    0
LB                  0.30 Hz
GB                     0
PC                  1.00
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Analysis of Triglycerides in Cooking Oils Using MALDI-TOF Mass Spectrometry and Principal Component Analysis

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Chemistry

Supervisor: Kingsley Donkor

1. Abstract

Triglycerides are composed of three esterified fatty acids bound to a glycerol backbone, and are the main component of several types of cooking oils. They are biologically important molecules in that they serve as an important source of energy. The analysis of lipids using other forms of mass spectrometry has proved difficult due to the large degree of fragmentation observed in the ionization process, indicating the importance of developing a new method. In this study, the analysis of triglycerides in 9 common cooking oils was conducted using matrix-assisted laser desorption ionization-time of flight (MALDI-TOF) mass spectrometry. Using 2,5-dihydroxybenzoic acid (2,5-DHB) and 9-aminoacridine (9-aa) as a matrix, intact triglycerides were successfully identified in all 9e cooking oils with little fragmentation. Principal component analysis (PCA), a technique used to identify underlying similarities and differences in a data set, was used in conjunction with MALDI-TOF mass spectrometry. The application of PCA to the mass spectral data obtained from the MALDI-TOF mass spectrometer allowed for further comparison of the underlying properties and components of each cooking oil. The results from PCA show noticeable differences in particular oils, and the MALDI method was also able to discriminate between these differences. This MALDI method can potentially be used to identify unknown oil samples or provide quality control in commercial settings.

2. Acknowledgements

I would like to thank my supervisor, Dr. Kingsley Donkor for the opportunity to conduct research under his supervision. I would also like to thank Western Diversification Canada for funding the MALDI-TOF instrument as well as the Chemistry Department of Thompson Rivers University for the provision of reagents.

3. Introduction

3.1 Triglycerides

Triglycerides are biologically important molecules that serve as an important source of energy in animals. They are composed of a glycerol backbone with three esterified fatty acids bound to it. [1] The length of each of the bound fatty acid chains and the degrees of unsaturation vary between triglycerides.

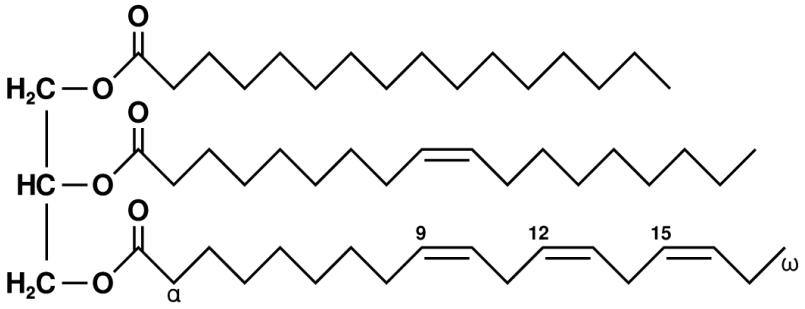

Figure 1: Chemical structure of a general triglyceride

Triglycerides are found in both animal fats and plant oils. Within animal fat, the fatty acid chains are commonly saturated, having no double bonds. Plant triglycerides, however, display a greater degree of unsaturation within their fatty acid chains. Cooking oils are largely made up of a variety of different types of plant triglycerides and have widespread use in commercial settings. With such a large dependence placed on cooking oils, it has become necessary for the development of a method for the fast and reliable analysis of these compounds. Similar to other large biomolecules, however, it is difficult to acquire mass spectral data on triglycerides due to the extensive fragmentation observed during the ionization process. [2]

3.2 MALDI-TOF Mass Spectrometry

Matrix assisted laser desorption/ionization (MALDI) is a soft ionization technique that utilizes a laser to desorb the sample.[3] MALDI is an effective method for the mass spectral analysis of large biomolecules and polymers, which tend to fragment under other forms of mass spectrometry. The sample is first dissolved in a weak acid or a weak base, called a matrix, and pipetted onto a stainless steel plate. The matrix will ionize the sample as well as absorb much of the energy that is introduced by the laser, reducing the amount of fragmentation that occurs. MALDI is commonly coupled with a time-of-flight detector (TOF) that will determine the masses of ions based on the time they take to reach the detector. The desorbed sample is accelerated down the column, where it will reflect off a mirror and strike a detector placed within the column. The detector will then determine the mass of ions based on the time it took for them to reach the detectors.

3.3 Principal Component Analysis

Principal component analysis (PCA) is a chemometric technique used to identify the underlying similarities and differences in a set of data.[4] In a set of correlated data, redundancy is removed via orthogonal transformation. This transformation will yield multiple plots in which the axes are PCs, which are organized in such a way that the first PC will contain the most variation, followed by the second PC, and so on. Additionally, PCA results include a scores plot and a loadings plot. The former plot graphs data based on how similar or different the individuals are to each other, as data with similar properties will be clustered together, while those that are different are farther apart. The loadings plot reveals how each of the variables contribute to a particular PC. Variables with large values on either the x or y axis contribute more to a particular PC than those that have values closer to zero.

4. Methods

4.1 Reagents

Matrices 2,5-dihydroxybenzoic (2,5-DHB) acid and 9-aminoacridine (9-aa) were purchased from Sigma Aldrich. Various solvents used, including hexane, isopropanol, and acetonitrile, were supplied by the TRU Chemistry Department. Eight common cooking oils were purchased and are summarized in Table 1.

Table 1: Cooking oils used and their respective brand names

Oil Sample	Brand Name
Grapeseed	Carapelli
Corn	No Name
Canola	Spectrum Naturals
Olive	Western Family
Sesame	Six Fortune
Peanut	Planters
Vegetable	Crisco
Sunflower	Safflo

4.2 Sample Preparation

Each cooking oil sample was diluted to 0.05% v/v in hexane. Matrices 2,5-DHB and 9-aa were separately dissolved in an isopropanol/acetonitrile (60/40 ratio) solution to a final concentration of 10mg/mL. The sample oils were mixed in a 1:1 ratio with the matrix solutions and 1µL of each sample was spotted onto a stainless steel MALDI plate for MALDI-TOF analysis (Figure 2).

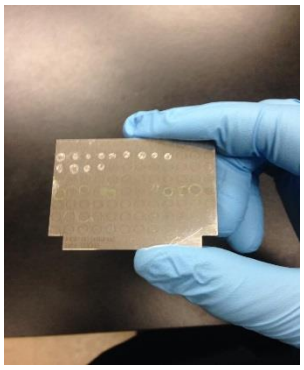

Figure 2: Samples spotted onto stainless steel MALDI plate

4.3 MALDI-TOF Analysis

MALDI-TOF analysis was carried out using a benchtop *Microflex* MALDI-TOF mass spectrometer from Bruker Daltonics (Figure 3). Optimized instrument parameters are summarized in Table 2.

Figure 3: Benchtop *Microflex* MALDI-TOF mass spectrometer from Bruker Daltonics

Table 2: Optimized MALDI-TOF Instrument Parameters

Optimized Parameters	
Laser Type	LTB MNL 100 (106 PD) V 002.61
Laser Wavelength	355 nm
Laser Frequency	60.0 Hz
Initial Laser Power	30%
Shots at Raster Spot	10
Total Number of Shots	300
Linear Detector Voltage	2.50 kV
Ion Source 1	19.00 kV
Ion Source 2	15.68 kV
Lens Voltage	9.44 kV
Reflector Voltage	19.98 kV
Pulsed Ion Extraction	50 ns
Polarity	Positive

The stainless steel MALDI plate was inserted into the MALDI-TOF instrument. Each of the eight oil samples in each matrix was analyzed in triplicate.

4.4 Principal Component Analysis

The mass-to-charge ratio and intensity obtained from the mass spectra from the MALDI-TOF analysis for each oil was then copied into an Excel table. Values that did not correlate with anything were removed until a correlated data set was produced. This Excel table was then

exported to a software program called The Unscrambler 9.1 (provided by TRU), which performed PCA on the two sets of data with the 2,5-DHB matrix and the 9-aa matrix.

5. Results and Discussion

5.1 Mass Spectra

Three mass spectra were obtained for each oil, for a total of 24 spectra for each matrix. The samples were run in triplicate to ensure that there was consistency among the data that was gathered from the MALDI-TOF analysis. The best spectra of the three, those with minimal background noise were then selected for PCA. Spectra obtained from the sunflower oil, canola oil, and grapeseed oil samples in each matrix are shown in Figure 4.

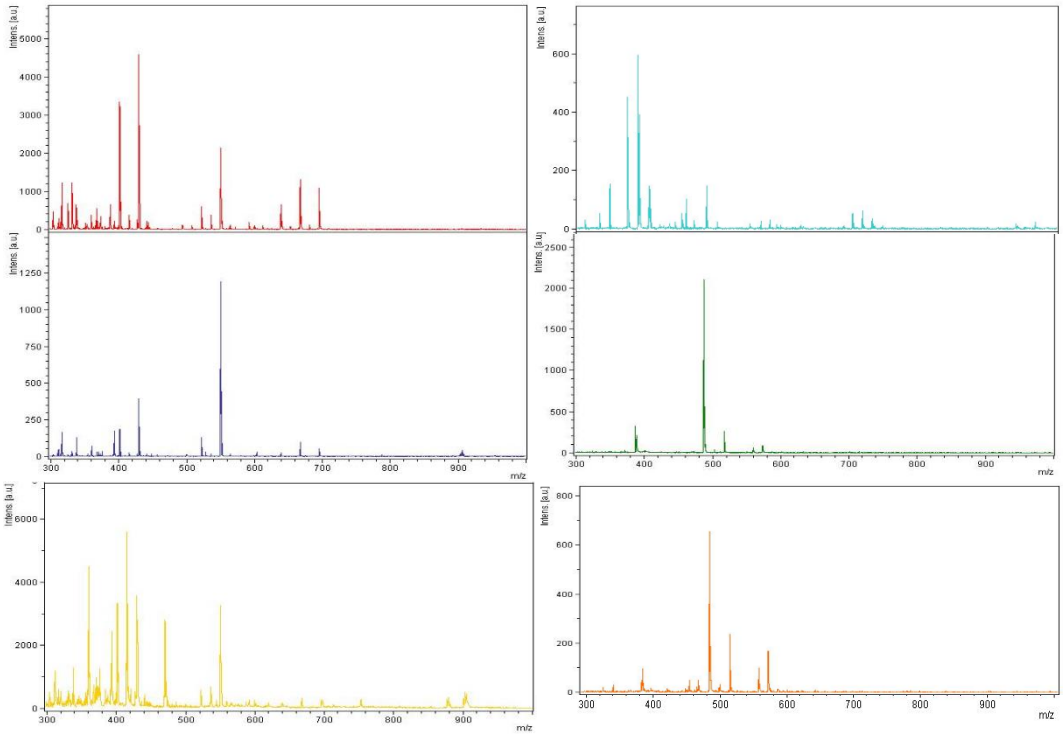

Figure 4: MALDI-TOF mass spectra of grapeseed (top), canola (middle), and sunflower (bottom) oil samples in 2,5-DHB (left) and 9-aa (right)

Triglycerides were identified in both matrices, however there was some fragmentation observed in each oil sample. In the oil samples mixed with 2,5-DHB, extensive fragmentation was observed, suggesting that this matrix is not suitable for the analysis for triglycerides. In contrast, the oil samples in the 9-aa matrix displayed a much smaller degree of fragmentation, as there were far fewer peaks in the spectra obtained. This was a strange finding, due to its lack of consistency with the work done by Hidaka and colleagues[5]. Their study on the analysis of

lipoprotein lipid composition in human serum identified intact triglycerides with minimal fragmentation using 2,5-DHB as a matrix. An explanation for these observed differences could be due to the presence of other compounds found within cooking oils, such as diacylglycerols.[6] It is possible that the fragmentation observed was due to the fragmentation of these other compounds as opposed to the triglycerides themselves.

5.2 Principal Component Analysis

A scores plot was obtained from The Unscrambler 9.1 software for each matrix and is shown in Figure 5.

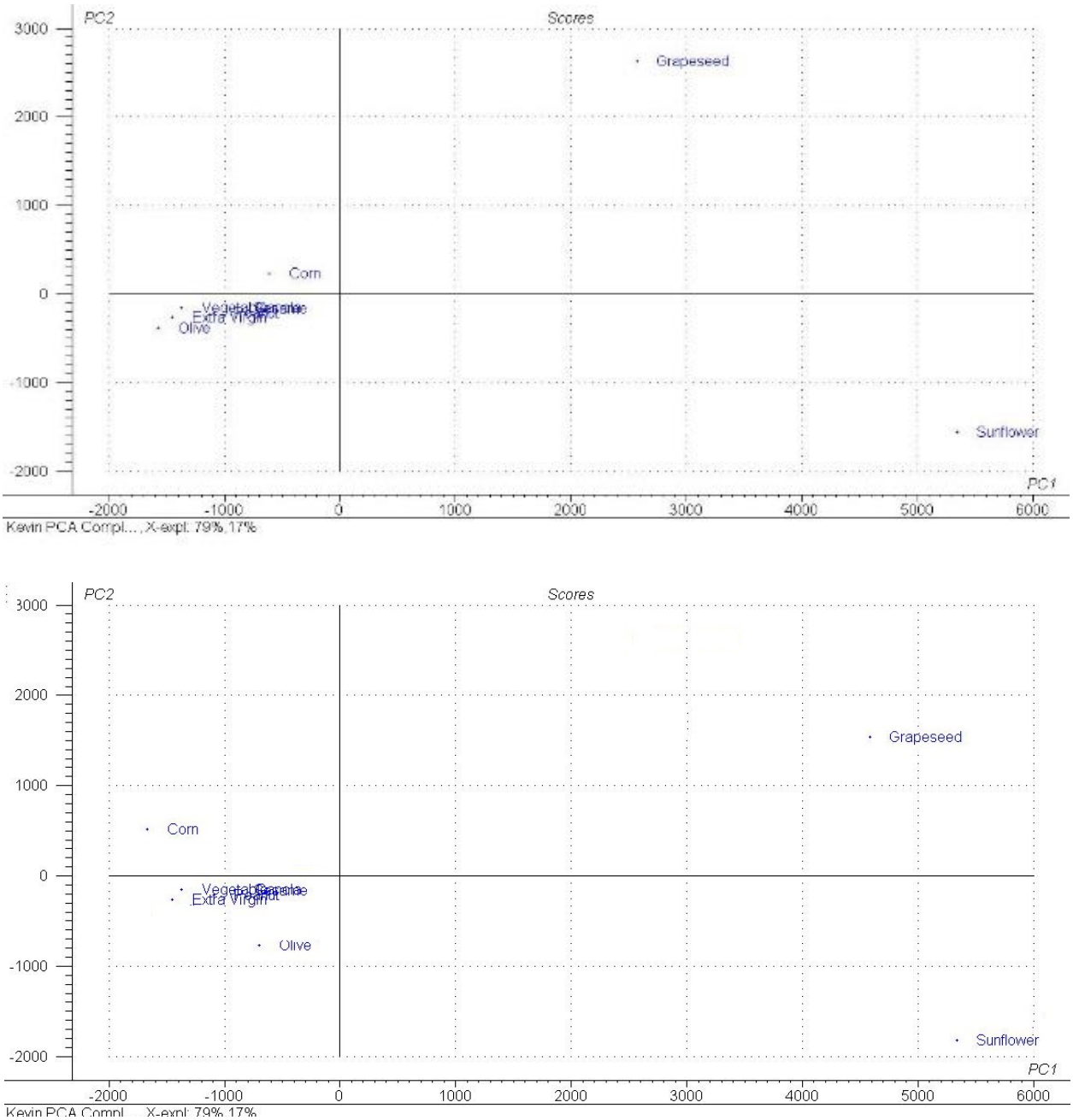

Figure 5: Scores plot obtained from PCA for oil samples in 2,5-DHB (top) and 9-aa (bottom)

The scores plot revealed three general clusters. The first contained corn, olive, vegetable, canola, sesame, and canola oil. The second contained grapeseed oil only, and the third sunflower oil only. The scores plot obtained from the mass spectral data from the 2,5-DHB matrix was very similar to the scores plot obtained from the 9-aa matrix, suggesting that the data obtained were very consistent. Comparing these sets of data to Figure 4, there are also some consistencies observed. The two scores plots showed three clusters that have different properties from one

another. This was also reflected in the mass spectra obtained from the canola oil (a representative of the first cluster on the scores plot), the grapeseed oil, and the sunflower oil. This suggests that MALDI-TOF is sensitive to small differences in the compositions of different cooking oils. These findings are also consistent with the literature.[7] Corn, canola, olive, peanut, vegetable, and sesame oil are all largely composed of oleic acid. The presence of oleic acid in all of these oils could explain why they are clustered so closely together in the scores plot in Figure 5. Additionally, the scores plot for each matrix show these six oils clustered together and the mass spectra obtained have similar peaks and intensities. While sunflower oil and grapeseed oil both contain linoleic acid, they differ in the other types of triglycerides that make up the oil. This may explain why these two oils are found so far apart on the scores plots and why each have different mass spectra. Additionally, they may also differ in the composition of diacylglycerols and other compounds found within the cooking oils.

These results show that, while fragmentation was observed in both of the matrices, the MALDI-TOF method developed was sensitive to small differences in the lipid compositions of each cooking oil, as confirmed by the PCA data and the literature. Consequently, this method could potentially be applied to a commercial level, where it may be used as a form of quality control in the cooking industry.

6. Conclusion

The MALDI-TOF mass spectrometry method successfully identified triglycerides in each of the cooking oils. Although there was fragmentation observed in both of the matrices, it appeared that the 9-aa matrix was more suitable for the analysis of triglycerides in these cooking oils, as it displayed a much smaller degree of fragmentation. Finally, MALDI was able to discriminate between small differences in cooking oil composition, as confirmed by the PCA data and literature findings, making this a possibly suitable method for triglyceride analysis in the cooking oil industry as a form of quality control.

7. Literature Cited

1. Champagain BP, Wiesman Z (2009) MALDI-TOF/MS Fingerprinting of Triacylglycerols (TAGs) in Olive Oils Produced in the Israeli Negev Desert. *J. Agric. Food Chem*. 57: 1135-1142.

2. Ewanyshyn C (2014) Differentiation of 7 Cooking Oils Using MALDI-TOF-MS and PCA. *Thompson Rivers University Directed Studies*.

3. MALDI-TOF, Chemwiki, http://chemwiki.ucdavis.edu/Analytical_Chemistry/Instrumental_Analysis/Mass_Spectrometry/MALDI-TOF

4. Ito H, Kono T (2008) Quantitative Analysis of Organic Additive Content in a Polymer by ToF-SIMS with PCA. *Applied Surface Science; Proceedings of the Sixteenth International Conference on Secondary Ion Mass Spectrometry*. SIMS SVI 255: 1044-1047.

5. Hidaka H, Hanyu N, Sugano M, Kawasaki K, Yamauchi K, Katsuyama T (2007) Analysis of Human Serum Lipoprotein Lipid Composition Using MALDI-TOF Mass Spectrometry. *Annals of Clinical & Laboratory Science*. 37: 213-221.

6. Gidden J, Liyanage R, Durham B, Lay JO (2007) Reducing Fragmentation Observed in the Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometric Analysis of Triacylglycerols in Vegetable Oils. *Rapid Commun. Mass Spectrom.* 21: 1951-1957.

7. Zambiazi RC, Przybylski R, Zambiazi MW, Mendonca CB (2007) Fatty Acid Composition of Vegetable Oils and Fats. *B. CEPPA, Curitiba*. 25: 111-120.

Women and War: The Western Hero Myth

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Philosophy

Supervisor: Robin Tapley

Abstract:
The paper will be concerned with the explanation of the Western Hero Myth (WHM) as laid out by Terence De Pres in The Survivor. This is a book that explores the concentration camps of WW2 from a philosophical perspective. One of De Pres' main goals is to break down assumptions about persons in extremity made by those from the safety of a stable society. To this end, he exposes the erroneous sacrificial nature of the WHM that contrasts starkly with reality. The argument presented by De Pres will be applied to the nature of women's roles on the "back lines" of many wars. Contrasts will be made and connections will be drawn between the front line soldiers and the women who support them, who cannot escape but must grow, learn, and live with war as a constant presence. Counter-arguments will also be addressed. Among those will be the prima facie reaction that front-line men are lessened by giving respect to women and by shedding light on their role in war. The idea that the argument forces women in war into a cage of traditional gender roles will also be addressed.

War is unceasing. It spans human history and the planet itself. The stories and mythos surrounding war involve the men that fight and die within it. Both genders are deeply involved in war but only one side is shown and when the stories of women in war are revealed, the importance of their actions are perceived as less than those of men. One of the reasons for this centers around the Western Hero Myth. The Western Hero Myth and the belief in it dramatically undervalues the role of women in war. To understand this concept the myth itself must first be explained. From there the reality of women in war and the actions they take must be investigated. Finally, the work of women in war must be considered in relation to the Western Hero Myth.

In Terrace Des Pres' (1976) *The Survivor: An Anatomy of Life in the Death Camps,* the author had set out to explore the camps of World War II from a more analytic perspective than most other authors had attempted. In doing this he challenged many long-standing theories and opinions on the makeup of humanity within the reality of the prisons. He pushed against the boundaries of what had been accepted as true in relation to the world of death camp prisoners, both during and after incarceration.

One of the first areas of concern for Des Pres was that of the Western Hero Myth (WHM). The WHM has at its foundation the idea that "while the business of living goes forward from day to day we reserve our reverence and highest praise for action which culminates in death" (Des Pres 5). We are creatures that perceive a very high value in the continuation of our lives. But out of this, we heap honour and respect upon those who choose to sacrifice their lives for a cause.

A person sacrifices their life for that which is greater than themselves. Des Pres believed that "men have always been ready to die for beliefs, sacrificing life for higher goals" (Des Pres 6). Our tallest and most powerful heroes have always voluntarily ended their lives to resolve the challenge of their circumstances. One does not have to look far for examples: historical figures that fit this archetype are well known. Jesus Christ stands largest among them. He is a figure who sacrificed his body and life for the sins of humankind. It was his willingness to give up his life that saved all of humanity.

Socrates is another example. On the morning of the day before his execution Socrates refuses to be saved by Crito. Even though Crito implores Socrates: "I beg you for the last time to listen to me and save yourself... The public will never believe that... you yourself refused to escape" (Plato 53), Socrates is unmoved. He will not compromise his beliefs to save his own life. He will not "cast aside my former arguments because this misfortune has come to me" (Plato 55). He will not be swayed from his convictions. Here then, is a man who willingly paid the ultimate price for what he believed right and true.

Modern film continues the tradition of the WHM. One of the most popular and highest grossing action movies of all time has a theme of the journey towards humanity. In Terminator 2 Arnold Schwarzenegger's character completes this journey by sacrificing his life. Immediately after explaining "I know now why you cry, but it is something I can never do" (Terminator) he lowers himself into molten metal, ending his life. This sacrifice staved off the nuclear war that would lead to humanity's end. It also cemented his character as understanding what it means to be human. His willingness to die for a cause was the ultimate expression of his new-found humanity.

The 2005 film Sin City follows the same archetype. John Hartigan commits suicide to save Nancy's life. Had he continued to live she would have been hunted and harangued by those who wished to make him suffer. He trades his life for hers. All of these examples share a strong and apparent theme: the voluntary sacrifice of one's life for a cause, reason, or belief that rests upon a plateau high above that of the individual's desire for continued survival.

These persons and characters are the stuff of the WHM. Their actions are the "dramatic defiance of superior individuals" (Des Pres 6). Their actions elevate them to the level of heroes. But there is a rotten tooth to be uncovered within the WHM. It reveals itself when the WHM is considered in relation to survivors. The WHM reduces and ultimately rejects those for whom survival itself is heroism. It has a blind spot towards those who occupy the extreme situation.

The extreme situation is typified as a scenario where there is no end in sight and one's life is not guaranteed from one moment to the next. A literary example of this can be found in Albert Camus' *The Plague*. It is the story of how "week in, week out, the prisoners of the plague struggled along as best they could" (Camus 129) as their friends and family die around them at random. As people died, there was no end to the nightmare in sight. This is not screaming passionately as you fall upon the enemies' sword. Or a scenario where the hero "controls the conditions for his fulfillment" (Des Pres 7) of personal death. It is the never-ending grind of fighting for survival without knowing what the next week, day, hour, or moment will bring.

The WHM wrinkles its nose at these persons, as if "life is justified only by things which negate it" (Des Pres 5). It is as if life can only be worthy retroactively, only after death has been achieved. The "struggle to survive... is felt to be suspect" (Des Pres 5). Psychologist Bruno Bettelheim who became a camp prisoner early in World War II typifies this mentality. He used a psychoanalytic approach to interpret camp behaviour.

Bettelheim argued that "'manhood' requires dramatic self-confirmation, and in the camps this could only be achieved through some moment of open confrontation with death" (Des Pres 161). He argued that to remain covert in rebellion and focused on survival was to act as an infant with the SS as the patriarch. He praised and argued for actions that based heroism upon death. This argument is rooted deeply in the WHM. His "critique of camp behaviour is rooted in old heroic ethic. Heroism, for him, is an isolated act of defiance" (Des Pres 161) that ends in death. For Bettelheim and his proponents, life is only as valuable as the act that brings its end.

General Patrick Cammaert is a Dutch general and a United Nations Force Commander for the Eastern Democratic Republic of the Congo and consequently he is a man who has seen much of war. In 2008 he was quoted as saying "It is now more dangerous to be a woman than to be a soldier in modern wars" (Chemaly). During the fighting in Iraq from 2003 to the present there were approximately 216 000 casualties and civilians make up an estimated 73 percent of these deaths (Iraq). It is estimated that the two Chechen wars killed 160 000 people and 75 000 of these were civilians (Russia). The United Nations estimates that 7 out of 10 Palestinians killed in Gaza are civilians (Booth). Generally speaking, "75 percent of modern war casualties are women and children" (Salbi).

For those who are not killed in war, "half of all refugees are women" (Global) and "children and women make up an estimated 80 percent of displaced populations" (Patterns). More than 500 000 civilians were displaced from their homes in the first Chechen war (First). While these numbers are only estimates owing to the absolute chaos of warfare, they reveal a stark reality: civilians pay a

high price for warfare. This is especially true for women. These numbers speak of only death and displacement. They reveal nothing of the sexual assaults, disfigurements, starvation, disease and all other manner of devastating horror that make war a nightmare reality. It is estimated that "more than 20 000 women have been raped since the Balkan war began in 1992" (Patterns). Conflict in the Congo has caused "the rape of hundreds of thousands of Congolese women" (Salbi).

Men in areas of war are on the front lines. Women on the front lines of war are a rarity as war is, in general, the domain of men. So where are these women? Are they hiding, doing all they can to preserve their lives? Secreted away in hidden bunkers, waiting for the end of the conflict? Are they frozen in place until such time as the normal rhythm of life can resume? Absolutely not.

War ends the lives of millions of individuals, but it does not stop the act of living itself. People still grow, die, fall in love, fall out of love, share, and learn in war. They still do all of the things that are part of being a living breathing person. The bombs fall and the bullets find their targets meters away from people acting out the drama of their own personal lives. The violence and brutality of war can't stop the will of human life. Even in the shattered and terror stricken streets of World War II Stalingrad life went on. Mothers and fathers still held their children and told them stories. Things change irrevocably for those that experience war. They can never go back. But the stuff of life still happens during conflict.

Here are the stories of women in war. At the time Mah-Bibi was interviewed by the Red Cross she was ten years old. Her mother was dead and her father had been missing for some time. When he disappeared she was forced to sell their animals for food. She then took over the role of matriarch and provider to her five and seven year old brothers. They had no shelter and she begged for food. When there was no food they ate grass. When they "are sitting in the sun it is unbearable. But at night we shake with cold" (Mah-Bibi).

Qualam is a grandmother and a widow. Fighting started in her village and she was forced to flee with her daughter and two sons. They could not bring any of their possessions. They were

displaced to a refugee camp and had not felt rain for three years. At the camp she helped feed babies and children. She also helped teach other women about hygiene and health. When she looks forward for herself and her family, she doesn't "know about our future... and how we will survive" (Qualam).

Zakiya has four children and a husband who has been in jail for 4 years. She visits him every two weeks to share stories of how her and their children are doing. She has no money for supplies and feels lonely; there is a vacuum in her life with her husband gone. She is a woman who is "responsible for the household. I take care of the children... I believe I carry out the roles of the father and the mother" (Zakiya). She makes sure her children and other children do their homework and go to school. These women and others like them are from all over the world: places like Afghanistan, Sierra Leone, Colombia, the Balkans, Israel, the Palestinian territories, Ukraine and anywhere else war breaks out.

Stories like these are everywhere. Stories like that of Fareeda, a piano teacher in Sarajevo who kept a music school open every day during a four year siege of her city. Every day meant walking through streets full of sniper fire on the way to the school (Salbi). In war there is the side "that fights, and there is the side that keeps the schools, the factories and the hospitals open. There is the side that thinks of peace as the end of fighting, and there is the side that thinks of peace as the arrival of school and jobs" (Salbi). There are those who pick up their rifle as the fighting starts, and there are those who pick up their ladle and chalk.

Zainab Salbi was a woman who grew up in the midst of the Iraq war. She experienced the role of women in war in a very profound manner: she saw one side of war as being led by men and another by women. But, "unfortunately, the world typically sees only one side of the coin" (Salbi). Women do not have guns and bombs and a popular cause to die for with a battle cry on their lips. Women are not remembered as heroes.

Women are on the front lines of their wars every minute of every day. They fight it bereft of

the hope that there is an end in sight. Fareeda in Sarajevo exemplifies this phenomenon. For four long, ceaseless years she fought her battle. Every day did not bring her closer to the end. For those steeped in the chaotic landscape of war the end only becomes an end once it has arrived. Prior to that, the days only pile onto one another. The end of a conflict is a retroactively simple thing to understand. But down on the ground in the noise and the dust, war is an eternity.

To be a soldier on the front line is to have only one goal: to kill your opponent before your opponent kills you. Nothing else matters. This creates a scenario where that dead man who killed and was killed is elevated to the status of hero without having had need to remain allied to his humanity. He can become a cold, hard killer and still be a hero. For women in war this is not the case. They must retain their humanity. Their sense of caring and concern for others must stay intact. They must remain strong and steadfast in places that constantly wear away at those things that make a person whole.

The heroic deaths of the front line are the stuff of the WHM. Soldiers have always and will always die as the myth demands. They will continue to be fired by a worthwhile cause and forfeit their lives in the pursuit of its success. These dead soldiers will continue to be held up as heroes, as people willing to make the ultimate sacrifice for a goal higher than their own life.

But the heroism of women finds its legitimacy from a different source. The WHM bestows honour through death; it legitimizes heroic actions that end in a loss of life. The heroism of women is found at the opposite end. Their war is the battle against death. They fight to sustain life. They do not have guns and bombs and a worthy cause to die for with a battle cry on their lips. Their worthy cause is the scared and starving people who suffer and die by no choice of their own, and they are also among these people.

They provide nourishment of two kinds. One is of the more functional nature. They feed and help those who need it. People need to eat. There can be no argument that this is absolutely fundamental to the survival of people. This is so obvious as to be instantly redundant. But women in

conflict provide so much more than just the basic needs of the physical body.

Women in conflict provide those things that colour in the various parts of human experience. They both create these things and create the settings for them to continue, regardless of warfare. Stories like that of Fareeda in Sarajevo illustrate this. It takes so much more than the basic necessities of survival for life to be continued. These can be nearly as important as food and water, and a life without them may not be worth much. Stories shared, a squeeze of the shoulder, a sharing of knowledge, a motherly figure, a lesson taught, a familial tie, a shared experience, or any other human connection: these go beyond that which fuels the body. These are the things women of war support and maintain. They are so far removed from the masculine world of war. They are the things that sustain life as more than a mere physical existence.

These women have little to defend themselves with. They fight their war with the ever present danger of rape, robbery, and death for themselves and those they care for. They fight for their cause with precious little. A soldier can fight back. A soldier has the tools at his disposal to kill those that kill him. A woman in a war zone, most likely, does not. She must take on the burden of her own defenseless suffering and find the courage and will to help those around her.

Women wage war for life. They wage war against the insidious, ever present risk of losing that which makes life worth living. They keep alive that which stands as the center of us all. People are not automatons kept in cold storage until a conflict arises. We are living, breathing, feeling creatures with all the potential and need for growth entailed by these qualities. Women of war fight every day for the things that make life so precious and important.

This is where the WHM fails. It creates the illusion that it is only through the removal of life that it becomes worthwhile. It demands that an individual's life be made forfeit in order for that person to be held in the highest regard. We honour those that fall, and we should. However, those that live are worth the same esteem. Those that stand for life no matter the bullets and bombs must also be recognized.

No one would call these women cowards. But their untold stories go beyond the passive role of a witness to war. "It is time to see the other side of the war. It is time to understand war and peace as women see it and feel it" (Salbi). There is a whole other reality to war that is rarely witnessed. It does not hold the enchanting glamour of traditional warfare. Instead it is the core of life and what life is when the guns stop firing.

Women in conflict are the bright warm center of life surrounded by the vicious darkness of war. They are absolutely heroes in every sense of the word. To look at heroism as the WHM depicts it is to miss their contribution and status. They contribute more to that which truly counts than any trigger pulled or bomb set off ever could.

A possible criticism to what has been argued here is that increasing the visibility of heroism by women in war may reduce the heroism attached to combatants. This claim holds no weight when closely examined. It assumes that holding one thing in higher esteem will reduce the esteem of something else. This indicates a belief that people have only a finite amount of respect to go around. Respect is not a precious resource. It is not like a fossil fuel; one doesn't have to worry about it running low or disappearing completely from over use.

As well, it does not work like a full glass of water and an empty glass. Where pouring water from the full glass to the empty one empties the original. Respecting something does not reduce the level of esteem for something else. Women and men in war, and the different sacrifices they make, can be equally respected.

There is no adversarial nature between these two sides of war. Their experiences and actions in war are very different. There needs be no struggle over who should be held in higher esteem. Both sides can be held evenly as capable of great heroism.

But the important point is that one side isn't held in high esteem. One side is largely ignored. Women in war are an unknown entity. Their actions are not those that are traditionally held in high regard by the populace. Their stories are perceived as small and unimportant next to the cannons

and guns of warfare. A belief in the story of the Western Hero Myth is a cause of this. It causes a dramatic undervaluing of the roles women take in warfare. Exploring the nature of the WHM and understanding how it rejects the importance of what women do in war reveals the damage done to women. The story of women in war must be told. The horror and constant adversity they face must be revealed. To know of their stories is to allow for respect. From that respect, understanding and support can flow.

Works Cited

Booth, William. "The U.N. Says 7 in 10 Palestinians Killed in Gaza Were Civilians. Israel Disagrees." *The Washington Post*. The Washington Post, 29 Aug. 2014. Web. Date Accessed: 2 June 2015.

Camus, Albert. *The Plague*. London: Penguin, 2002. Print.

Chemaly, Soraya. "Worldwide, It's "More Dangerous to Be a Woman than a Soldier in Modern Wars"" *The Huffington Post*. TheHuffingtonPost.com, 5 Oct. 2012. Web. Date Accessed: 1 June 2015.

Des Pres, Terrence. *The Survivor: An Anatomy of Life in the Death Camps*. New York: Oxford UP, 1976. Print.

"First Chechnya War - 1994-1996." *First Chechnya War*. GlobalSecurity.Org, 7 Nov. 2011. Web. Date Accessed: 2 June 2015.

"Global Issues at the United Nations." *United Nations News Center*. UN, n.d. Web. Date Accessed: 2 June 2015.

Iraq Body Count. Iraq Body Count, 2003. Web. Date Accessed: 2 June 2015.

Mah-Bibi. *International Committee of the Red Cross*. ICRC/Urban Films, 2001. Web. Date Accessed: 02 June 2015.

"Patterns in Conflict: Civilians Are Now the Target." *UNICEF*. UNICEF, n.d. Web. Date Accessed: 2 June 2015.

Plato. *Euthyphro, Apology, Crito; Phaedo, the Death Scene*. Trans. F. J. Church. Upper Saddle River, NJ: Prentice Hall, 1948. Print.

Qualam. *International Committee of the Red Cross*. ICRC/Urban Films, 2001. Web. Date Accessed: 2 June 2015.

"Russia: Chechen Official Puts War Death Toll At 160,000." *Radio Free Europe/Radio Liberty*. RFE/RL, 16 Aug. 2005. Web. Date Accessed: 1 June 2015.

Salbi, Zainab. "No Peace without Women." *Reflections*. Yale University, 2015. Web. Date Accessed: 2 June 2015.

Sin City. Dir. Frank Miller. Perf. Bruce Willis. Buena Vista, 2005.

Terminator 2 Judgment Day. Dir. James Cameron. Perf. Arnold Schwarzenegger. Momentum, 2001.

Zakiya. *International Committee of the Red Cross*. ICRC/Urban Films, 2001. Web. Date Accessed: 2 June 2015.

How to Kill in the 21st Century: The Resurgence of Mercenaries on the Battlefield

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Abstract:

This paper proposes to show that the return of mercenaries is due largely to the shift of infantry warfare from large pitched battles to small skirmishes. This research analyses the historic reasons for employment of mercenary companies, including their self-sufficiency, high level of combat experience and specialization in different fields of combat. The era of the mercenary of antiquity sees its end with the rise of the musket. It is this invention which causes drastic change in the dynamics of the battlefield, rendering mercenary companies obsolete. However, the world has seen a massive resurgence of private military companies, with the dynamics of warfare once again turning to a battlefield requiring individuals who possess the same characteristics of mercenaries past. Addressing this past and comparing it to the present, we see that mercenaries are not a new phenomenon, no matter what label is applied, and that mercenaries will continue to remain a consistent part of warfare until technology once again renders them obsolete.

Introduction

Though retaining a remarkable technical uniformity through history, the mercenary tradition systematically perpetuated itself, to the point of threatening governmental monopoly on violence. The private soldier is not a newcomer to warfare, and under the name of “mercenary,”

the first account of the profession was in the employ of King Shulgri of Ur 2094 BCE[i]. This paper, which will follow the evolution of mercenary forces is divided into sections as follows: first, terminology and the dynamics of warfare will be discussed in order to better illustrate the similarities between PMSCs (Private Military and Security Companies) and the mercenaries of the past. The paper will then trace the Greek mercenary trade and its development, followed by the Free Companies of the 11th-16th century Europe and the impact of their systemization in different countries. This process will aid the reader in understanding the chronological development of the mercenary profession from individual soldiers for hire to registered corporate military entities. Finally, the paper will explore the decline of the mercenary profession through the widespread implementation of firearms in militaries, as well as the return of the mercenary in the 20th century as a military profession. As P.W. Singer, a political scientist, writes:

> "PMFs (Private Military Firms) are structured as firms and operate as businesses first and foremost. As business entities, they are often linked through complex financial ties to other firms, both within and outside their industry. In fact, many of the most active PMFs, such as Armorgroup or Vinnell, are openly part of broader multinational corporations"[ii].

The PMSC economic boom, which occurred after the terrorist attacks of September 11th 2001, began as a revamping of the military utilising instruction and training offered by PMSCs, who served in non-combat role[iii]. While this drastic increase in mercenary activity exceeded the projections of some analyses examining the increase of PMSCs in the global market, it did not altogether contradict them; there was an expectation of their eventual increase, which had already been set in motion[iv]. Since then, PMSCs have become major actors in the military market, offering high wages to individuals with a wide range of specialized skill sets[v], so that in some cases Special Forces find themselves in direct competition with these companies through the "poaching" of their recruits[vi].

Since PMSC's are private enterprises, individuals who are employed by these firms may work in concert with military forces, but they are not under their direct control. This lack of direct control has in the past led to acts ranging from the sacking of cities to their complete seizure, such as the sacking of Rome in 1527, or the mercenary war of Carthage in the 3rd

century B.C. This creates a future cause for alarm, since the power of these highly trained companies might strip governments of their control over the armed forces they employ.

Literature Review

To begin, this section will present some clarification regarding the debate about the lineage of the PMSC industry from the mercenary profession. Once the continuity of the profession has been established, the general dynamics of warfare up to the 18th century will be illustrated in three sections, in order to contextualize the skill required of these private actors. It can be observed that the privatized and specialized nature of military and security companies, as well as their diverse breadth of employers, ties their lineage to the mercenary tradition as private actors on the battlefield. In addition, the skills that were needed in pre-firearm combat were demanding, requiring much training and experience. Mercenaries provided this skill and experience without the time required for a commander to train their own troops.

Terminology: PMSC VS Mercenary

Private Military and Security Companies operate under a multitude of names. This includes Private Military Firms (PMF), Private Security Companies (PSC), Private Military Companies (PMC) and Private Military and Security Firms (PMSF).

The United Nations has criminalized mercenaries, creating incentive for PMSCs to disassociate themselves with the label, hence the more modern term utilized, "contractors". However, the label "contractor" itself draws the image of a private entity working for a limited period, with a financial incentive, thereby once again eliciting and recalling the mercenary function.

There has been much debate regarding the definition of PMSC (or any of the other above titles) being the same as mercenary in profession, with some academics seeing them as an evolution of the mercenary.[vii] [viii] Others state that a PMSC is not connected to mercenaries because of the formal, highly corporatized nature which is stressed by these companies, causing them to disassociate themselves from rag-tag bands of soldiers for hire.[ix] [x] Interestingly, a similar corporate stance can be seen in the development of the Condottieri in Italy of the Renaissance; they maintained permanent organizations[xi] and had multiple employees who worked

administrative roles, such as notaries and attorneys. This arrangement more closely resembles a corporate-like structure (to the extent possible in that time) rather than a ragged mercenary band.[xii] We cannot completely disassociate PMSCs from the mercenary trade, especially when "many PMF employees have been mercenaries both before and after their employ, [although] their processes, relationships, and impacts within local conflicts were completely different".[xiii] Nonetheless, there is a general consensus that the companies *themselves* are not mercenary enterprises; therefore, the proclivities of their employees, outside of their current contract, are not indicative of the current nature of their employment.

Combined with this popular stance, the nature of the U.N. definition of mercenary means that any individual working under the label of Private Military and Security Company can simply call himself/herself a Private Military and Security Contractor, employed by said company and therefore protected from the infamous mercenary label. However, it should be pointed out that there are still independent private actors who function directly as mercenaries, without an alternative to adopt an alternative label. Thus, PMSCs have not completely replaced the mercenary figure from warfare. Rather, it can be observed, based on the privatized nature of these military and security companies and their diverse breadth of employers, that these PMSCs owe their lineage to the mercenary tradition as private actors in otherwise state-monopolized warfare; they have expanded the services they offer to multiple sectors of the military industry.

Other analysts are more than happy to make no distinction between private entities and militaries that are hired out to fight for other nations, such as the Swiss cantons (districts) hiring out their militias to the French, Spanish, English, and Dutch in the 1700s, or the Hessians hired out by German territories to the British to fight in the American Revolution. However, this is a faulty assumption, lacking the distinction afforded to PMSCs and mercenaries today. These forces of Swiss and German troops were hired out directly under the sanction of their sovereign states as previously mentioned, and thus are not deserving of the mercenary status ascribed to them. The debate seems to be less about the fact that mercenaries are private actors with their own authority of force and PMSCs are also private entities with authority of force, but that PMSCs also provide such services as security consulting, training, and logistics, in addition to force. The end result is simply that PMSCs differentiate their services in order to create a new

label for the mercenary actor, and therefore do not wish to be associated with the stigma (or illegality) of the "mercenary" profession.

The Dynamics of Warfare

In order to explain the temporal continuity of the profession, from mercenary to PMSCs, it is necessary to explain the historical appeal that mercenary forces held throughout history. Hand to hand combat on the battlefield required extensive drilling and experience, something which was very costly and time consuming if a would-be military commander wished to raise his or her own army. A much simpler and more cost-effective way to create an efficient fighting-force involved hiring mercenaries, as they were often combat experienced and usually had a specialization in select armaments, such as pikes or crossbows. Equally, however, once technology advanced to the point whereby firearms (starting with the musket) replaced all other infantry armaments, the specialized actor was no longer needed, and the mercenary found himself obsolete. Thus, the necessity of private actors is directly proportional to the level of specialized skill needed in an armed conflict.

Pre-Musket: Pre-1700

Prior to the adoption of firearms, violence was not as simple as pulling a trigger. Warfare went through multiple phases and indeed cycled on itself with cavalry and missile troops, such as archers and slingers, each taking a role in the spotlight and with the infantry forever providing the backbone of every assault[xiv]. These roles required both constant drilling, and no small amount of skill. A highly disciplined and skilled group could confront a poorly trained group many times its number[xv]. Fighting throughout the Grecian age was conducted in a three foot interval; that is to say, soldiers were trained to maintain a three foot distance from each other, providing adequate space to thrust, slash and hack at their opponents[xvi]. What this combat-structure meant was that the battlefield was dominated by soldiers who, once committed, were required to fight under their own initiative, gradually grinding down the opposition in one-on-one combat: in other words, a duel with the individual directly in front of you. This type of combat required individuals to be in good physical condition, skilled, motivated, and disciplined. Killing an opponent demanded physical strength and the endurance to continue the assault for long periods of time. Skill was needed to survive and kill efficiently; violence was not as simple

as pointing and pulling a trigger and thus required a higher level of self-control and stamina. For instance, the Greeks and the Romans both fought in the phalanx, a tight block formation of individuals who guarded each other with their shields. This required strict discipline in order to achieve a unified speed by which the phalanx moved, lest the cohesion break. The Romans would eventually move this towards individual prowess, with soldiers spreading further apart, quite literally turning the battle into multiple duels[xvii]. As it was in 400 BC, so it was in 1600 AD: the infantry dominated the battlefield, backed up by cavalry and missile troops, many of which were highly specialized and required extensive training.

Training: Three Examples

Training itself was aimed at conditioning an individual who was competent with a sword and shield. The person would need to learn the basic mechanisms of different strokes, as well as proper application of parrying or feinting in order to gain an advantage over their opponent. Furthermore, they would be instructed how to properly handle a shield: where to stand behind it, how to properly angle it for different incoming blows, and how to strike while still maintaining a defensive posture. This would include line drills, as a unit would need to achieve a uniform defensive posture of overlapping shields to maintain a solid line in the face of assault.

An even more drastic example was that of the longbow men. The famous English longbow men required years of training simply in order to achieve full draw of the 6-foot long bow (boys would begin instruction by age seven)[xviii]. Archers' skeletons of the period have been found with deformed left arm and shoulder bones, as well as twisted vertebrae, as a result of repeatedly drawing the bowstring. This was a highly specialized skill and as such saw usage throughout the 1300s-1400s. English longbow men were highly sought for by other countries for mercenary work. The famous ``White Company`` of John Hawkwood, which operated inside Italy in the fifteenth century, possessed a contingent of English longbow men, and at least one contract Hawkwood accepted specified that the archers in his company be English[xix] to strengthen their force.

This specialized training, combined with often sizable amounts of experience, were what made mercenaries all the more marketable to kingdoms looking for soldiers. While hiring these "specialists" could be costly, it was still much more profitable and time-efficient to employ these

individuals, who often came with their own equipment (in order to join a landsknecht regiment, for instance, an individual had to at least supply their own pike[xx]), as opposed to recruiting, equipping, feeding and training an entire army from the general population. Since skill and experience were equal to, if not more important, than numbers in combat, a highly trained and equipped mercenary force had a very strong appeal to most rulers. In fact, this became such a perpetuated practice that it continued to grow and diversify until the rise of standardized armies.

The Adoption of Firearms: 1400s-1700

Initially, the adoption of firearms by militaries did not radically change the way wars were conducted. For over a century, they simply supplanted the role of the bow, and regiments of pikes augmented by cavalry and cannon continued to wage war, with the all-important pike regiments gradually grinding down their opposition[xxi]. By 1700, however, the pike had been completely eliminated, with the musket now being the prime weapon of choice for the infantry. This black-powdered rifle was an instrument that required raw memorization more than a specific skill to use; the individual had to complete over a dozen movements to load, aim, and fire the weapon, all while under incoming enemy fire and following the orders of his officer[xxii]. It was through this new method of warfare that the average soldier was no longer required to be a highly-experienced, calculating individual who could be set loose with his comrades onto the battlefield. Rather, he became a piece of machinery made to fulfill a function dictated by his officers' strict commands. The individual simply required strict drilling to perform this task, and less time was required to train an individual to an acceptable level of proficiency[xxiii]. The speed with which soldiers could be trained made it so that conscription gradually became preferable to hiring outside forces, and armies began to swell in size. The mercenaries that were hired at this point were almost entirely those purchased from one country by another rather than independent actors.

Despite this, the mercenary tradition, established by such individuals as the Greeks and Swiss, had developed a historic imprint of the private actor as the provider of high-specialization and short-term employ. This imprint would withstand the dynamic shift of warfare, which still found these characteristics to be an ever valuable asset.

The Greek Mercenary

The Greek mercenary tradition is particularly important because of their systemization of the mercenary forces under their employ. The Greek mercenary trade (500 B.C. to around 100 B.C.) presented a specialized business in arms, laying the systemized and contractual groundwork for the mercenary tradition. Different regions of Greece are documented as being specialized in certain weapon types, thus providing us with an aspect of cultural diversity. Furthermore, the documentation of this regional specialization and employment shows that the Greek mercenaries were sought out to the point that states such as Carthage built their armies and selected fighters almost entirely from the mercenary pool.

The specialization of particular groups shows us a range of set skills that were marketed as needed. For instance, the Cretans were proficient in archery, and the Rhodians were skilled slingers.[xxiv] Also, the Arcadian people seem to have supplied the bulk of mercenary services across Greece and beyond; both Alexander the Great and Xerxes of Persia had Greek hoplites—heavy infantry—in their armies.[xxv] [xxvi] These examples suggest that the Greeks already showed proficiency in this form of soldiering; otherwise their mercenary forces would have eventually been absorbed into other native units, such as the Macedonian pike regiments, which also marched for Alexander.[xxvii]

Some employers who used mercenaries to maintain quasi-standing armies offered quite constant and defined contracts—a surviving example being that of Eumenes I of Pergamum, whose 260 B.C. contract included:

1. A fixed price for wine and wheat at the commissary.

2. A campaign year of ten months, the final two months being unpaid.

3. Special tax dispensation.

4. Welfare benefits for soldiers unable to find employment on the completion of a contract, and provision made for the orphans of men killed on service.[xxviii]

The Greek mercenary boom truly systemized the mercenary trade, actively stipulating such details as the rate of pay, length of service and campaigning year.[xxix] Coinage was largely

implemented in Greece by 505 BC for mercenaries' wages, and even upon the cessation of coin use in many Greek cities, the ones which continued to employ large contingents of mercenaries continued to produce large quantities of gold and silver coins.[xxx] This encouraged economic growth in a more modern sense. It is, however, important to note that Egypt already long had a complex and sophisticated system of financial transactions for mercenaries without coinage[xxxi], and Carthage also did not implement coinage until the end of the fifth century BC. Even then, they only employed coinage that was struck in Sicily, where a large portion of its mercenary contingents were hired.[xxxii] The Greek mercenary boom also had a further social phenomenon element to it, as mercenaries came to be acceptable in Greek society.[xxxiii] This is particularly of note since we see the recurrence of this fact with the Italian renaissance and arguably yet again with the PMC boom of the 21st century. The popularity of mercenary forces and their growing power, however, created the potential for a large-scale mutiny. This danger can be seen as directly proportional to the reliance and control of a governing body on hired forces.

Carthage—arguably the wealthiest city of its time—was able to afford an almost entirely mercenary army, picking and choosing exactly who to hire. In one instance the Carthaginians are recorded hiring a Spartan mercenary in 256 –255 BC specifically to train their armies[xxxiv] ; he was essentially an ancient private military consultant. However, their reliance on mercenary forces led them to be vulnerable in the face of a power they couldn't stop. A prime example would be the Carthaginian "Mercenary War", in which mercenaries in the employ of Carthage, returning to the city in the wake of the First Punic War, found that the city elders would not pay the soldiers their back wages.[xxxv] [xxxvi] In protest, the mercenaries marched on Carthage, joined by some seventy thousand incensed Libyan peasants, thus starting the war.[xxxvii] [xxxviii] In the end, it took Carthage had to use what little wealth remained in order to employ yet more mercenaries to quash the first contingent.

While the mutiny of forces is not something exclusive to mercenaries, this level of rebellion and seeking to extract payment is not the same as a military coup—an action more commonly associated with national militaries. The Carthage Mercenary War illustrates the damage that mercenaries can wreak on their employer if they feel cheated on pay or are otherwise disgruntled. While Carthage managed to eventually overcome the mercenary revolt, a

nation that puts all of its military resources into hiring private actors in a modern setting would be equally, if not more, hard pressed to repeat this victory.

This image of mercenaries operating under their own initiative would continue in the 13th century, when the European Free Companies would act of their own accord to seek employment, banding together and moving from country to country offering their services to the highest bidder.

The Free Companies of Europe

The European mercenary boom of the 13th century provides an example of military downsizing expanding the pool for mercenary recruitment, thus illustrating the effect of warfare conducted by nearly-pure mercenary armies, as it was the case of the Italian-city states. Also, an interesting example is that of Switzerland, in which one of its main exports was mercenaries.

The Free Companies (also known as Great Companies or Free Lancers) began to gain prominence throughout Europe in the 13th centuries and were influenced heavily by the development of mercenary warfare throughout the medieval ages. The Companies developed roughly in parallel with the Condottieri, who became famous throughout Europe as Italian mercenary army recruiters. Comprised of men from a multitude of countries, often former men-at-arms who found themselves out of work once warfare in their native lands ended, the Free Companies functioned as private armies that owed allegiance to no specific government. These armies had their own equipment and were available to any noble offering enough coin to employ them, creating armies comprised of multiple companies working in unison. The rise of the Free Companies has often been linked directly to the end of the first phase (1339-1360) of the Hundred Years War (1339-1453), during which both the English and French downsized their armies with the signing of the Treaty of Bretigny in 1360.[xxxix] This downsizing included veteran foot soldiers, as well as captains and other battlefield commanders who had been fighting for the English and French nobility. While the vast majority complied with the order to return to their peacetime occupations, many did not.[xl] These bands of men operated completely outside of any military or government authority, and would hire themselves out to whoever was willing to pay for their services. The Free Companies developed a fearsome reputation for looting and savagery. In one notable case, the Grand Catalan Company turned on its employer in order to

create the Duchy of Athens, transforming a successful military company into a successful political entity.[xli] The Free Companies and their other mercenary cousins were often combat veterans, and offered specialized forms of combat not seen in militia units utilized by military commanders for basic line infantry. Some notable examples included the Swiss Pike Companies, the German Landsknecht, and the Italian Condottieri.

These notable examples illustrate the different approaches mercenaries took to making themselves an important asset to military commanders. They also provide examples of the further systemization and industrialization of private warfare, making mercenary employment the all-important staple of the military market.

The Swiss Pike Companies

The Swiss Pike companies illustrate the controlling power of a nation that utilized its potential employment pool to create a powerful fighting force capable of offering its services in other wars, while retaining the loyalty of its mercenary base.

Switzerland during the 13–16th centuries is often compared to Greece in terms of its mercenary boom; the Swiss were the preferred mercenary forces for many armies, and the mercenary trade became a national hallmark.[xlii] However, the Swiss companies were often hired out en masse by their cantons (Swiss districts) to fight as mercenaries, thus gaining state approval for citizens who chose this type of employment, rather than developing independent mercenary bands.[xliii] [xliv] This made the Swiss very attractive to other nations due to their already trained and armed nature. Furthermore, it has been suggested that this was done so that Switzerland would be able to avoid directly entering warfare, as it had a large element of its population already very experienced in warfare.[xlv] Specifically, the Swiss were infamous for their tactics involving the pike.

The pike is by definition an exceptionally long spear (roughly 14–18 feet long) which levelled out the playing field of battle for infantry against cavalry. Prior to development of the pike, heavy cavalry had dominated the battlefield as the shock offensive force. However, the Swiss `Push of Pike` style of warfare rapidly seized the imagination of military tacticians and swayed the status quo away from heavy cavalry and towards an infantry-heavy battlefield. The Swiss initially supplied a specialized type of troops that different rulers rushed to obtain,

including French, Italian and Hungarian generals. The 'pike men' comprised a shock unit, which utilized thick columns of soldiers and effectively steamrolled its opponents with sheer brute force, or "push-of-pike" tactics.[xlvi] This made them unique, as the Swiss somewhat minimized their use of crossbows, handguns and artillery, preferring to maintain very strong pike and halberd squares. [xlvii] [xlviii]

The Swiss would see their status as specialized offensive troops end with a bitter defeat at the Battle of Bicocca in 1522, against a combined force of Spanish Tericos and German Landsknecht mercenaries that used fortifications and handguns to inflict heavy casualties.[xlix] [l] This resulted in the Swiss beginning to adopt the formations and tactics of other units on the field, maintaining a strong ranged weapon group as well as artillery. Since their tactics were no longer a specialized selling feature (although it should be mentioned that the Swiss continued to provide mercenary troops to a multitude of countries well into the 19th century) the ascendancy of Swiss military units was over. The Swiss cantons would continue to hire out their men into the 1700s, most noticeably to France,[li] however, this was much more a case of a state hiring out the services of its infantry to another, than direct mercenary work.

This national support, on a more tacit level than from a modern nation, allows for intervention in conflicts in which a nation has a vested interest while avoiding a direct confrontation. Additionally, the more conflict a PMSC is involved in, the more experienced and skilled it becomes at waging warfare. Because of this advantage, the profession of mercenary kept being sought out by governing bodies. Thus, while the later Swiss foreign military units came to resemble the French Foreign Legion or the Nepalese Ghurkhas, the Swiss pike companies of the 13th to 16th centuries remained state approved mercenary units.

German Landsknecht

The Swiss case, however, does not necessarily resemble that of other private companies. Another example of initially state-backed mercenary forces, the German Landsknecht, did not possess the same loyalty to their state but rather fought for whoever paid them. While technically under the control, of the German Emperor, they would fight against German forces as well, illustrating that state-sponsored mercenary units did not necessarily feel loyalty to their nation of origin.

The Landsknecht units (literally meaning "foot-soldier" or "land servant") were formed around 1490 by Emperor Maximilian I, who intended them to act as mercenaries, but on the condition that they would be willing to answer the Emperor's call should he ever need them.[lii] The reason for Maximilian's creation of these units was the Swiss Pike Regiments, currently in ascendance on the battlefield. With Germany lacking in the way of regular army and pike-infantry, Maximilian saw a chance to both create a military and to battle-harden it without having to enter direct conflict. However, this is not to say that the Landsknecht were particularly loyal: there are multiple accounts of Landsknechts fighting other Landsknechts on the battlefield, each company working for a separate employer. For instance, in a particular case, a German knight, Georg von Frundsberg, led a 10,000 man strong army of Landsknecht on campaign against Italy. However, the army soon found itself fighting opposing forces with contingents of Landsknechts working for them.[liii] Also, the Landsknechts were not particularly honorable individuals, they had a tendency for looting and a willingness to become violent if they felt cheated from their rightful pay. This is shown by the 1527 sack of Rome during which Landsknechts (led by the same Georg von Frundsberg) ran rampant in the city for nine months until they were paid their delayed wages.[liv]

In terms of specialization, the German mercenaries possessed *Zweihänder,* two-hander great swords, massive weapons that averaged four and a half feet in length. Used by the skilled *doppelsoldners,* or double-pay soldiers, these fearsome weapons would disrupt the Swiss in a pike battle and force the `push-of-pike' combat into the Landsknechts' favour. While the Landsknechts were primarily pikemen, they were willing to adapt do the changes of warfare, and diversified into use of artillery and firearms, allowing them to hold dominance with their defeat of the Swiss at Biocca in 1522.[lv] This adaptation would see the German Landsknecht still in existence in the time of the Thirty Years War.[lvi]

Condottieri: The Contractors

A further example of detachment from specific governmental control, the Italian Condottieri exemplify the development of truly business-minded warfare, as they were willing to fight for any patron who would pay for their services. They also operated with an accompaniment of scribes, lawyers and notaries, drawing up contracts with explicit stipulations and specific numbers of troops to be raised. It is from this extremely systemized approach to

conducting war that the PMSCs can most strongly trace their lineage, in which contracting warfare is a purely business-like affair.

Mercenaries were not new to the Italian city states by the 14th century. A series of invasions of Italy had resulted in German, Flemish, Brabantine and Hungarian mercenary bands appearing in the country.[lvii] These conflicts simply augmented the number of available private soldiers, as the English had also entered the scene by the early 13th century, and some of the famous companies still existed, albeit with new individuals.[lviii]

The Condottieri were recorded as treating the profession of arms as strictly business, with no loyalty guaranteed once a contract was fulfilled. Carefully-drafted documents stipulated the terms of service, number of men, and salary within the terms of the contract.[lix] In some cases the contract would stipulate a grace period, after the task's completion, in which the hired mercenaries could not wage war on their previous employer.[lx] The Condottieri employed a number of non-military personnel in order to maintain their business, including ``treasurers, bankers, attorneys, secretaries, notaries and registrars".[lxi] These mercenary companies were also notable for what, in *The Prince*, Niccolò Machiavelli described as "slow, belated, unconvincing victories, and then sudden, bewildering defeats".[lxii] In this, Machiavelli seems to be referring to the reduction of slaughter on the battlefield when Condottieri companies fought each other. It is recognized that the mercenary leaders would seek to defeat, but not entirely crush their rivals, lest they lose a potential patron for employment opportunities.[lxiii] Alternatively, he could simply be referring to the "push-of-pike" method of combat, as he speaks in turn of John Hawkwood, a leader of an English mercenary company called the White Company.[lxiv] Pike combat would looked much like a gradual back and forth grind, with one side finally turning and fleeing, something which would have occurred quite quickly after a long duration of seemingly standing still. Hawkwood`s White Company fought effectively in the style of Swiss pike regiments, with densely packed columns of men slowly advancing on foot with lances lowered.[lxv] Hawkwood himself achieved quite a high status in Italy, owning multiple estates.[lxvi] He is an example of the range of nationalities that found work as mercenaries in Italy in the 14th to 16th centuries.

Mercenary companies would hold a monopoly on warfare inside Italy,[lxvii] and would in fact seize political control from their employers.[lxviii] The so called "Grand Company" under the command of Walter of Montreal, numbering some 7,000 men, marched from city to city

demanding tribute.[lxix] The Condottieri mercenary companies in Italy were willing to fight for money, but would not decimate an opponent if they had the chance. However, this unwillingness to press the advantage for decisive victory was not the result of a merciful attitude, but rather of a farsighted view of potential employment by their opponent, something which does not nurture loyal soldiers, but hands victory to whoever has the largest amount of wealth to spend.

This method of conducting war would change as nations begin to look within their own citizens to raise their armies, rather than seeking external manpower. This would temporarily end the dominance of mercenaries on the battlefield, and bring about a much more standardized soldier who fought for a single national flag.

The Decline of Mercenary Participation and Rise of the Conditioned Soldier

This section will discuss the gradual decline of the mercenary as an actor on the battlefield, as the development of national armies absorbed the majority of independent soldiers into its ranks. One of the key reasons for this decline was the simplification of warfare, requiring less specialization and transforming the soldier into a mechanical operator rather than an independent combatant. An example of this reduction in specialization will be illustrated through the recruitment and training of the Prussian infantryman in the 18th century.

While "mercenaries" were utilized after the 1700s, they were much more closely linked to their respective states than were the Condottieri or Landsknechts. The development of national consciousness and a wish to maintain neutrality in conflicts can be argued to be one of the reasons why military units eventually stopped being sold to other countries. However, the independent mercenary bands seem to disappear closer to the 1700s rather than the 1850s.[lxx] For instance, the British hired some 30,000 German soldiers to augment their own military in America during the War of Independence in 1775. These men were hired from some of the poorer provinces, such as Hesse-Kassel, which caused the Germans who served overseas to be labelled with the generic name of "Hessians".[lxxi] While these individuals were indeed nationally unrelated to the conflict, and the German states were simply selling their forces to the British, the German soldiers themselves were not exactly mercenaries. That is to say, they did not seek employ with the British and merely functioned under the orders of their provincial nobility, who were paid a fee to supply such troops. Furthermore, Hesse-Kassel also supplied its troops to the

Netherlands, Venice, and England.[lxxii] Many countries developed distinct "foreign legions" within their military structure, some which exist to this day, such as the French Foreign Legion in the French army and the Nepalese Ghurkha units in both the Indian and British armies. Despite the fact that these units can include foreign individuals, in the case of the French Foreign Legion, members must swear allegiance to France. Similarly, in the case of the Ghurkhas, combatants are considered a part of the British military in all respects and therefore find themselves under British military laws and regulations.

The end result is that mercenaries in this time simply function in the uniform of the state they are utilized by, or in the uniform of the army they were contracted from, making them auxiliaries to an army rather than short-term mercenary forces.

Prussia`s Machine Men: The Prussian Infantryman

A perfect example of this shift in dynamics is that of Prussia; ``Frederick the Great of Prussia wrote that he would not furnish the Crown with mercenaries even if he was offered `all the millions possible'" [lxxiii] This reveals a change in mind-set which favours a long-standing army, which would arguably be more loyal to the governing body. Prussia's military development during the 18th century provides an excellent example of a largely conscripted and conditioned military, which would have absorbed potential mercenaries into its ranks. This type of simplification and standardization created an interregnum of widespread independent mercenary involvement in combat.

The Prussian army of Frederick William I (1713-1740) and his son Frederick II (1740-1786), also known as "the Great," was in large part formed out of a near slave trade form of conscription, which utilized "crimping" gangs that would kidnap, or otherwise threaten individuals into the army.[lxxiv] These gangs were not limited to functioning on Prussian soil and would actually operate in surrounding principalities as well.[lxxv] A second source of recruits for many armies of the time was the conscription of criminals. Convicts were often offered the option of either facing execution or military service.[lxxvi] In fact, the Prussian army has been called "mercenary" due to its extremely high percentage of foreign soldiers that comprised its ranks.[lxxvii] This however is not accurate, as these soldiers were enlisted (generally for life) in its army, fought in the uniform of the Prussian nation, and in many cases had been coerced into

service. Foreign mercenaries, therefore, found themselves enlisted directly into armies by which they would otherwise have been hired on a limited capacity, and they thus served out their military careers as soldiers of the state. If they deserted, managed to escape pursuit, avoided punishment, and offered their services to another state, they most likely found themselves once again enrolled as a soldier in the standing army of that state.

The Prussian military provides an excellent example of military developments of the time, specifically the decline in autonomy individual infantrymen would have on the battlefield. A soldier of the Prussian army could expect a regimen of extremely harsh discipline, utilizing an almost universal application of corporal punishment.[lxxviii] This led to training in a much more conditioned sense. After thousands of hours of repetitive drilling, a Prussian solider was expected to reflexively load, prime, and aim a rifle so that he could fire it on command.[lxxix] Line infantry warfare ultimately required the soldier to follow the orders of their officer to the letter, with absolutely no free thought as to the effect. An infantryman in the Prussian military looked forward to standing at attention for hours under the continuous barrage of artillery, only to walk point-blank into enemy fire before finally being ordered to return fire. At this time, muskets were not accurate, and a Prussian experiment, conducted towards the end of the 18th century, concluded that at 75 yards only 60 percent of shots would hit their intended target.[lxxx]

The end result made standardization and simplification key to victory; an average, almost-robotic soldier was to be directly maneuvered and commanded by highly trained and equally standardized officer corps.[lxxxi] This removed any market for specialization, and made recruitment a simple demand for raw bodies. Casualties in 18th century combat are estimated to have equalled any combat seen in previous centuries of warfare—the Prussian army lost 180,000 men during the Seven Years War of 1756-63.[lxxxii] Frederick the Great explains this new-found approach to war in the most colourful and accurate way: ``If my solders were to begin to think, not one of them would remain in the army.'' [lxxxiii]

Dynamic Shift: Warfare is Continuing to Become Asymmetrical

The gradual shift of warfare, from being highly systemized and ritualized on the battlefield to requiring more independence and self-initiative, provided a market once again for mercenaries and a short-cut for nations to access specialized actors without the expenditure of

time and training needed to create their own. Companies such as Executive Outcomes in the 1990's re-established the mercenary tradition by providing specialized forces to nations that did not possess enough soldiers of their own, if any at all.

As conflicts continue to become more and more asymmetrical (one force is either numerically and/or technologically inferior, and has to resort to unconventional tactics and/or equipment) and the development of more and more advanced tactics, and implementation of firearms, the expectations for combat infantry likewise shift. The infantry is no longer expected to stand in a straight line to load, prime, aim, and fire a rifle regardless of both musket and cannonball crashing into their lines, nor are they expected to go ``over the top`` and march headlong into machinegun fire as they were on battlefields as Ypres and the Somme in the First World War. The battlefields themselves have changed, and now include almost every geological feature on Earth. Furthermore, battles no longer take place in removed fields or woods; they occur throughout cities and towns populated by civilians. Armies have become much smaller than they were at the start of the 20th century.[lxxxiv] This is simply a matter of economics and cost-efficiency: no country can expect to equip massive armies with modern weapons, equipment, and protection without directly mobilizing its economy and putting it on a war footing.[lxxxv] In addition, maintaining a constant state of war can potentially reflect poorly on the nation maintaining it. On the international stage, they would appear conflict-oriented and risk censure by other nations, not to mention the fact that they would need to appeal to their own population to justify the high cost of maintaining their stance.

Mercenaries provide a quick augmentation of already standing forces, as they are already trained and often combat-experienced, offering short-term additional numbers for conflict.

Military Actors without Uniform

Warfare now features heavily the irregular combatant, who has no distinctive armaments or uniform. They are essentially armed civilians (with or without military experience), with ad-hoc units and informal ranks. This type of warfare became more and more popular with conflicts from the 1950s onwards, with the initial fragmentation of the Soviet Union, the wars in Africa and the CIA-backed wars of Central and South America. What was originally known as "rural guerrilla warfare" has moved on to "urban guerilla warfare", high profile and target attacks

which are essentially methods to denigrate government authority.[lxxxvi] Modern day insurgents, in multiple situations throughout the world, do not operate on a specific uniform, nor do they function continuously as combat units, but may or may not actively integrate themselves in with non-combatant populations. A modern infantryman is expected to think on their feet now, and assess all potential threats in order to maximize their reaction times. There is a requirement for individuals now to work together in small teams, without military operations on the scales previously seen in the First and Second World Wars.

The mercenary profession seemed to suddenly reappear in conflicts with the Congo Crisis of the 1960s. The mercenaries were from a multitude of nations, and were from very diverse backgrounds, including veterans of the Second World War and naïve individuals with illusions of adventure. Mike Hoare, a mercenary leader in the Congo conflict, recruited his soldiers through newspaper classified ads.[lxxxvii] The actions of the mercenaries in the Congo conflict are very murky, and exactly all the activities they were up to is still questioned. However, mercenary units are recorded working in concert with Belgian and American forces. The Congo mercenaries simply added to the chaos of the Congo Crisis and seemed to muddle events further.

Executive Outcomes

Executive Outcomes was a South African based PMSC, which set the framework for companies after it brought to the market specialization for clients in conflict resolution. Like the Free Companies of the 13th century, this PMSC was created as a result of downsizing of the military. Many of them were veterans of South African Defense Force (SADF), and had combat experience. This military career led to them marketing their specializations, and their success in Sierra Leone proved that a small military unit could defeat an enemy force many times larger if proper equipped and trained.

The actions of Executive Outcomes (EO) PMSC in Angola and Sierra Leone during the 1990s were that of an independent mercenary force hired to actively assault and destroy elements of the rebel forces. Executive Outcomes, along with Sandline, was one of the first corporations (that is to say a legally existing business entity) to strictly market combat ready forces for offensive work.[lxxxviii] They acted similarly to the American military during the Vietnam War, conducting seek and destroy missions through helicopter insertion of infantry. The firm spent

roughly 21 months in Sierra Leone,[lxxxix] during which it suffered less than 20 casualties,[xc] out of a total of approximately 250 individuals, actively engaging a force of an estimated 15,000 individuals (Shadow Company). Through its efforts, a peace accord was signed November 1996.[xci]

The majority of Executive Outcomes was comprised of former South African Defence Force (SADF) personnel, who were downsized following the end of apartheid.[xcii] A large chunk of these men had fought in multiple conflicts, and many of them actually came from South Africa`s special forces, which was especially hated by the South African revolutionaries (ANC). Some elements of these units, such as the Koevoet, a police counterinsurgency group, were known to have committed atrocities such as torture and killing of prisoners.[xciii]

This downsize is in some ways reminiscent of the English free companies that formed during the Hundred Years War, as they had nothing else to turn to except seeking further employment in warfare. An estimate of the total number of soldiers dismissed from the SADF is 60,000; generating a very large potential employment pool for EO.[xciv] The pay offered to individuals monthly ranged from 2,000 to 13,000 USD (United States Dollars) based on experience, and was roughly 3,500 dollars for soldiers, 4,000 for officers, and 7,500 for aircrews, roughly 5 times the South African military equivalent.[xcv] They brought with them a level of specialization that was valuable on the market, and in succeeding to such a large degree were able to prove the strategic, if not the moral, value of utilizing mercenaries as an alternative to standing militaries. While the origins of many of EO`s employees made for some tension, as they were veterans of a military that had actively attempted to crush the forerunners of the current government, it has been argued that South Africa made use of EO's formation to forward its own interests, ``pushing`` even for EO to take on certain contracts in a number of African countries.[xcvi]

PMCS: Modern Condottieri on a Global Scale

PMSCs, like their Condottieri forbearers, construct their forces around the needs of the contracts they acquire. They are comprised of combat veterans from multiple nations, and provide specialized combat skills.

If Executive Outcomes and the mercenaries of African in the 1960s were the Free Companies of Europe, the Private Military Companies(PMC) and Private Security Companies(PSC) of the 2001 private contractor boom[xcvii] were the Condottieri in corporate structure and contracting methods. While PMC companies did exist in a much smaller manner previous to September 11, 2001, they were already expected to continue in expansion. [xcviii] The attacks on the World Trade Center were akin to adding gunpowder to a jerry can and lighting a match. The private military sector overnight turned from seeing a slow and steady increase in business to becoming a thriving enterprise with multiple contracts, as the United States looked for advisors to upgrade, train, and augment its military forces in the conflicts to come. ``In Iraq, the US Government Accountability Office (GOA 2006) estimated between 20,000 and 50,000 former military personnel have been employed by PMCs supplying various military services to coalition state agencies and US based companies working on Iraq reconstruction projects``.[xcix]

Like the Condottieri of ages past, the PMCs build forces around the needs of their contracts, and do not have a static force always on hand. Rather, they collect their forces and then bring them to the employer. Similarly, this can be seen through surviving Condottieri contracts, in which different conditions and even negotiations can be observed.[c] In the case of PMSCs, the exact nature of contracts is much murkier. For the United States of America, a major employer of PMSCs, the Defense Department has seen accusations of fraud and lack of transparency with respect to its contract spending.[ci]

However, the supply of specialized troops for specific contracts remains the same, with the companies themselves remaining static and their ``employees," more often than not, functioning on much more of a contract basis (personal interview). This allows for the company to keep a dynamic and expanding roster, and for individuals themselves to go and seek further certification in other specialized forms of both combat and security proficiencies. This includes, but is not limited to: proficiency in foreign weapons(usually specifies the weapon model), firing from moving and static vehicles, firing while exiting vehicle, entering buildings, exiting buildings, securing rooms in hostile environments, operating static machine guns, handgun proficiency, explosive proficiency, ability to disarm bombs, and scarily enough, security clearance levels of United States Department of Defence. The last one is required by many different jobs in order to apply for them (pulled from triple canopy and academic websites).

Former Special Forces members are highly sought out, including Navy SEALs, Delta Force, Green Berets, British SAS, Irish Rangers, Australian SAS, Nepalese Ghurkhas, and Serbian Commandos.[cii] One estimate stated there were more ex-SAS than active duty members inside Iraq in 2004.[ciii] With offerings of very high pay compared to the salary of most special forces operators, with comparable or even lower risk, it is no wonder these individuals are willing to work for these companies, in some cases even resigning from the military in order to do so(interview).

In many cases the weaponry and equipment needed is supplied by the contracting company for the individual contractor, with the allowance that they may bring whatever gear they prefer should they choose to.[civ] This provides PMCs the ability to use whatever equipment they would prefer. While the base uniform may be determined by the company itself the rest is up to the individual, arguably giving them the advantage of the best tools for the job. This, of course, is not always the norm, as some cases have shown individuals turning up with equipment that is absolutely sub-standard. In addition, the availability of weaponry inside countries in which the mercenaries operate may not be adequate (interview, Shadow Company).

Another reason put forward for the increase in PMCs is the cost. The same figures have been debated as both positive and negative; a Blackwater operative in 2007 cost 1,222 per day, a sergeant in the military cost between 50,000 and 70,000 per year.[cv] The argument, however, does not take into account that mercenaries are utilized as contract-based individuals, and if hired for only short periods of time reduce the cost of the military significantly, especially if those hired have extensive military background and therefore have all of the training normally expected of an armed forces member.

Findings

Demilitarization Provides Recruits

What Executive Outcomes demonstrated on the military market was that quality could once again defeat quantity and that with the military downsizing that was increasing after the end of the cold war, a market was opening up for these soldiers to work on-demand in a multitude of countries that could not, or would not, provide their own military force. The “phenomenon”` of the mercenary boom can be tied in part to global military downsizing from 6,873,000 (1990) to

3,283,000 (1997).[cvi] This giant downsize can be seen quite logically as placing a large number of individuals with military training on the market for recruitment by private military companies,[cvii] as well as opening the door in some cases to careers in criminal activities. 'Private Intelligence' in Eastern Europe, for example, commonly refers to former State Security personnel working closely with Crime Syndicates.[cviii] A simple search into the origins of Los Zetas Cartel in Mexico shows that they began in a military unit going mercenary for the very elements they were originally tasked to destroy, in almost Heart-of-Darkness-style villainy. While only alleged, Mexican and Columbian cartels are rumored to hire any former special forces members willing to work with them on instructing their soldiers on tactics,[cix] weapons handling and proper firing drills (with the leader of the Sinaloa Cartel ranked 701 on the list of world's richest people in the world, it would not be considered a stretch). [cx]

In discussions with PMCs, the author has also heard in passing the ``dark side"` of mercenary work. That is to say individuals leaving the military for whatever reason and being immediately approached by criminal elements and recruited either with offers of cash or with threats of violence. Some of the criminal elements named were the Mexican Drug Cartels, the Russian mafia and more locally, criminal motorcycle gangs (interview).

All of this, however, is not a new phenomenon as shown by the Landsknechts and Free Companies, as well as the Greek mercenaries to a lesser degree, who when not fighting for an employer, would regularly turn to robbery, looting and general brigandage. While the modus operandi may have changed, the essence of the actions remains much the same

Quality over Quantity

> "There is such a thing as a 'natural soldier': the kind of man who derives his greatest satisfaction from male companionship, from excitement, and from the conquering of physical and psychological obstacles. He doesn't necessarily want to kill people as such, but he will have no objections if it occurs within a moral framework that gives him a justification—like war—and if it is the price of gaining admission to the kind of environment he craves. Whether such men are born or made, I do not know, but most of them end up in armies (and many more move on again to become mercenaries, because regular army life in peacetime is too routine and boring.)" Dyer, *War.*

The resurgence of private actors in warfare, conducting combat actions on the behalf of an employer, coincides with the development of warfare that requires specialized actors who can conduct warfare independently. Asymmetrical warfare demands free thinking operators who are able to function without continuous orders from their higher ups. Furthermore, with the demobilization of military and the increasing budgets of these companies as they receive more and more lucrative contracts, PMSCs have prime choice with respect to who they hire, and are able to look for the most skilled and experienced individuals to contract. Furthermore, the industry is one that has the ability to lure individuals from the military after they have received their basic training, offering a substantial increase in pay to those willing to join.[cxi]

Like the English Longbow man and the Swiss pikeman, actors in modern conflict must be specialized, and private enterprises offering such services have flourished when they are in demand and willing to adapt to the needs of their employer. Current PMSCs are adapting as well; a British company called Air Partner is now offering a "global evacuation service" to multinational corporate employees in the event of crisis. As this degree of specialization and diversification occurs, so too does the centralization of violence. The mercenary trade is not a product of the 20th or 21st century, and the PMSC industry is populated by individuals who arguably, in another century, upon being downsized, would have found themselves joining a free company or a landsknecht regiment, and posed the same possible negative ramifications of freedom of force

Endnotes

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[i] Andreopolous, *Revisiting the Role of PMSC*, p.141

[ii] Singer, P. W. (2011-06-16). *Corporate Warriors: The Rise of the Privatized Military Industry*, Updated Edition (p. 40). Cornell University Press. Kindle Edition. p.40

[iii] Scahill, Jeremy. *Blackwater: The rise of the world's most powerful mercenary army*. Profile Books, 2011. pp. 105-106.

[iv] O'Brien, Kevin A. "PMCs, myths and mercenaries: the debate on private military companies." *The RUSI Journal* 145, no. 1 (2000): 59-64. p.64

[v] Singer, Corporate Warriors, p.76

[vi] Ibid

[vii] Fulloon, Mark. "Private military companies: The new condottieri." *Social Alternatives* 32, no. 1 (2013): 49. p.49

[viii] Andreopolous, *Revisiting the Role of the PMSC*, p.140

[ix] Ibid p.147

[x] Fulloon, *The New Condottieri*, p.51

[xi] Ibid. p.50

[xii] Holmilla, *A Private History of Violence*, p.52

[xiii] Singer, *Corporate Warriors*, p.46

[xiv] Dyer, *War*, p.39

[xvxv] Ibid. p.36

[xvi] Ibid.

[xvii] O'Connell, Robert L. *The ghosts of Cannae: Hannibal and the darkest hour of the Roman republic*. Random House, 2010. p.45

[xviii] Grant, Reg G. *Warrior: A Visual History of the Fighting Man*. Penguin, 2007. p.81

[xix] Fowler, Kenneth. "Sir John Hawkwood and the English Condottieri in Trecento Italy." *Renaissance Studies* 12, no. 1 (1998): 131-148. p.137

[xx] Ibid. p.111

[xxi] Dyer, *War*, p.55

[xxii] Ibid, p.63

[xxiii] Singer, *Corporate Warriors*, p.29

[xxiv] Russell, *Greek as Mercenary Soldier*, p.107.

[xxv] Ibid, p.104

[xxvi] Freeman, Charles. *Egypt, Greece, and Rome: civilizations of the ancient Mediterranean*. Oxford University Press, 2014. p.318

[xxvii] Ibid.

[xxviii] Miller, Harvey F. "The practical and economic background to the Greek mercenary explosion." *Greece and Rome* (Second Series) 31, no. 02 (1984): 153-160. p.158

[xxix] Russell, *Greek as a Mercenary Soldier* p,110

[xxx] Miller, *Background on the Greek Mercenary Explosion*, p.157

[xxxi] Benjamin, M. Sullivan. "PAYING ARCHAIC GREEK MERCENARIES: VIEWS FROM EGYPT AND THE NEAR EAST." *The Classical Journal*, 107, no. 1 (2011): 31-61., p.33

[xxxii] Russell, *The Greek as Mercenary Soldier*, p.111

[xxxiii] Holmilla, *The History of Private Violence*, p.47

[xxxiv] Freeman, *Civilizations of the Ancient Mediterranean*, p.385

[xxxv] Miller, *Background on Greek Mercenary Explosion*, p.158

[xxxvi] O'Connell, *Ghosts of Cannae*, p.77-78.

[xxxvii] Ibid.

[xxxviii] Miller, *Background on the Greek Mercenary Explosion*, p.158

[xxxix] Holmilla, *A Private History of Violence*, p.49

[xl] Ibid.

[xli] Singer, *Corporate Warriors*, p.154

[xlii]Ropp, Theodore. *War in the modern world*. JHU Press, 2000 , p.23

[xliii] Ibid.

[xliv] Holimlla, *A History of Violence*, p.56

[xlv] Ibid.

[xlvi] Singer, *Corporate Warriors*, p.26

[xlvii] Ibid, p.27

[xlviii] Holmilla, *A Private History of Violence*, p.59

[xlix] Ibid.

[l] Singer, *Corporate Warriors*, p.29

[li] Ibid, p.27

[lii] Grant, *Warrior*, p.111

[liii] Ibid, p.112

[livliv] Ibid.

[lv] Singer, *Corporate Warriors*, p. 27

[lvi] Ibid.

[lvii] Holmilla, *A Private History of Violence*, p.52

[lviii] Ibid, p.53.

[lix] Ibid, p.52

[lx] Fulloon, *The New Condottieri*, p.50

[lxi] Holmilla, *A Private History of Violence*, p.52

[lxii] Machiavelli, N., and translated by T. Parks. *The Prince*. Penguin Books Limited, 2009 p.52

[lxiii] Montross, Lynn. *War through the Ages*. Harper, 1960. p.201

[lxiv] Homilla, *A Private History of Violence*, p.53

[lxv] Ibid.

[lxvi] Fowler, *Hawkwood and English Condottieri*, p.132

[lxvii] Singer, *Corporate Warriors*, p.23

[lxviii] Ibid, p.25

[lxix] Montross, Lynn. *War through the Ages*. Harper, 1960. p.201

[lxx] Singer, *Corporate Warriors*, p.31

[lxxi] Singer, *Corporate Warriors*, p.33

[lxxii] Ibid, p.32

[lxxiii] Holmilla, *A Private History of Violence*, p.64

[lxxiv] Ropp. *War in the Modern Wor*ld, p.54

[lxxv] Ibid.

[lxxvi] Ropp, *War in the Modern World*, p.54

[lxxvii] Singer, *Corporate Warriors*, p.32

[lxxviii] Ropp, *War in the Modern World*, p.56

[lxxix] Dyer, *War*, p.65

[lxxx] Ibid. p.62

[lxxxi] Ropp, *War in the Modern World*, p.58

[lxxxii] Dyer, *War*, p.63

[lxxxiii] Grant, *Warrior*, p.140

[lxxxiv] Dyer, *War*, p.191

[lxxxv] Ibid.

[lxxxvi] Ibid. p.165-167

[lxxxvii] Singer, *Corporate Warriors*, p.43

[lxxxviii] O'Brien, *PMCs, Myths and Mercenaries*, p.61

[lxxxix] Singer, *Corporate Warriors*, p.112

[xc] Ibid. p.114

[xci] Singer, *Corporate Warriors*, p.113

[xcii] O'Brien, *PMCs, Myths and Mercenaries*, p.59

[xciii] Singer, *Corporate Warriors*, p.102

[xciv] Ibid.

[xcv] Ibid.

[xcvi] O'Brien, *PMCs, Myths and Mercenaries*, p.59

[xcvii] Scahill, *Blackwater*, p.105-106

[xcviii] O'Brien, *PMCs, Myths and Mercenaries*, p.63

[xcix] Fulloon, *The New Condottieri*, p.49

[c] Fowler, *Hawkwood and English Condottieri*, p.142

[ci] Scahill, *Blackwater*, p.366

[cii] Ibid. p.140
[ciii] Ibid. p.141

[civ] Scahill, *Blackwater*, p.143

[cv] Scahill, *Blackwater*, p.24

[cvi] O'Brien, *PMCs, Myths and Mercenaries*, p.60
.
[cvii] Fulloon, *The New Condottieri*, p.49

[cviii] O'Brien, *PMCs, Myths and Mercenaries*, p.60

[cix] Singer, *Corporate Warriors*, p.15

[cx] Beith, Malcolm. *The Last Narco: Inside the Hunt for El Chapo, the World's Most Wanted Drug Lord*. Grove Press, 2010 p.156

[cxi] Singer, *Corporate Warriors*, p.76

Bibliography

Beith, Malcolm. *The Last Narco: Inside the Hunt for El Chapo, the World's Most Wanted Drug Lord*. Grove Press, 2010

BENJAMIN, M. SULLIVAN. "PAYING ARCHAIC GREEK MERCENARIES: VIEWS FROM EGYPT AND THE NEAR EAST." *THE CLASSICAL JOURNAL* 107, no. 1 (2011): 31-61.

Brabazon, James. *My friend the Mercenary*. Canongate Books, 2010.

Dawkins, R. M. "The later history of the Varangian guard: some notes." *Journal of Roman studies* 37, no. 1-2 (1947): 39-46.

Dyer, Gwynne. *War*. Crown Publishers, 1985

Freeman, Charles. *Egypt, Greece, and Rome: civilizations of the ancient Mediterranean*. Oxford University Press, 2014.

Fowler, Kenneth. "Sir John Hawkwood and the English Condottieri in Trecento Italy." *Renaissance Studies* 12, no. 1 (1998): 131-148.

Fulloon, Mark. "Private military companies: The new condottieri." *Social Alternatives* 32, no. 1 (2013): 49.

Grant, Reg G. *Warrior: A Visual History of the Fighting Man*. Penguin, 2007.

Holmila, Erkki. "THE HISTORY OF PRIVATE VIOLENCE." ENDC Proceedings, Volume 15, pp.45-74

Lind, John H. "Varangians in Europe's Eastern and Northern Periphery." *Ennen ja Nyt* (4) (2004).

O'Brien, Kevin A. "PMCs, myths and mercenaries: the debate on private military companies." *The RUSI Journal* 145, no. 1 (2000): 59-64

Machiavelli, N., and translated by T. Parks. *The Prince.* Penguin Books Limited, 2009

McKechnie, Paul. "Greek mercenary troops and their equipment." *Historia: Zeitschrift fur Alte Geschichte* (1994): 297-305

Miller, Harvey F. "The practical and economic background to the Greek mercenary explosion." *Greece and Rome (Second Series)* 31, no. 02 (1984): 153-160.

Montross, Lynn. *War through the Ages*. Harper, 1960.

O'Connell, Robert L. *The ghosts of Cannae: Hannibal and the darkest hour of the Roman republic.* Random House, 2010.

Ropp, Theodore. *War in the modern world*. JHU Press, 2000

Russell, A. G. "The Greek as a Mercenary Soldier." *Greece and Rome* 11, no. 33 (1942): 103-112.

Scahill, Jeremy. *Blackwater: The rise of the world's most powerful mercenary army.* Profile Books, 2011.

Singer, P. W. Corporate Warriors: The Rise of the Privatized Military Industry, Updated Edition. Cornell University Press, 2011. Kindle Edition.

Benjamin, M. Sullivan. "PAYING ARCHAIC GREEK MERCENARIES: VIEWS FROM EGYPT AND THE NEAR EAST." *THE CLASSICAL JOURNAL*107, no. 1 (2011): 31-61.

Hear My Voice: The Experiences of Transgender Sex-workers within the British Columbia Healthcare System

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Abstract:

The purpose of this research project is to document the personal experiences of transgender sex workers (TSW) in dealing with the healthcare system. Healthcare professionals (HCP) exposure to sex workers or transgender people is limited, and often when exposed to this population, HCPs do not know the proper way to behave. This can lead to TSWs not feeling safe to access healthcare, which can have adverse health outcomes for them. Grounded in phenomenology and thematic analysis, phase one of this research involved collecting data through interviews with TSWs to explore the positive and negative experiences they have had with respect to their involvement in healthcare. During phase two of the research, a thematic analysis will be conducted focusing on a series of themes that were identified through interviews with TSWs, and any gaps or barriers to TSW care will be explored. The conclusions drawn from the research will provide a foundation for recommendations and suggestions to be made on how HCPs can help to provide a safe, supportive health care environment for TSWs. This will foster a better understanding of this unique population, and assist in equipping HCPs with the knowledge they need to provide competent care.

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Introduction

It has been acknowledged that stigma and discrimination contribute greatly to greater healthcare needs for transgender sex workers (TSW) (Grace & Zunner, 2012; Grant, Mottet, & Tanis, 2011; Houston, 2011; Mulia, 2002; Roche & Keith, 2014; Slamah, Winter, & Ordek, 2010). Discrimination by employers, parents, friends, strangers, healthcare workers, and others in a society can lead to higher needs for mental health treatment for anxiety, depression and substance use disorders, to the delay of the seeking of emergency or non-emergent medical care when it is needed, to the withholding of important information from healthcare providers for fear of judgment, and to a number of other issues that negatively impact the health of the individual (Roche & Keith, 2014).

Despite the fact that healthcare providers are in a prime position to assist transgender sex workers to improve their health outcomes, many in this population have struggled to find healthcare practitioners who are knowledgeable and supportive (Roche & Keith, 2014). A large contributing factor to this lack of awareness and knowledge on the part of the health care professional (HCP) is the fact that this is such a specialized population ("*We just don't come up frequently enough*," said one participant).

There is limited peer-reviewed literature available that addresses the needs of this population within healthcare, and this literature tends to be limited to data collected in the United States and in Europe (Grace & Zunner, 2012; Operario, Soma & Underhill, 2008). The literature also often addresses the healthcare needs of either transgender individuals or individuals who work in sex work, but rarely that of transgender sex workers, despite statistics stating that 16% of Ontarian transgender individuals report having engaged in sex work (Bauer et al, 2013). By exploring this topic, the authors hope to provide information that directly addresses the experiences of transgender sex workers who have accessed the healthcare system in British Columbia, Canada, thus filling a gap in the literature.

This study aims to explore the challenges that TSWs face when accessing the healthcare system in British Columbia, as well as the strengths that the current healthcare system offers. The conclusions drawn from this inquiry will then lay the foundation for recommendations that can assist healthcare professionals and systems in better meeting the health needs of transgender sex workers. In turn, this will foster greater sensitivity to this unique population within the healthcare system.

For the purposes of this report,

1. *Transgender* individuals are "those whose psychological self ('gender identity') differs from the social expectations for the physical sex they were born with" (Transgender, n.d.). This is a broad and far-reaching term that is used by people who have a wide variety of definitions of self and gender. A transgender person may also self-identify as trans, genderqueer, gender fluid, androgynous, two spirit, transsexual, or any other number of gender identities.
2. *Transsexual* individuals are people who "do not identify with the sex they were assigned at birth and wish...to realign their gender and their sex through use of

medical intervention" (Transgender vs. Transsexual, n.d.). Examples of medical intervention are sexual affirmation surgery, hormone use, and cosmetic procedures such as facial feminization or masculinization surgery.

3. Sex workers are individuals who receive money or goods in exchange for sexual services (Overs, 2012). Examples of sex work include escorting, adult film performance, phone sex operation, domination/submission work, adult webcam performance, erotic dancing, sexual surrogacy, tantric sex services, and other services.

Participants

Inclusion criteria for participation:

1. Self-identifies as transgender,
2. currently works in sex work in Canada (or has done so within the past five years),
3. has accessed the British Columbian healthcare system within the past two years, and is over the age of eighteen.

Participant 1: 50, self-identifies as a transsexual woman, has worked for twenty-five years as a dominatrix in Vancouver.

Participant 2: 35, self-identifies as gender-fluid, worked in sex work for several months as an escort in Kamloops.

Participant 3: 25, self-identifies as a transgender man, has worked in sex work for five years as an actor and technician in adult film in Vancouver.

Participant 4: 60, self-identifies as an intersex transgender woman, has worked in sex work for 45 years as a survival sex worker (escorting).

*ages are approximate to maintain confidentiality

Methods

Study Design

Qualitative research methods were used to explore the experiences of TSWs in the British Columbian (BC) healthcare system. Data was collected through recorded semi-structured interviews with TSWs in hopes of developing a broader understanding of the challenges and barriers TSWs face while accessing and navigating through the British

Columbian healthcare system. The study was conducted in BC, with three interviews taking place in the metropolitan area of Vancouver, BC, and one taking place in the mid-sized city of Kamloops, BC. Written informed consent was received prior to the beginning of interviews and data collection.

Participants were recruited through purposive and snowball sampling, with various businesses, advocacy groups, and agencies contacted through email, telephone, word-of-mouth referrals, and dissemination of recruitment posters. Recruitment hoped for diversity of age, identified gender, and healthcare experiences to ensure the richest data possible.

Data Collection

Interviews were conducted by the primary investigators in a semi-structured format and recorded. Interviews were face-to-face with participants in a mutually agreed upon location. Interviews were up to two hours and transcribed verbatim for analysis. Initial 'icebreaker' questions were used to allow the participant to open up and become comfortable, and then main questions were introduced. Participants were able to speak freely as well as follow guiding questions, in order to allow the interviewers to receive the richest data possible. Participants provided data on socio-demographics, involvement in sex work, involvement in healthcare services, and enlightenment in regards to their experiences and feelings.

Analysis

Qualitative analysis was conducted on the interview transcripts using thematic analysis. Thematic analysis has been defined by Vaismoradi, Turunen, and Bondas (2013) as "an independent qualitative descriptive approach for identifying, analyzing, and reporting themes" (p. 400). The following framework for thematic analysis as defined by Braun and Clarke (2008) in Vaismoradi et al. was used:

1. Familiarizing with Data
2. Gathering initial codes
3. Search for themes – reviewing themes – defining and naming themes
4. Producing the report.

The investigators used inductive inquiry to analyze themes and patterns that arose throughout the interviews. Two researchers were involved in the analysis and worked through all four transcripts together, coding potential themes.

To ensure credibility, researchers read over transcribed interviews and coding occurred independently. The results of the coding were then discussed between the researchers. Adequacy of data was considered, and limitations were discussed. The investigators considered whether saturation of data occurred, and the investigators determined that sufficient data was present, although there were several new themes that may be explored further.

Results

The following results are the themes that the authors deducted from the transcribed interviews:

Theme 1: Subtle distancing

Transgender sex workers often face subtle distancing from healthcare providers. Although these changes in tone of voice, body language or other shifts are subtle and often unintentional or subconscious, clients of HCP take notice of them. Clients who are often marginalized in society become all the more sensitive to these changes as they experience them over and over across their lifespan, making it even more important for HCPs to be self-aware when communicating with TSWs.

"They ask all the questions and then suddenly, the rubber gloves come on. The distance between you and them, and that's what happens. They find out and then suddenly their attitude changes. And it still happens;it happens daily. I don't think that you want to do that daily with a doctor, a physician, and the medical world! You know? You want a standard of care to be given to you right off the bat when you walk in the door. I think that's essential." -Participant 1

"This is more persona; you can tell, you can feel. People are not stupid; I really believe that people are very astute, especially when you're seeking out medical care. And when you're looking for different things, you can tell. You can tell when someone's guard goes up and it's not the first time it's happened to me." -Participant 1

"There's a lot of subtleties- the words people say that demean how I choose to identify. For example, if initially someone will call me he- because physically I still look like a he, other than how I dress- I'll say 'can you use the she pronoun,' and some will really try;some won't at all. It's already a subtle hint that they don't want to honour me or respect where I'm coming from. And then there's other little comments, like 'it's a choice,' or 'you're sick.'" -Participant 2

Theme 2: Dismissive attitudes

Many transgender clients of healthcare who are sex workers experience blatant dismissal by HCPs, and point out that when comparing their experiences with those of other users of the healthcare system they seem to experience dismissal more often and more quickly. The comments in the interviews of this study indicate that these clients feel shut down by many healthcare providers -- that they are treated as though their concerns are illegitimate. One participant reports that, because Canadian laws do not necessarily offer legal protection against discrimination for transgender individuals, and because, traditionally, Canadian law has punished people who engage in sex work simply for doing their job, it makes it easier for all people, including those working in healthcare, to ignore the validity of TSWs as people deserving of equal treatment.

"It's been a real serious search to find individuals who would actually listen to me and take me seriously in what I was doing." -Participant 1

"There's a lot of dismissive attitudes with these individuals, and they don't do that with other patients. Because I've gone to doctors who are the same doctors of friends of mine and they get very different treatment when it comes to doing types of blood work, and I'm going in for the same things." -Participant 1

"They can't talk about that they are sex workers because they are automatically pushed aside. They are deemed unimportant." -Participant 2

"Some of us may not be healthy, may have negative behaviours, but we are all part of the community. We all deserve to be supported, and that can perpetuate health too." Participant 2

"I feel like, as a trans sex worker, I'm kind of met twice with that "Nobody knows I'm a real thing" which can happen socially and it can happen legally. Like, I don't have legal

protection as a trans person. I have legal protection as a gay person, but not for being trans specifically." -Participant 3

"Let us self-identify. It's crazy- I've legally changed my name to [female name], *and too many times they'll screw up on the pronoun.. Like he or… you know you're in a waiting room, and the nurse come out and asks for Mr.* [female name]. *"* -Participant 4

"S*o I finally get a nurse and this one nurse thought I was a junky, and I don't do needles. And she thought I was prostitute junky. They never listen to what you say. The only thing they saw was 'sex trade,' and after that they treated you like a bimbo bitch that doesn't know shit. And you just have to go with it because you know they treat all the girls like that."* -Participant 4

Theme 3: Assumptions and judgments about sex workers as "victims"

The participants in this study reported experiencing assumptions by healthcare workers that they are "victims" because they work in sex work. Two of the four participants made numerous statements that they choose to be in sex work and enjoy the work. Although many sex workers are indeed in the line of work due to financial need, lack of availability of other jobs, or coercion , there are indeed many who choose it because they enjoy it.

The value of recognizing each person's individual experiences is pertinent for healthcare workers. It is important to avoid making assumptions regarding this question and to avoid attaching negative stereotypes to these clients.

"People who perform sex work are doing work. It's work to them." -Participant 1

"Do not assume that just because they are a sex worker that they are a victim. If you need to know, find out. Ask them. Don't assume." -Participant 2

"Sex workers are human, and they make choices, and sometimes it's based on survival and sometimes it's based because they want to. Like me, I chose because yes, there was a financial piece to it, but I wanted to do it, and I actually enjoyed some of it." -Participant 2

"There's an interesting narrative of wanting to transition because you're born in the wrong body and you hate yourself until you become this upstanding man or woman;

meanwhile, there's this narrative of if you're a sex worker, you want out. So there's a lot of 'I understand your needs and I understand your needs, and here's how you become the perfect straight person you've always wanted to be. If you get out of the industry, it's fine.' It's very victim-based. And it's not okay to have a fluid gender and to be fine with your career choice." -Participant 3

In spite of these individuals' experiences, Participant 4 stated:

"I would not wish sex work on anyone".

Recognizing differences in experience helps all HCPs to reach a deeper level of rapport with and understanding of the clients they serve.

Theme 4: Building a network of supportive and informed healthcare providers is important, but extremely difficult in the beginning

Because there is no centralized location where transgender individuals and sex workers can get information directing them to supportive healthcare services, these clients can often only become connected with services through word-of-mouth and recommendations by other people in the community.

"I had to seek out my own specialists, so that was something I had to take up on my own, which wasn't easy." -Participant 1

"For people, it's about being honest and truthful and trustworthy with individuals, and that makes a person feel good. The compassion that people are looking for, people who are already compromised emotionally, they want to be validated as an individual when they go through that door. It's really, really important. And after the validation comes the emotional support, but also the care that I'm getting from these individuals [is better] because they believe in me and they want to give me the same amount of care that they're giving anybody else that's coming through their doors." -Participant 1

"My experience in the healthcare system within the past few years has been great, mostly based on how involved in the [trans] *community I am."* -Participant 3

"Once I find the right places, like now I've found Three Bridges [a clinic in Vancouver], *that's been great for me. I haven't felt the need to access sex work resources but I feel very able to, based on my connections there. But they're kind of, you know, tucked, so if you don't know where to look then you're kind of screwed there."* -Participant 3

"The initial finding of the right people and the right connections [has been my biggest barrier to accessing healthcare]. *Like when I was handed the contact information of a person who no longer worked at Vancouver Coastal Health. I would have been so fucked there, that would have thrown me for a loop, and I was on a Live Journal community* [an online blog] *at the time and had mentioned I was going to go see this guy, and somebody commented there "That guy's no longer there; you need to talk to this guy." Like he just happened to be there. So once you start making enough friends who are going through the process, you can have each other's backs and navigate the system that way, but starting off, who knows?"* -Participant 3

"*I started seeing* [a counselor] *when I was having trauma issues and breaking down. She's the one who connected me to* [another worker] *which got me to Dreamweaver which was on the Riverview grounds* [a treatment centre]." -Participant 4

Theme 5: Mental health care is urgent, yet complicated by numerous factors

Barriers to mental health care were reported by two of the participants in this study as being prevalent. Participant 3 spoke of extreme apprehension to access mental health services, despite experiencing extreme anxiety and deep depression, for fear of seeming mentally ill and therefore incompetent to make the decision to transition:

"*A thing that I took on for myself when I started transitioning and has affected me since: I sort of had the sense that I had to be a 'sane trans person,' because you need doctor approval to get from A to B, and if you have any other mental health issues or if you're an addict or have some other anything, that can halt your process. You really want to appeal to the person who's gatekeeping the* [transition] *process for you. There's no room for mental illness because I need to maintain my credibility in case I want surgeries or whatever that may be.*

It is also a challenging balancing act, since, as this participant further explained,

"*I want to show that I'm doing poorly enough that I need to do this with my body, but I'm doing well enough that you can trust me to make this choice.*" Participant 3

Participant 2 also explained that, in order to access government-funded psychiatry services necessary to begin transitioning physically,

"*You have to get a psychologist to do the first assessment, and most of the doctors are not*

covered."

This is a major barrier for lower-income transgender individuals looking to access mental health services and/or looking to transition physically. Participant 4 describes the effect that all of this has an intense effect on one's psyche:

" I wrestled with my sexuality. I didn't know which way to go. I was going to blow my brains out. Depression and despair do funny things to your head."

The need for timely, affordable mental health care is high, as Participant 3 points out:

"*We focus so much on the physical transformation, thinking that that's going to solve all the problems.*"

Strengths of the current system

The biggest strengths that the healthcare system in BC has to offer transgender sex worker clients, according to the participants in this study, are that the Canadian government financially covers many aspects of the initial sex transition for individuals who are interested and who qualify; and that there are some specialty clinics and providers, as well as some compassionate and informed individuals within the system who offer a sense of support. When asked what has worked well since finding supportive healthcare providers, Participant 1 stated "*They give me emotional support. They validate me. That's the most important part of it.*"

There is a growing understanding in Canadian society that transgender people exist and access healthcare regularly, though the awareness of transgender sex workers is limited because, according to Participant 3, "*it's too different, too complicated for people.*" The same participant also noted "*I wouldn't say I've faced discrimination* [in healthcare], *clumsy ignorance at worst.*" Although there is much room for improvement, many persistent trans sex workers do eventually locate and build relationships with caring, informed professionals in the healthcare system in British Columbia.

Discussion and Recommendations

RNs view the world through a theoretical perspective, and they use this perspective to understand their role when providing care. This theoretical perspective is

built on four key components: the person (patient), the environment, health, and nursing (CNA, 2007).

The authors in this study used this theoretical perspective to shape their findings. The 'person' in the study is the TSW. The 'environment' is a broad setting focusing on both physical and social factors that may affect the client, and encompasses all care settings where the TSW may come into contact with a healthcare provider. The 'health' component focuses on many aspects, including the TSWs' physical, emotional, social, and spiritual wellbeing, as well as the TSWs' lived experience throughout their care. The 'nursing' component includes "roles associated with care, health promotion, prevention of illness, advocacy, research, policy, and education" (CNA, 2007, p. 8).

Participants in this study provided the authors with a snapshot of their journey living as TSWs accessing healthcare in BC. A thorough understanding of the challenges and barriers that this unique population faces would help HCPs optimize TSW care. A participant stated that she dealt with discrimination and violence on a daily basis:

"*There's issues that need to be addressed and helped! And people shouldn't just brush them off…. The bus drivers that won't pick me up. The cab drivers that never pick me up. You won't believe the discrimination…. Denied service, thrown out of bars. I have to get someone to stand with me at the bus stop so that the bus would stop."* -Participant 4

However, ideas around gender and sexuality are changing in society. Individuals who identify along the "trans" spectrum are beginning to be discussed and their experiences explored. Unfortunately many trans individuals still feel that they are not treated equally to other patients, with one participant saying *"Sometimes the tone is really accusatory from doctors. Like, unsafe or demeaning or things like that." –Participant 2*.

Although some literature exists on the experiences of transgender individuals, as well as literature around sex work, there is a large gap in research regarding being a TSW seeking healthcare in Canada, and very limited research is available to HCPs.

This study found that all participants experienced some sort of discrimination by HCPs, ranging from subtle distancing, discriminatory comments, and dismissal, to full-on aggressive behaviours and intimidation. Access to care was impaired by fear of judgment and the unknown. One participant in this study said: *"It becomes playing Russian roulette, whether I am going to get a good doctor or not. Right? And so that becomes a*

bit of an issue." –Participant 2

Participants felt that they were unsupported by some HCPs, but once they built up a support system, they began to feel confident and comfortable in stating and exploring their healthcare needs. One participant spoke to this:

"*Getting started in transition, I had no idea where to go, who to turn to, stuff like that. And I have, through the people I interact with and who I date, I've kind of ended up in this really handy social circle, and now like, I'm here, I run the* [trans resource section of a retail store], *I'm relatively savvy with trans connections based on that."* Participant 3

Another notable finding from the research is the notion that HCPs tend to perceive TSWs as victims, assuming that they need to be 'saved'. It is important to not make assumptions regarding how TSWs feel about their line of work. HCPs should explore TSWs' needs in regards to their work by asking questions, examining body language, and perception checking to make sure they have a clear understanding of that unique client's needs.

Continuity is also highly impactful, as the participants spoke to the importance of having a support system and a network. Many participants have experienced various mental health concerns or crises, and continuity of care would result in a better standard of care for TSWs. A study by Vidya and Rudolf (2007) showed that continuity of care increased patient satisfaction and resulted in care that saved time and resources, as well as better management of patient illnesses and concerns. One participant spoke of meeting with new doctors: *"You just share being trans with some doctors, and they don't know what to do with you. It's a foreign concept or their concept."* Participant 2

The authors and participants have determined a number of recommendations for improving the abilities of the healthcare system and healthcare providers to meet the needs of transgender sex workers in British Columbia.

1. **Develop a list of trans-friendly service providers available online for people to access.**

"I almost feel that, in smaller communities, if people are working with individuals who are going through these kind of obstacles, people should get together, create a list of individuals who are on-board. You know, of friendly organizations and doctors, practitioners, whoever it is, in the community as well. I think an organization needs to be

established that doctors, nurses, healthcare practitioners can sign on for. And there needs to be an organization that's progressive enough to get people to move forward." -Participant 1

"Everything's underground, you have to find ways to network to get them to those safe spaces." -Participant 2

"You can't do it alone…. I tried… It's hard to ask for help, and sometimes you don't know where to go to ask for help. It's there but you need someone to tell you or show you. I heard from the other girls." -Participant 4

For transgender sex workers in small communities, finding healthcare providers who are supportive or informed about issues affecting them may be challenging, and the client may not know where to look. This also affects newcomers to a community, regardless of the size of the community. In larger cities, although the resources may exist, it can be overwhelming to determine where to begin the process of seeking out these resources. Although finding providers has become easier with the advent of internet forums and search engines, the authors were unable to find any central location (either online or elsewhere) that could direct transgender and/or sex worker clients to supportive healthcare providers. One participant suggested an urgent need for the development of a central online resource, where users of healthcare in BC could locate supportive providers. It can be compared to the rainbow sticker that is posted in the doorways of many businesses and services around North America, which indicates that the location is friendly toward gay, lesbian and bisexual clients, but this would not require participating services to accumulate numerous stickers and clutter their entrances.

An online resource could be one designed and developed by people in the community, or it could be one that providers sign up for. Ideally, it would include the participation of both the trans/sex worker communities and interested healthcare providers. Collaboration between HCP and the trans and sex worker communities is extremely valuable when developing resources. There could be a BC website, or each city or community could develop its own. There could also be a place on the website where providers could note whether the staff at their offices have engaged in any additional formal training, such as gender and sexuality workshops.

"You need to consult with the community at large, because every community has

individuals who are transgender or transsexual or trans, whatever term you choose. Hear from the people you're going to be dealing with and treat. They need to be active members and actively involved in this consultation process, and once you start that process, others will hear about it and they will come to sign on. If you make it available, they will come." -Participant 1

"Collaborate with sex workers and trans folk to determine new policy, training for professionals, create a dialogue to determine how to create friendly clinics." -Participant 2

"Don't just read about them in textbooks, talk to people, because a lot of the victim-based narrative comes from meeting a trans person or a sex worker once, and then saying 'If I lived that life, I would feel like shit! That person must feel like shit because of these reasons!'" -Participant 3

2. Offer HCPs training in gender and sexuality

In various parts of British Columbia, there are university professors, advocates and advocacy groups that offer workshops on gender and sexuality sensitivity. These are similar to cultural competence workshops and can offer a wealth of information to professionals in all areas that deal regularly with people. Through clinics, hospitals, public health offices, and other healthcare employers offering workshops and training for staff regarding these topics, a culture of compassion and understanding can be further developed.

"We need to realize these are social issues, not criminal issues. Spend money: Not on prisons, but on education and assistance." -Participant 4

3. Validate peoples' experiences

For individual HCPs, there are few things more powerful than validating the experiences and lives of our patients who regularly face marginalization and exclusion. By simply acknowledging people where they are in their lives, and giving them the support they need regardless of our own experiences, HCPs have the power to offer help, to provide guidance, and to enhance health and wellness.

"I don't think that a person can have the strength-building tools properly administered to them if they're not getting the validation from going in and seeing and meeting their healthcare practitioners who stand and believe in what they're all about." -Participant 1

"The compassion that people are looking for, people who are already compromised emotionally, they want to be validated as an individual when they go through that door. It's really, really important. And after the validation comes the emotional support, but also, you know, the care that I'm getting from these individuals because they believe in me and they want to give me the same amount of care that they're giving anybody else that's coming through their doors. And that makes you feel good. And they listen to me. My voice is being heard." -Participant 1

"When you spend your life justifying your existence and explaining what that means to absolutely everyone, you want a practitioner who already knows that part. It sounds ridiculous but that's how it works. I don't want to go somewhere where I'm hated by default, and I'd like you to know I exist." -Participant 3

4. Advocate

Being an advocate means being a voice for someone who may not have one. If HCPs question their own practice, as well as issues of systemic marginalization, it is possible to be a voice for change.

"We can't do this alone! We are minority of the minority, and because of that- let's be honest- we are not always the healthiest people, and if we've been discriminated against because of our lifestyles or because we're addicted to drugs or because of sex work or whatever, we don't always have a voice, a strong voice. We need others to be voices for us. I think we need allies, professional allies to speak up and create space and all of those things." -

Participant 2

"It's also just creating space, advocating, just saying 'No, this is not how we treat these individuals. They deserve service too, here's a different way we can do it." -Participant 2

It is a professional responsibility of healthcare professionals to report any suspected abuse of all clients. This includes transgender sex workers, who are significantly more at risk of physical, emotional, psychological and sexual abuse by partners, clients, strangers and authority figures such as the police (Roche & Keith, 2014). Members of this population are often vulnerable to abuse due to societal stigma, discrimination, and lack of understanding. One participant spoke of being assaulted by police officers and feeling as though they did not have anyone listen to them, as well as having their concerns

ignored by healthcare staff. HCPs must ask questions regarding injuries and mental health concerns to prevent TSWs from falling through the cracks:

"I spent two weeks in the hospital handcuffed naked… after five days someone put a sheet over me…. "-Participant 4

"I was rushed onto the emergency table because I had lost so much blood from [the police] *taking so long before phoning the paramedics. The doctor couldn't believe it.It was the worst he had ever seen and he was afraid to release me into their custody."* -Participant 4

5. Research

More research is needed in this area. The participants in this study were living in Kamloops and Vancouver, British Columbia. Exploring the experiences of transgender sex workers living and working in smaller communities would be a next step for research. Exploration of the differences across Canada and in different parts of the world would be valuable. Further research could focus on interventions to help HCPs better understand TSWs' needs, education dissemination, or a TSW mentoring program between TSWs and HCPs.

"Research is where it starts!" -Participant 2

Contribution to Nursing Practice

The Canadian Nurses Association (CNA) states that Registered Nurses work all throughout Canada in a variety of settings, and care for patients around the clock, 24 hours a day, seven days a week (2007). In order to meet the needs of such a diverse patient population and practice safe, culturally appropriate care, nurses must be competent and have an in-depth knowledge base. This research hopes to merge RN practice with positive TSW outcomes, by promoting a deeper understanding of the unique needs of this population. The CNA tells us that "research supports the link between RN practice and positive client outcomes" (2007, p.19). By providing nurses with the knowledge they need to support TSWs to receive optimal care, nurses can create a therapeutic nurse-TSW relationship in which TSWs feel safe to explore their healthcare needs, and where nurses have the knowledge base to help empower TSWs. Nurses have the power to be very influential figures in patients' lives. Through life-long learning,

evidence-based research, and a commitment to best practice, nurses can deliver TSWs the optimal care that they deserve.

Limitations

Limitations of this study include small sample size. Fewer participants than initially anticipated were reached and, given the small sample size, it is difficult to ascertain saturation of data. Snowball sampling also tends to reach participants that are more accessible and connected, which can result in a less than true representative sample. The authors' previous research experience was limited, but throughout the responsibility of collecting data, transcribing, and conducting the thematic analysis valuable research skills were attained. Despite the limitations, participants shared valuable and enlightening information regarding their experiences, barriers and challenges they faced, strategies for overcoming barriers, and valuable recommendations for healthcare professionals.

Conclusion

This qualitative thematic analysis explored the experiences of four TSWs in accessing healthcare. Findings provided insight on barriers and challenges TSWs face on a daily basis, as well as recommendations for optimizing care. Participants were also able to provide testament to what HCPs are doing well and the level of care they should continue to strive for. TSWs are regularly discriminated against, abused, and neglected, all of which affect the TSW-HCP relationship, hinder trust, and interfere with reaches the highest level of patient care. The findings point to the need for a shift in HCP's attitudes and perceptions, allowing for TSWs to feel validated, supported, and free to seek care.

It is hoped that this research will contribute to paving the way for better clinical practice, where TSWs feel safe and confident in the healthcare system. This research also hopes to provide HCPs with knowledge around existing gaps in the system, and to provide a stepping stone on which HCPs can stand to bring about a voice for change.

References

Bauer, G., Redman, N., Bradley, K., & Scheim, A. (2013). Sexual health of trans men who are gay, bisexual, or have sex with men: Results from Ontario, Canada.

International Journal of Transgenderism, 14(2), 66-74.

Canadian Nurses Association. (2007). Framework for the practice of registered nurses in Canada.

Grace, P. & Zunner, B. (2012, December). The ethical nursing care of transgender patients: An exploration of bias in health care and how it affects this population. *The American Journal of Nursing, 112*(12). 61-64.

Grant, J.; Mottet, L. & Tanis, J. (2011, February 3). Injustice at Every Turn: A Report of the National Transgender Discrimination Survey. *National Gay and Lesbian Taskforce*. Retrieved October 5, 2012, from http://www.thetaskforce.org/reports_and_research/ntds

Houston, A. (2011, November 9). Trans sex workers still most vulnerable. *Xtra*. Retrieved November 5, 2012, from http://www.xtra.ca/public/National/Trans_sex_workers_still_most_vulnerable-11058.aspx

Mulia, N. (2002). Ironies in the pursuit of well-being: The perspectives of low-income, substance-using women on service institutions. *Contemporary Drug Problems*. 711-748.

Operario, D.; Soma, T. & Underhill, K. (2008, May). Sex work and HIV status among transgender women: Systematic review and meta-analysis. *Journal of Acquired Immunodeficiency Syndromes*, *48*(1), 97-103.

Overs, C. (2012). Sex workers: Part of the solution. *World Health Organization*. Retrieved January 18, 2014 from *www.who.int/hiv/topics/vct/sw_toolkit/115solution.pdf*

Roche, K. & Keith, C. (2014). How stigma affects healthcare access for transgender sex workers. *British Journal of Nursing*, 23(21), 1147-52.

Slamah, K.; Winter, S. & Ordek, K. (2010, December 16). Stigma and violence against transgender sex workers. *RH Reality Check*. Retrieved October 3, 2012, from http://www.rhrealitycheck.org/blog/2010/12/16/stigma-exclusion-violence-against-trans-workers

Transgender. (n.d). In *Definition of Terms*. Retrieved October 6, 2013, from http://geneq.berkeley.edu/lgbt_resources_definiton_of_terms#transgender

Transgender vs. transsexual. (n.d.). Retrieved from http://www.diffen.com/difference/Transgender_vs_Transsexual

Vaismoradi, M., Turunen, H., and Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing and Health Sciences*. 15, 398-405.

Vidya, S. and Rudolf, M. (2007). How important is continuity of care? *Arch Dis Child.* 92(5), 381-383.

Gendered Violence in Indigenous Communities: A Restorative Justice Approach

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Abstract:

In 1996, the Canadian government implemented reforms to the Criminal Code regarding sentencing in an attempt to reduce the overpopulation of Indigenous people in the judicial system, a problem which was seen as partly a result of colonialism and systemic discrimination. Included in these amendments were the restorative justice principles of reparations and responsibility, and a requirement for sentencing judges to consider reasonable alternatives to imprisonment, especially for Indigenous offenders. Unfortunately, a review of the recent literature indicates that judicial reform and sentencing innovation have failed to mitigate the overrepresentation of Indigenous people in the incarcerated population. It is apparent that what these reforms have failed to address are the broader systemic issues, such as poverty and lack of education, that contribute to the high incidence of Indigenous people committing criminal offences. Restorative justice has many goals, including enhancing accountability for one's actions, increasing voluntary dialogue, and reconnecting the individual with the traditional community. However, these actions also need to be targeted at preventative measures, rather than focusing on sentencing and offender reintegration. Thus, in order for a restorative justice approach to legal issues to be effective, social workers have an obligation to strive for the creation of more programs specifically targeted at Indigenous people, especially those for women and youth.

Introduction

In recognition that the high rates of incarcerated Indigenous men and women in Canada is in part due to systemic racism within the criminal justice system, legislative amendments were imposed that required judges to factor in Indigenous background during sentencing. However, these amendments have not made a difference in diverting Indigenous people from the criminal justice

system, and incarceration rates have steadily increased. The lack of systemic change for criminalized Indigenous individuals is in part due to conflicting case law and a lack of community resources. Colonization has altered traditional values of Indigenous justice such as healing relationships and restoring balance within the community environment; restorative justice is one measure to reclaiming this holistic cultural identity. However, Indigenous people need to push for self-governance to alleviate pervasive social inequalities. Further, sentencing circles need to be critically informed by Indigenous feminists in order to develop a safe, trauma-informed, and supported response to gendered violence—especially in intimate partner relationships—in Indigenous communities.

Gendered Violence in Indigenous Communities

Gendered violence (systemic gendered discrimination which results in violent acts towards women, including physical or sexual assault, and which includes intimate partner abuse) is a product of the historical and ongoing colonization of Indigenous people in Canada (Balfour, 2008; Cameron, 2006; Milward & Parkes, 2014; Snyder, 2014). Dickson-Gilmore (2014) describes gendered violence as an epidemic with dire consequences for Indigenous women. Indeed, Indigenous women have internalized sexual violence and sexism and often face intersectional abuses and vast social inequalities (Balfour; Snyder). Indigenous women need to be respected and empowered to reclaim their traditional revered positions within their communities in order to heal the historical and continued wounds of oppression (Balfour). As Balfour clarifies, the "squaw narrative" utilized by defense lawyers to show their clients as "pathetic" in order to receive sympathy among the jurors has done Indigenous women a disservice (p. 115). Instead, the narrative brought to court should illuminate the ongoing oppression faced by Indigenous women from communities fraught with systemic poverty, substance abuse, and gendered violence, and a criminal justice system that ignores their safety and oppressed status (Balfour). Part of the challenge to achieving a shift in perspectives is the lack of understanding amongst the public, the ubiquity of violence in Indigenous

communities, and an absence of culturally appropriate programs to raise awareness (Baskin, 2002; Dickson-Gilmore).

As Roach (2000) states, restorative justice has the potential to overcome its challenges to become an effective and safe response to gendered violence. Through critical Indigenous feminist analysis and input, a victim-centered restorative justice model that is trauma-informed and supportive is possible (Randall, 2013). Restorative justice can heal relationships and does not require an ending of the union; risk to the victim is present, however, and there is the possibility of coercion to participate in the restorative sanctions (Dickson-Gilmore, 2014). Dickson-Gilmore therefore suggests that restorative justice measures be partnered with retributive oversights to enhance relational healing and ensure the victim's well-being. I contend, however, that this retributive oversight should come from consultation and engagement with the Indigenous community, rather than solely through the mainstream justice system. Community leaders, band members, survivors and families should have a voice at the table, and traditional and contemporary cultural aspects should be included in any retributive response. Otherwise, mainstream retributive sentencing principles such as deterrence, denunciation, and separation might overshadow the more positive aspects of restorative sentencing.

Other challenges to the effective implementation of restorative justice for gendered violence include public opinion and conflicting case law. Crimes of a sexual nature or spousal violence are deemed to necessitate a severe response (Doob, 2000). Further, inconsistent interpretations by Canadian courts have perpetuated a belief that the limited scope of restorative justice makes it inapplicable to serious or sexual offences, a belief which has stagnated any substantive changes to the incarceration landscape for Indigenous people (Pfefferle, 2008). Nonetheless, restorative justice can be a more meaningful approach in some cases, if the safety of the victim is paramount and community programs are financially and publically supported (Randall, 2013).

Critical Analysis

Sentencing innovation has not alleviated the over-incarceration of Indigenous people in Canada; in fact, the situation has continually gotten worse since the judicial reform in 1996 (Pfefferle, 2008). It is clear that the issues facing Indigenous people that have led to high crime rates—poverty, addiction, dislocation, and intergenerational trauma caused by the forced and assimilative residential schooling system, for examples—are ongoing products of a colonizing government (Pfefferle). Urban Indigenous populations are even worse off, with an increased social dislocation and poor judicial understanding of the challenges that continue to face off- reserve Indigenous populations, as evidenced by the sentencing judge's decision in *R. v. Gladue* (1999) (as discussed later in this paper) (Pfefferle). A lack of training and community resources has largely made restorative justice measures ineffectual, despite research (albeit limited) that shows a positive outcome in victim and offender satisfaction, reduced recidivism rates, and restitution compliance (Latimer et al., 2005; Roach & Rudin, 2000).

Anand (2000) suggests that money would be better spent outside of the judicial system on targeted social programs that address the underlying causes of crime (such as substance abuse, poverty, and mental health issues). Indeed, the criminal justice system is highly punitive and is more concerned with formal equality (equality of treatment) than substantive equality (equality of outcome) (Rudin, 2013; Turpel-Lafond, 1999). Substantive equality is the motivation behind sentencing reform requiring judges to consider circumstances facing Indigenous people in order to offset systemic oppression (such as longer sentences and more onerous prison sanctions) and social impacts of colonization (including loss of identity). Further, implementing restorative justice through the criminal justice system has assimilated traditional Indigenous justice to be more compatible with the Western system (Vieille, 2013). However, restorative justice has been effective at highlighting social injustice in the Canadian environment (Roach, 2000).

Restorative justice implemented through the mainstream criminal justice system cannot even begin to heal Indigenous communities, according to Miller and Schacter (2000); however, I believe

it is still a worthy endeavour. On one hand, the criminal justice system is an oppressive, colonial system that perpetuates the social inequalities facing Indigenous people (Snyder, 2014). On the other hand, the restorative justice movement challenges the judiciary to become self- reflective about their unequal treatment of Indigenous people and is a method to decolonize the pervasive racism within the system, call for the creation of community programs, and alter public perceptions (Turpel-Lafond, 1999). Hand et al. (2012) suggest a two-pronged approach to reclaim Indigenous justice—to work within the mainstream system to advance culturally appropriate measures, and to extend self-governance initiatives outside of it. In addition to targeting the systemic racism within the system that has led to criminalization through strict judicial sanctions and over- policing, it is also important that holistic health care, accessible early childhood education, and the proliferation of social programs are implemented to target crime beforehand (Miller & Schacter).

The high prevalence of gendered violence in Indigenous communities is one consequence of colonialism (although it is important not to romanticize pre-settler communities as free of violence) (Snyder, 2014). The lack of current victim resources, conflicting case law, public misperceptions, and the need to build capacity and culturally informed sentencing alternatives within Indigenous communities has challenged restorative justice initiatives from being utilized in serious or sexual offences (Milward & Parkes, 2014). Snyder further suggests that the legal realm has perpetuated gendered oppression against Indigenous women in both the mainstream and Indigenous justice systems, as both systems are predominantly patriarchal institutions that ignore gender relations. To decolonize the system and to change the negative outcomes for Indigenous women as both victims and offenders, we need to challenge rigid gender norms, highlight intersectional oppressions, and subvert heteronormative standards (the traditional and socialized notions of heterosexuality and gender binaries) (Snyder). As such, women need to be encouraged towards positions of power in the legal system—as lawyers, judges, and victims' advocates.

Criminal Code of Canada

In spite of 1996 amendments to the *Criminal Code* (1985) intended to alleviate the overrepresentation of Indigenous people in the prison system, the situation for Indigenous persons in Canada is still critical. Although they compose only approximately four percent of the Canadian population, nearly one in four incarcerated men and more than one in three women in prison claim Indigenous ancestry (Sapers, 2014). The amendments were made to the sentencing provisions contained under section 718 within the *Criminal Code*, which specifically required sentencing judges to give "particular attention to the circumstances of aboriginal offenders" under section 718.2(e). This clause, and its subsequent interpretations by the Supreme Court of Canada, was a progressive measure as it was intended to remediate the overrepresentation of Indigenous people in the criminal justice system and it brought focus on discriminatory practices from the judiciary (Anand, 2000; Milward & Parkes, 2014; Turpel-Lafond, 1999). However, as Milward and Parkes state, these amendments have not made a difference, and the criminal justice system continues to fail Indigenous people in Canada.

Conflicting retributive and restorative sentencing values have hampered systemic change within the criminal justice system (Milward & Parkes, 2014). Retributive sentencing principles, such as deterrence, denunciation, and separation, are often prioritized over restorative goals of reparations and responsibility (Anand, 2000; *Criminal Code*, 1985). Thus, the retributive values will negate any positive impact of alternative sentencing for Indigenous people; indeed, sentences have remained the same as they pertain to length and severity for Indigenous and non-Indigenous individuals alike (Anand, 2000). In addition, Welsh and Ogloff (2008) have found that circumstances arising from being Indigenous (such as intergenerational trauma from Indian Residential Schools or high rates of child welfare system involvement) are not considered as mitigating factors as required by the legislative reform. Instead, universal issues such as addiction are factored into sentencing. Aggravating factors such as seriousness of offence or extensive criminal history therefore often counteract any alleviating conditions for Indigenous people (Welsh & Ogloff). Even so, the

fallacious notion that Indigenous people are given preferential treatment in the Canadian criminal justice system is perpetuated in the public arena (Anand). However, as Turpel-Lafond (1999) clarifies, there is a difference between equal treatment and equal outcome; sometimes, it is necessary to have a different sentencing process to ensure equality of outcome for Indigenous individuals. For example, once sentenced, Indigenous people often serve more of their sentences before release, and are more often sent to higher security settings where they face institutionalized racism from correctional staff.

Conditional sentences—sentences served in the community with strict conditions—that fell under the guise of restorative justice were also increased through the 1996 amendments made to the *Criminal Code* (1985). As expected, this has led to net-widening (which is more intrusive sentencing than previously, such as utilizing conditional sentences over a probation period) and the imposition of longer terms of incarceration for breach of conditions (Roach & Rudin, 2000). Although viewed as restorative justice measures, conditional sentences can be more punitive than probation through onerous sanctions such as strict curfews and mandated and intensive community treatment (Balfour, 2008). For Indigenous people, these conditional sentences may also overburden already limited culturally appropriate community resources (Turpel-Lafond, 1999).

Case Law

In *R. v. Gladue* (1999), the Supreme Court of Canada first interpreted the amendments made to the *Criminal Code* (1985), including the new section 718.2(e) regarding Indigenous background sentencing considerations. This case involved an Indigenous woman convicted of manslaughter against her common-law spouse (*R. v. Gladue*). It was determined that the sentencing judge had erred in not considering her Indigenous status as requiring special consideration because she had been living in an off-reserve, urban community (*R. v. Gladue*). Perhaps the most significant part of this case law is the clarity given to the remedial intention behind section 718.2(e) and the emphasis for the implementation of non-custodial sentences, when appropriate (*R. v. Gladue*). The Supreme Court of Canada made it explicit that the goal of section 718.2(e) was to reduce the

overrepresentation of Indigenous people in the prison system, irrespective of where or how they were living, whether on-reserve following traditional paths or not. Rather, *R. v. Gladue* emphasized the systemic discrimination still prevalent in the judicial system, which often unfairly punishes Indigenous people with longer, more severe sentences by not considering such circumstances arising from Indigenous identity as, for example, social dislocation (Pfefferle, 2008).

More recently, in *R. v. Ipeelee* (2012), it was once again affirmed by the Supreme Court of Canada that alternative sentencing sanctions are required due to historical and ongoing colonization of Indigenous people. *R. v. Ipeelee* involved the appeal of the breaches of long-term supervision orders for two Indigenous offenders, both with background addiction issues and violent criminal histories. It was outlined that limiting the decision in *R. v. Gladue* (1999) to less serious offences hindered the efficacy of section 718.2(e) in diverting Indigenous people from the criminal justice system and was, therefore, a misinterpretation of the remedial intent of the clause (*R. v. Ipeelee*). Gladue factors (the mitigating aspects arising from the offender's Indigenous status) need to inform different sentencing methodology, even for long-term supervision orders (*R. v. Ipeelee*). Neglecting to consider alternatives to imprisonment would be to deny the "fundamental principle of sentencing" which is to consider both the offender's responsibility and the gravity of the offence (*R. v. Ipeelee*, 36). As Rudin (2013) notes, this creates a problem when minimum sentences are imposed, as this negates the Court's discretion at utilizing information obtained regarding the Indigenous person's heritage to construct a proportionate sentence, which may be less than the mandatory minimum sanctions. Therefore, the Court must have the ability to impose conditional sentences, if deemed proportional to the offence, in order to meet the remedial nature contained in section 718.2(e) (Rudin).

Restorative Justice

As stated, the amendments to the *Criminal Code* (1985), added principles of restorative justice (such as rehabilitation, reparations, and responsibility) to the purposes of sentencing. Restorative justice is a democratic and reintegrative approach, which includes input from the

victim, offender, and the community (Tomporowski, Buck, Bargen, & Binder, 2011). Further, it offers a more culturally appropriate response for Indigenous people, as it is premised on key Indigenous values such as healing, harmony, and balance (Baskin, 2002; Hand, Hankes, & House, 2012). In addition, restorative justice strives to be holistic, flexible, and inclusive, and can be measured relationally through positive social outcomes (Llewellyn, Archibald, Clairmont, & Crocker, 2013).

It is important to include opportunities for restorative justice for Indigenous offenders in the highly punitive and hierarchical criminal justice system in order to reduce social injustices that have arisen due to colonization in Canada (Hand et al., 2012). In addition to ideological discrepancies, colonization has resulted in the denial of traditional justice systems, the acculturation of western worldviews, and imposition of cultural racism against Indigenous people (Hand et al.). Although retributive principles of deterrence and denunciation are still utilized during sentencing, restorative justice is seen as preferential treatment by the public (Anand, 2000; Pfefferle, 2008). Thus, one challenge to full implementation has been the view that restorative justice provides a race-based leniency on sentencing; this erroneous belief has perpetuated cultural discord between Indigenous and settler societies (Doob, 2000).

According to Latimer, Dowden, and Muise (2005), restorative justice is a superior system as it enhances victim and offender satisfaction, increases restitution adherence, and lowers recidivism rates. Moreover, it is better at restoring balance within the community and denouncing unlawful conduct for repeat offenders (Moss, 2013). Surprisingly, restorative justice appeals to people for different reasons—to the left-wing for its focus on healing, and to the right-wing for its cost efficiency (Doob, 2000; Roach, 2000). Restorative justice is, however, difficult to implement through the mainstream criminal justice system and is highly subjected to public criticism (Doob; Owen, 2011). According to Tomporowski et al. (2011), further challenges to restorative justice include a lack of comprehensive research on its effectiveness, limited community programs and funds, tenuous connection with traditional Indigenous justice values, and the contested views on its

applicability to serious and sexual offences. As outlined in this paper, these assertions should be addressed through increased research, enhanced community programs, self-governance initiatives, and critical input from Indigenous feminists on the development of culturally appropriate, yet safe, community responses to serious and sexual crime.

Sentencing Circles

Sentencing circles, one practice of restorative justice, develop a culturally and socially appropriate sentence through Gladue reports (outlining the offender's Indigenous heritage, mitigating factors, and alternatives to incarceration) in conjunction with input from all involved parties-- including the victim, the accused, Elders, and other community members (Turpel-Lafond, 1999). There are many benefits to sentencing circles over mainstream court sentencing procedures. For example, according to Baskin (2002), sentencing circles are based on traditional circle speaking values that enable and empower the victim to break the silence, and hold the offender responsible to their community (which leads to lower reoffending rates). By involving the community, the tendency to blame the victim as in a contested court proceeding is reduced, and the root social causes of crime (according to some theories) are highlighted and addressed (Belknap & McDonald, 2010). Further, sentencing circles provide a platform for people marginalized by the Canadian justice system to speak out and also draw attention to the intersectional oppressions facing Indigenous people (Linker, 1999).

On the other hand, sentencing circles are focused on the offender and fail to consider the emotional and safety needs of the victims, often risking the safety of female victims of gendered violence who are encouraged to speak out against their abuser (Belknap & McDonald, 2010; Cameron, 2006). Thus, the existence of safe, voluntary, and inclusive victim services for women should be an essential component for any restorative sanction (Cameron). Further, to be utilized as an alternative conditional sentence, culturally appropriate community resources must be created (Belknap & McDonald). However, according to Cameron, as sentencing circles fail to advance

Indigenous self-governance initiatives or increase funding for community programs, they are inauthentic restorative justice measures.

Although there are a number of reasons to be optimistic about the potential success of sentencing circles, it is also important to be cautious and self-reflective (Belknap & McDonald, 2010; Edwards & Haslett, 2011). For instance, sentencing circles are still part of the criminal justice system, and there is an expectation that the individual will plead guilty (even if they are not) in order to participate. It is possible that the offender is entering a guilty plea for sentencing leniency, which could hinder true remorse if they are guilty and endanger an outspoken victim due to feigned remorse (Owen, 2011). Also, during sentencing circles, the presence of conflict resolution skills, neutral language, and impartiality can remove the offender's violent actions from the discussion; the focus, instead, on conflict between the offender and victim could lead to revictimization (Edwards & Haslett). In addition, it is imperative that the judiciary involved in sentencing circles also receive training to increase their awareness of the intersectional issues and available community resources, decolonize the sentencing process, and ensure proper support for the victim is provided (Belknap & McDonald; Turpel-Lafond, 1999).

Conclusion

In conclusion, restorative justice and the practice of sentencing circles can be an appropriate and effective means of responding to gendered violence in Indigenous communities. However, there are a number of challenges to overcome in order to achieve this goal. For example, sentencing circles need to be critically evaluated in a self-reflective manner to ensure that they are victim-centered and trauma-informed. Although the victims should be empowered to speak out, they should not be coerced, and their safety needs to be ensured through community oversight. Further, the offender needs to be held accountable through non-coerced guilty pleas where sentencing leniency is not levied. A circumspect or cautious approach is essential, one which involves community participation, increased funding for culturally informed, holistic programs for serious offenders, and enhanced judicial education for lawyers and judges working

with Indigenous people. The oppressive consequences of ongoing colonization within the criminal justice system need to be highlighted to the media, frontline social service workers, taxpayers, and government workers, and Indigenous self-governance needs to be advanced outside of the mainstream criminal justice system as well as others. In this manner, we can decolonize our relationships and institutions, reduce the root social causes of crime and high incarcerations rates, and lessen the epidemic of gendered violence (particularly the most prevalent form of intimate partner violence) in Indigenous communities.

References

Anand, S. (2000). The sentencing of aboriginal offenders, continued confusion and persisting problems: A comment on the decision in R. v. Gladue. *Canadian Journal of Criminology, 42*(3), 412-420. Retrieved from http://www.heinonline.org/HOL/Page?handle=hein.journals/cjccj42&div=32

Balfour, G. (2008). Falling between the cracks of retributive and restorative justice: The victimization and punishment of aboriginal women. *Feminist Criminology, 3*(2), 101- 120. doi:10.1177/1557085108317551

Baskin, C. (2002). Holistic healing and accountability: Indigenous restorative justice. *Child Care In Practice, 8*(2), 133-136. doi:10.1080/13575270220148585

Belknap, J. & McDonald, C. (2010). Judges' attitudes about and experiences with sentencing circles in intimate-partner abuse cases. *Canadian Journal of Criminology and Criminal Justice, 52(*4), 369-396. doi: 10.3138/cjccj.52.4.369

Cameron, A. (2006). Sentencing circles and intimate violence: A Canadian feminist perspective. *Canadian Journal of Women and The Law*, *18*(2), 479-512. doi: 10.3138/cjwl.18.2.479

Criminal Code, R.S.C., 1985, C-46, s.718 and s.742.

Dickson-Gilmore, J. (2014). Whither restorativeness? Restorative justice and the challenge of intimate violence in aboriginal communities. *Canadian Journal of Criminology & Criminal Justice, 56*(4), 417-446. doi:10.3138/cjccj.2014.S02

Doob, A. N. (2000). Transforming the punishment environment: Understanding public views of what should be accomplished at sentencing. *Canadian Journal of Criminology*, *42*(3), 323-340. Retrieved from http://www.heinonline.org.ezproxy.tru.ca/HOL/Page?handle=hein.journals/cjccj42&?&id=329

Edwards, A. & Haslett, J. (2011). Violence is not conflict: Why it matters in restorative justice practice. *Alberta Law Review*, *48*(4), 893-903. Retrieved from http://heinonline.org.ezproxy.tru.ca/HOL/Page?handle=hein.journals/alblr48&id=901

Hand, C. A., Hankes, J., & House, T. (2012). Restorative justice: The indigenous justice system. *Contemporary Justice Review, 15*(4), 449-467. doi: 10.1080/10282580.2012.734576

Latimer, J., Dowden, C., & Muise, D. (2005). The effectiveness of restorative justice practices: A meta-analysis. *The Prison Journal, 85*(2), 127-144. doi: 10.1177/0032885505276969

Linker, M. (1999). Sentencing circles and the dilemma of difference. *Criminal Law Quarterly*, *42*, 116-128. Retrieved from http://www.heinonline.org.ezproxy.tru.ca/HOL/Page?handle=hein.journals/clwqrty42&id= 136

Llewellyn, J. J., Archibald, B. P., Clairmont, D., & Crocker, D. (2013). Imagining success for a restorative approach to justice: Implications for measurement and evaluation. *Dalhousie Law Journal*, *36*(2), 281-316. Retrieved from http://ezproxy.tru.ca/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=95396810&site=eds-live

Miller, S. B. & Schacter, M. (2000). From restorative justice to restorative governance. *Canadian Journal of Criminology*, *42*(3), 405-411. Retrieved from http://www.heinonline.org.ezproxy.tru.ca/HOL/Page?handle=hein.journals/cjccj42&?&id=

Milward, D. & Parkes, D. (2014). Colonialism, systemic discrimination, and the crisis of indigenous over-incarceration: Challenges of reforming the sentencing process. In E. Comack (Ed.), *Locating law* (pp. 116-142). Nova Scotia: Fernwood Publishing.

Moss, A. (2013). Responding to retributivists: A restorative justice rejoinder to the big three desert theories. *Contemporary Justice Review, 16*(2), 214-227. Retrieved from http://dx.doi.org/10.1080/10282580.2013.798522

Owen, S. (2011). A crack in everything: Restorative possibilities of plea-based sentencing courts. *Alberta Law Review, 48*(4), 847-892. Retrieved from http://heinonline.org.ezproxy.tru.ca/HOL/Page?handle=hein.journals/alblr48&id=855

Pfefferle, B.R. (2008). Gladue sentencing: Uneasy answers to the hard problem of aboriginal over-incarceration. *Manitoba Law Journal,* 32(2), 113-143. Retrieved from http://heinonline.org.ezproxy.tru.ca/HOL/Page?handle=hein.journals/manitob32&id=327

Randall, M. (2013). Restorative justice and gendered violence? From vaguely hostile skeptic to cautious convert: Why feminists should critically engage with restorative approaches to law. *Dalhousie Law Journal, 36*(2), 461-499. Retrieved from http://ezproxy.tru.ca/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=95396816&site=eds-live

Roach, K. (2000). Changing punishment at the turn of the century: Restorative justice on the rise. *Canadian Journal of Criminology, 42*(3), 249-280. Retrieved from http://www.heinonline.org.ezproxy.tru.ca/HOL/Page?handle=hein.journals/cjccj42&?&id=255

Roach, K. & Rudin, J. (2000). Gladue: The judicial and political reception of a promising decision. *Canadian Journal of Criminology, 42*(3), 355-388. Retrieved from http://www.heinonline.org.ezproxy.tru.ca/HOL/Page?handle=hein.journals/cjccj42&?&id=361

Rudin, J. (2013). There must be some kind of way out of here: Aboriginal over-representation, Bill C-10, and the charter of rights. *Canadian Criminal Law Review, 17*(3), 349-363. Retrieved from http://ezproxy.tru.ca/login?url=http://search.proquest.com/docview/1491386799?accountid=14314

R. v. Gladue, [1999] 1 S.C.R. 688.

R. v. Ipeelee, [2012] 1 S.C.C. 13.

Sapers, H. (2014). *Annual report 2013-2014 of the Office of the Correctional Investigator*. Retrieved from http://www.oci-bec.gc.ca/cnt/rpt/pdf/annrpt/annrpt20132014-eng.pdf

Snyder, E. (2014). Indigenous feminist legal theory. *Canadian Journal of Women & the Law, 26*(2), 365-401. doi:10.3138/cjwl.26.2.07

Tomporowski, B., Buck, M., Bargen, C., & Binder, V. (2011). Reflections on the past, present, and future of restorative justice in Canada. *Alberta Law Review, 48*(4), 815-829. Retrieved from http://ezproxy.tru.ca/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=66508586&site=eds-live

Turpel-Lafond, M. E. (1999). Sentencing within a restorative justice paradigm: Procedural implications of R. v. Gladue. *Criminal Law Quarterly, 43*(1), 34-50. Retrieved from http://www.heinonline.org.ezproxy.tru.ca/HOL/Page?handle=hein.journals/clwqrty43&?&id=58

Vieille, S. (2013). Frenemies: Restorative justice and customary mechanisms of justice. *Contemporary Justice Review, 16*(2), 174-192. doi:10.1080/10282580.2012.734570Welsh, A., & Ogloff, J. R. P. (2008). Progressive reforms or maintaining the status quo? An empirical evaluation of the judicial consideration of aboriginal status in sentencing decisions. *Canadian Journal of Criminology and Criminal Justice, 50*(4), 491-517. doi: 10.3138/cjccj.50.4.491

"The Problem of Pocahontas": Colonialism, Stereotypes, and Personal Identity in Janet Campbell Hale's *Bloodlines: Odyssey of a Native Daughter*

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Abstract:

As a genre, traditional autobiography has historically been an exclusive domain, most accessible to the male writer. In contrast, the memoir genre has broadened the field of life writing and has granted a voice to members of marginalized groups. As acknowledged by various literary critics, the memoir form, which is less ego-focused, has been especially important to female writers who often express personal identity in relation to their surrounding communities. However, this link between the self and the communal can be damaging, especially in a dominant culture that perpetuates stereotypes about minorities. In this research paper, I analyze the manifestation of racial stereotypes in Janet Campbell Hale's memoir Bloodlines: Odyssey of a Native Daughter *(1993) and explore the ways in which the author, who comes from a mixed blood family, attempts to discover a strong sense of personal identity in a culture dominated by images of the Indian Princess and her reviled, darker twin, The Squaw.*

From the earliest days of colonialism in North America, the relationship between the Indigenous population and European settlers has been fraught with tension and conflict. Paradoxically, in spite of the history of dehumanization of Native peoples in Canada and the

United States, the American Indian was, and arguably remains, a highly romanticised figure. Although today we are more attuned to cultural sensitivity, images of noble Tonto and brave Pocahontas still reverberate in our cultural consciousness. In this paper, I will analyze the manifestation of racial stereotypes in Janet Campbell Hale's memoir, *Bloodlines: Odyssey of a Native Daughter* (1995), exploring the ways in which the author struggles to discover and maintain a sense of personal identity in modern America, a society which still clutches onto images of the beautiful Indian Princess and her reviled, darker twin, The Squaw.

Throughout Hale's memoir, the author combines her own personal experiences as an American Indian woman with the histories of her paternal and maternal ancestors. At surface level, this family and tribal connection could be viewed as a source of empowerment; as Hale speaks to the children of the Idaho Coeur d'Alene tribal school, she reminds them that being a "tribal person is something special, something non-Indian Americans don't have, and it can be a source of strength" (Hale xix). Indeed, this focus on communal relationships is prominent in Hale's narrative. As critic Frederick Hale remarks, the author "emphasizes the centrality of personal relationships and the impact of turning points in her life on her psychological development…rather than episodically relating individual achievements" (F. Hale 69). Furthermore, Hale's perspective on the inherent strength associated with her indigenous identity is noteworthy, especially given that historically, Native groups have been denied agency by a dominant white society, a society whose citizens, critic Daniel Francis argues, "have always formed their impressions of the Indian without much reference to actual Native people, and especially without hearing what Native people might have to say about their own situation" (Francis 109). This willful ignorance has been especially damaging to the Native women, who have largely been represented according to the strict binary of virtuous and beautiful Indian Princess or else the "debased, immoral" squaw woman (Francis 121).

However, despite her positive affirmations regarding her heritage and communal ties, Hale also hints at the notion of family as a source of dysfunction and damage. Although her words to the school children are positive, Hale muses that, if the situation were different, "I might say a few things more…. [because] some families will, if they can, tear you down, reject you, tell you that are a defective person." (xxi). These private thoughts hint at the darker reality of Hale's upbringing in a mixed-blood family plagued by racial ambivalence and, more disturbingly, deeply ingrained patterns of internalized prejudice.

As the memoir progresses, Hale elaborates on the nature of her family's dysfunction. In the essay entitled "Daughter of Winter", Hale chronicles her relationship with her volatile and embittered mother, Margaret. A victim of domestic abuse, Margaret regularly whisks her daughter away from her family home on the reserve so that Hale's childhood is marked by a series of dislocations, patterns of "runnin' towards a new beginning, a fresh start that somehow never pans out" (27). Trapped with her mother, an "absolute master" (61) of emotional and verbal abuse, Hale recounts how her mother's mental illness and worsening arthritis is exacerbated by a vicious cycle of poverty: "We're so poor, Mom and me, so damned, damned poor….I remember being hungry at school, feeling faint" (30). Perhaps most troubling is the notion that such patterns of neglect and abuse are inherited. Years later, as Margaret lies upon her death bed, she reveals that her own family "mocked her…the way she walked…the way she talked" (59). While Hale herself admits that it is possible that Margaret is confusing her daughter's childhood with her own, the possibility of cross-generational dysfunction acts as a catalyst for Hale to piece together her ancestry in an attempt to understand the causes of Margaret's animosity towards her daughter, and although "the particular cause…is never clarified…the cycles of abuse are clearly fueled by the internalized racism that reaches back along Hale's bloodlines" (Finnegan 75).

Arguably, it is within one of the latter essays of Hale's memoir, "The Only Good Indian", that the truly insidious nature of this prejudice is exposed. As a relative of Dr. John McLoughlin, a chief founder of Oregon City, Hale's mother takes great pride in her white ancestry, while simultaneously denigrating her Indian blood. In a particularly telling passage, Margaret warns young Hale about the importance of maintaining proper behaviour in order to earn the approval of white people. Over and over, Margaret drives in the message that Janet must be a "Good Indian…clean and neat, hardworking and sober" (113). Moreover, as Hale gets older, she is informed that she must also be "the kind of woman men respect" (113). Other family members reinforce these messages about the imbalance of power between whites and Indians, for although her mother's sisters "[are] poor, uneducated, working-class…they [make] no effort to disguise the fact they [look] down on us because we [are] Indian" (115).

Interestingly, despite the obvious disdain that her white relatives have for Margaret and her Indian husband, Hale also observes that the exotic Indian "other" is an object of fascination for her family, and, by extension, the dominant white culture. Later in life, Hale overhears her

blond cousins bragging that they have native ancestry ("Their great-great-grandmother was an Indian princess, you know" (115)), although they are careful to note that this connection is slight, as Hale notes that it seems that "a little [Indian blood] is enough" (115). Here, Hale hints at one side of a deeply engrained image of the Indian woman that has permeated the European mindset, namely the noble, chaste, self-sacrificing Indian Princess. Such an image of the Indian woman has dominated the American cultural landscape for centuries. In her analysis of the American fixation on the "Pocahontas perplex", critic Rayna Green, herself a Cherokee Indian woman, observes the problematic nature of this stereotype:

> Both her nobility as a Princess and her savagery as a Squaw are defined in terms of her relationships with male figures. If she wishes to be called a Princess, she must save or give aid to white men. The only good Indian— male or female, Squanto, Pocahontas, Sacagawea, Cochise, the Little Mohee or the Indian Doctor—rescues and helps white men. But the Indian woman is even more burdened by this narrow definition…for it is she, not the males, whom the white men desire sexually (703).

Here, Green highlights a key feature of the problematic nature of the "good" Indian woman; as Western literary convention would have it, in order for an Indian woman, the Princess, to be "good", "she must defy her own people, exile herself from them, become white, and perhaps suffer death" (704). In order to be acceptable in the eyes of both her family and her greater society, therefore, Hale is expected to fall in line with this idealized and romanticized image of the virtuous, compliant and self-deprecating Indian princess.

Although she is not precisely able to articulate why her mother's comments about proper behaviour are so grating, it is arguable that some part of Hale recognizes the unfairness and outright absurdity of her situation. Regardless of her behaviour, she is so condemned by her obvious Indian ancestry that only outright rejection of her roots and capitulation to the whims of white society will offer any relief. Hale, however, rejects the notion of the classical Indian girl of the colonized West, a lifeless, flat figure whom author and poet Pauline Johnson described as a "'doglike', 'fawnlike', 'deerfooted', 'submissive', 'crouching' book heroine" (Johnson 273). This description is somewhat ironic, for although Johnson, a mixed blood Mohawk woman, used her celebrity to attract attention to the plight of Native people in Canada in the late 19th century, her conformity to the princess image in her dress, mannerisms, and writings (catered to the tastes of her European audience) "stultified [her] effectiveness as a writer and limited her effectiveness

as a spokesperson for Native people" (Francis 120). Hale, on the other hand, is vocal in her rejection of this idealized and confining label; unlike her mother, Margaret, and her Gram Sullivan, Hale "[does not] care to be a good Indian" (Hale 113).

Although Hale opposes the sanitized Western image of the "Good Indian" and cannot identify with the Indian Princess ideal, it seems that the alternative identity imposed upon her is equally, and more explicitly, damaging. If Hale is not willing to be the Princess, she will be delegated to the Squaw, the "darker twin" who, in popular culture and literary tradition, "share[s] in the vices attributed to Indian men—drunkenness, stupidity, thievery, venality of every kind—and [who] lives in shacks on the edge of town rather than in a woodland paradise" (Green 711). According to scholar Denise Lajimodiere, this coarse, denigrating stereotype stems from the inability of early colonial powers to recognize the social values and gender roles of the indigenous groups:

> [These men's] observations reflected their cultural biases, and, perhaps, reflected a desire to manipulate relativity to accommodate expectations that American Indian women were to be held in low regard in their tribal societies because women were subservient to men in European societies. (5)

Such a crude, derogatory view of American Indian women proves to be damaging to both Hale herself and to her female relatives. Hale and Margaret are both victims of terrible domestic abuse at the hands of their white (and in Margaret's case, Indian) spouses and Hale is shocked when a complete stranger refers to her as a "dirty Siwash", a terrible, denigrating word with "the power to cut like a knife" (Hale 119). Worse still, the internalization of this cruel stereotype, and all the negative associations which it invokes, plagues Hale all her life. Margaret warns Hale that she must never become one of the "other kind, the bad ones, the drunken, lazy louts" (113). Most disturbingly of all, Hale distantly recalls soaking her "hateful brown hands" (140) in bleach in a futile effort to whiten them, thereby distancing herself from the image of the dirty, crude Indian girl and making herself acceptable to her white classmates.

Ultimately, Hale finds herself in an intolerable position. Limited as she is by both the abuse and dysfunction of her own family and by the domineering forces of white society at large, she finds herself adrift from her home. While her daughter and niece strive to reconnect the family, Hale acknowledges that she herself can never be a permanent member, and that she is "one of [the] broken-off pieces now" (xxxiii). Although her self-imposed separation from the

Coeur d'Alene tribal land is a source of heartache for Hale, it is arguable that her independence is, in a way, her best hope for survival. Bolstered by the courage which has "been bred into [her]" (xxi), Hale strives to carve her own niche in the world, separate from the stifling Princess/Squaw dichotomy and its "poetic images having to do with visions of spirits, drums and feathers, shape-shifters and eagles and things" (187). Like other American Indian women, Hale "needs a definition that stands apart from that of males, red or white….she [must] be defined as Indian, in Indian terms" (Green 714).

For over one hundred years, critics such as Pauline Johnson, Rayna Green, and Denise Lajimodiere have been calling out for an end to the limiting colonialist definitions of American Indian women. Although progress has been made, one need only look to Hollywood and to the products of popular culture to see that much more work must be done. In chronicling the experiences of herself, her family, and of the Coeur d'Alene people, Janet Campbell Hale joins a long line of American Indian women who have fought for an identity free from the boundaries of Eurocentric fiction and myth, and who have sought to lay the fantasy of Pocahontas and her sister, the Squaw, to rest.

Works Cited

Finnegan, Jordana. "Refiguring Legacies of Personal and Cultural Dysfunction in Janet Campbell Hale's Bloodlines: Odyssey of a Native Daughter." *Studies in American Indian Literatures* 19.3 (2007): 68-86. *JSTOR Journals*. Web. 25 Nov. 2014.

Francis, Daniel. *The Imaginary Indian: The Image of the Indian in Canadian Culture.* Vancouver: Arsenal Pulp Press, 1992. Print.

Green, Rayna. "The Pocahontas Perplex: The Image of Indian Women in American Culture." *The Massachusetts Review* 16.4 (1975): 698-714. *JSTOR Journals*. Web. 25 Nov. 2014.

Hale, Frederick. "In the Tradition of Native American Autobiography? Janet Campbell Hale's Bloodlines." *Studies in American Indian Literatures* 8.1 (1996): 68-80. *JSTOR Journals*. Web. 26 Nov. 2014.

Hale, Janet Campbell. *Bloodlines: Odyssey of a Native Daughter*. New York: Harper Collins, 1994. Print.

Johnson, Pauline. “A Strong Race Opinion: On the Indian Girl in Modern Fiction.” *Early Canadian Short Stories. Short Stories in English before World War 1*. Ed. Misao Dean. Ottawa: Tecumseh Press, 2000. 266-274. Print.

Lajimodiere, Denise K. "American Indian Females and Stereotypes: Warriors, Leaders, Healers, Feminists; Not Drudges, Princesses, Prostitutes." *Multicultural Perspectives* 15.2 (2013): 104-109. *Academic Search Complete*. Web. 26 Nov. 2014.

Curiosity and Connection: An Undergraduate Perspective on Community Research

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Abstract:

In this paper, I will explore the effects of experiential undergraduate research and subsequent conference participation on my self-identity as a scholar and contributing member of the university community and its surrounding urban centre. In particular, I will examine the impact that participation in undergraduate research and conferences has had on my perception of student engagement and learning outcomes. For the past forty years, extensive research into the goals of undergraduate education has generated much discussion about student retention, student engagement in the process, and learner outcomes. The consensus appears to be that independent undergraduate research is an essential component to providing a comprehensive education in conjunction with traditional lecture hall and seminar session teaching practices. A review of research literature written by faculty members and undergraduate students in diverse disciplines, as well as by administrators providing support and program underpinnings for innovative undergraduate research, reveals several common threads within post-secondary institutions. As well, I will analyze how my particular research projects and the dissemination of my findings connected my two communities: Thompson Rivers University (TRU) and the small city of Kamloops. The opportunity to disseminate the research process and subsequent findings of my research to undergraduate students in-class and to students, faculty and the general public at two undergraduate conferences held annually at TRU intertwine the history of our small city with the academic community of the university, thus emphasizing the symbiotic relationship

between the two. Community-based undergraduate research, in particular, oral history research, reveals the voices of people engaged in the building of the Kamloops community, thus connecting stories of personal accomplishment to the sphere of academia within our small city. Reflective consideration from an undergraduate student's perspective on research and conference presentation will add to the knowledge-base of student engagement in research, the learning outcomes of the conference forum, and the impact of community research within and outside of the university campus.

> *"Learning is based on discovery guided by mentoring rather than on the transmission of information. Inherent in inquiry-based learning is an element of reciprocity: faculty can learn from students as students are learning from faculty."*[1]

Introduction

When I enrolled in post-secondary education at the University College of the Cariboo (UCC) in 2004, I was comforted by the brick façade of the buildings on campus, metaphoric of the staid and somber learning experiences I anticipated—orderly and layered, representing a solid grounding in the truths of academia. I intended to be attentive to the professors' teachings, and began to methodically work my way through to a baccalaureate degree in English, three credits at a time.

In 2005, the University College of the Cariboo transitioned into Thompson Rivers University (TRU), and, at the same time, the images I held of university education transformed into possibilities more attuned to my creative and inquisitive nature. I was encouraged by my Canadian literature instructor to present my term research paper, an essay on Canadian poets Archibald Lampman, F. R. Scott, and Irving Layton, at the inaugural TRU Research and Innovation Undergraduate Conference (URIC) in the spring of 2006. With my professor's guidance, I prepared a fifteen-minute oral presentation, and, though I was nervous, my experience was decidedly exciting, and it was gratifying to share my insights with others in the TRU community.

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[1] Shirley Strum Kenny et al., *Reinventing Undergraduate Education: A Blueprint for America's Research Universities*, Boyer Commission on Educating Undergraduates in the Research University, Shirley Strum Kenny, Chair, (New York: State University of New York Stony Brook, 1998), 15. Available at http://www.niu.edu/engagedlearning/research/pdfs/Boyer_Report.pdf.

Since that first introduction to undergraduate research and conference presentation, I have enjoyed several research opportunities, and in most instances, I have presented my findings at conferences on the TRU campus. In particular, I have been involved in oral history research examining the underpinnings of the development of Kamloops, the small-city community in which the university is situated. Situated in the southern interior of British Columbia, Kamloops shares the regional histories of the fur trade, mining, forestry and ranching, all enmeshed in economic, political, and social transformations. Oral history speaks to the lives inside big histories, weaving the intricacies of personal contributions into the social fabric of community development. Dissemination of this research informs us of the relevance of academia to our fundamental understanding of the context of our own place and time.

In this paper, I will explore the effects of experiential undergraduate research and subsequent conference participation on my self-identity as a scholar and contributing member of the university community and its surrounding urban centre. In particular, I will examine the impact that participation in undergraduate research and conferences has had on my perception of student engagement and learning outcomes. As well, I will analyze how my particular research projects and the dissemination of my findings connected my two communities: TRU and the small city of Kamloops. Reflective consideration from an undergraduate student's perspective on research and conference presentation will add to the knowledge-base of student engagement in research, the learning outcomes of the conference forum, and the impact of community research within and outside of the university campus.

Undergraduate Research

Participation in two annual undergraduate conferences held at TRU, the Philosophy, History and Politics Conference (PHP) and the Undergraduate Research and Innovation Conference (URIC) begins in the realm of research. Research starts with a big idea, the research site, encompassing many abstractions about scientific, social, economic, and political issues. For example, a research site may be volunteerism in small cities, or mental health care in British Columbia, or the influence of undergraduate conferences on Canadian university students' learning outcomes. Each of these sites offers insightful possibilities about issues such as culture, class, race, and gender, depending on the focus of the research. From the germination of an idea, a proposal is made to create new knowledge; a forum is initiated to develop an investigative

strategy; intention and expectation are melded; and the work becomes an entity on its own. Each researcher's discovery becomes a part of the whole. This is motivating and rewarding work, albeit a little intimidating at first, as each participant moulds a distinctive place within the collective. Any trepidation dissolves as curiosity assumes control of the opportunity to be part of unexplored landscapes of knowledge. Whether the project involves discovery of new species on the planet or explication of historical events from different perspectives, academic research results in something learned or found that builds on past knowledge.

For the past forty years, extensive research into the goals of undergraduate education has generated much discussion about student retention, student engagement in the process, and learner outcomes for those holding a baccalaureate degree in their hands at the end of a long and winding path to scholarly enlightenment. The consensus appears to be that independent undergraduate research is an essential component of providing a comprehensive education in conjunction with traditional lecture hall and seminar session teaching practices. A review of research literature written by faculty members and undergraduate students in diverse disciplines, as well as by administrators providing support and program underpinnings for innovative undergraduate research, reveals several common threads within post-secondary institutions.

Since the mid-twentieth century, there has been an obvious trend towards increasing undergraduate research opportunities in North American universities. Most data is available in US published journals and reports, although Canadian research contributions are also recognized in these journals. In particular, the 1998 Boyer Commission Report, *Reinventing Undergraduate Education: A Blueprint for America's Research Universities*,[2] sent ripples through higher education by advocating that faculty and administrators reconsider the role of undergraduate research in student retention, engagement and successful learner outcomes beyond baccalaureate degrees. Boyer stressed that undergraduate research was not only important for advancing students along the higher education path, but also to for promoting critical thinking and analytical skills outside of university environments.

A consideration that is prevalent in the literature is identifying undergraduate students as willing and able to participate in research projects. Seeman (1973)[3] considered only graduate

[2] Kenny et al., *Reinventing Undergraduate Education*.
[3] Julius Seeman, "On Supervising Student Research," *American Psychologist* 28, no. 10 (1973): 900-906.

students. However, Garde-Hansen and Calvert (2007) and Gonzalez (2001) present arguments for creating resonant research culture in the early years of post-secondary education, advocating that the ultimate mission of research universities is to teach students how to do research and to instill an enthusiasm for discovery.[4] Palladino et al. (1982) emphasize that experiential opportunities in the research process should be given to the best undergraduate students; they ask the question: "Are all . . . students capable of completing (or even interested in) the full research process from library research to final write-up and presentation?"[5] In answer to this question, and in opposition to Palladino's opinion on selecting undergraduates for research participation (assuming that "best" refers to high academic standing), Haave and Audet (2013) advocate for disregarding GPA considerations and increasing availability of research opportunities for lower division undergraduate students to promote student engagement and to provide meaningful learning outcomes. Their findings indicate that participation in collaborative research projects has the "greatest impact on academically weaker students and accelerates academic maturity," thus challenging the prevailing practice of undergraduate research opportunities being offered to "upper-year students who have proven themselves academically."[6]

In support of undergraduate research as an essential aspect of undergraduate education, Carsrud (1975) determined that "undergraduates are less biased" in their inquiries, and less inhibited in asking questions than faculty and graduate students. This extends an insight offered by Seeman (1973) in his conclusion that an "optimal learning climate [involves] considerable latitude of students to go off into unconventional cognitive byways, along with a support system that provides them with occasions for doing so."[7] Considering that Seeman's work was concerned only with graduate students, Carsrud's opinion, two years later, indicates a leap, as it recognizes the value of undergraduate research work, not just to attain results, but to advance

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[4] Joanne Garde-Hansen and Ben Calvert, "Developing a Research Culture in the Undergraduate Curriculum," *Active Learning in Higher Education* 8, no. 2 (2007): 105. Note that "collaboration between academics and undergraduates on 'live' research projects is a relatively recent phenomenon in the UK." Also read Cristina Gonzalez, "Undergraduate Research, Graduate Mentoring, and the University's Mission," *Science* 293 (2001): 1624.

[5] Joseph J. Palladino et al., "Undergraduate Research in Psychology: Assessment and Directions," *Teaching of Psychology* 9, no. 2 (1982): 73.

[6] Neil Haave and Doris Audet, "Evidence in Support of Removing Boundaries to Undergraduate Research Experience," *Collected Essays on Learning and Teaching* 6 (2013): 105. Also read Wendy Katkin, "The Boyer Commission Report and Its Impact on Undergraduate Research," *New Directions for Teaching and Learning* 93 (2003): 25-26.

[7] Alan L. Carsrud, "Undergraduate Psychology Conferences: Is Good Research Nested Under Ph.D.s?" *Teaching of Psychology* 2, no. 3 (1975): 112; Julius Seeman, "On Supervising Student Research," 900.

students' scholarship goals by involvement in the process of learning how to do research in their formative post-secondary years.

On the topics of undergraduate research and conferences in relation to student engagement and learner outcomes, it is necessary to assess the prevailing circumstances of undergraduate research opportunities found in universities, and to recognize the relationships among three university community constituents—students, faculty, and administration. An analysis of the roles of these participants in research culture reveals a central consideration of the tenuous relationship between faculty motivation and administrative policies regarding undergraduate research activities. In particular, the incentive-driven research versus teaching effectiveness issue is seen as a barrier to innovative undergraduate teaching practices. In most universities, career advancement and increased remuneration is tied to publication of research results, while effective teaching practices are not considered.[8] Schroeder (2013) offers the premise that institutional processes affect undergraduate enrollment and degree completion."[9] Merkel (2003) notes the criticism directed at universities "for their emphasis on research over teaching and for not committing enough of their vast resources to the education of undergraduates."[10] The contentious issue of faculty commitment and institutional support for undergraduate research is evident in these studies and is explored by several other researchers.

To mitigate this situation, several teacher-scholars, including British researchers Garde-Hansen and Calvert (2007), have encouraged their fellow faculty researchers to implement curriculum-based research opportunities for their undergraduates, intimating that administration support is not imperative for this implementation.[11] Some, such as Carsrud (1984),

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[8] The Boyer Commission on Educating Undergraduates in the Research University promoted rethinking the reward system for faculty: "In 1895, the first president of the University of Chicago, William Rainey Harper, asked each new faculty member to agree in writing that advancements in rank and salary would be governed chiefly by research productivity. His stipulation, novel in its time, would raise few eyebrows in most research universities a century later. They might claim otherwise, but research universities consider 'success' and 'research productivity' to be virtually synonymous terms." Their report recommends that "reward systems in the modern university need to reflect the synergy of teaching and research – and the essential reality of university life: that baccalaureate students are the university's economic life blood and are increasingly self-aware," in Kenny et al., *Reinventing Undergraduate Education*, 31-32. Also read

[9] Charles C. Schroeder, "Reframing Retention Strategy: A Focus on Process," *New Directions for Higher Education* 61 (2013): 43.

[10] Carolyn Ash Merkel, "Undergraduate Research at the Research Universities," *New Directions for Teaching and Learning* 93 (2003): 39.

[11] Garde-Hansen and Calvert, "Developing a Research Culture," 108. For further insight into curricular undergraduate research strategies, also read Kirk and Hanne, "An Alternative Approach," 839; David F. Lancy, "What One Faculty Member Does to Promote Undergraduate Research," *New Directions for Teaching and Learning*

Galbraith (2012), and Lancy (2003), offer templates for organizing curricular research and successful undergraduate conferences. Lancy asserts that undergraduate students are more than willing to participate, "especially if the research project has a stipend attached."[12] Merkel (2003) revisits the issue of research versus teaching, noting that "tutorial interaction between mentor and student around a problem of mutual interest is an ideal bridge on the teaching-research continuum" and that there is evidence that "discussions about undergraduate research [are] evidence of institutional conversations" between administration and faculty to develop a common understanding about issues.[13]

My experience as an undergraduate student has demonstrated that independent undergraduate research provides a most satisfying pathway to acquiring the baccalaureate degree, and considerable support from teacher-scholars at TRU has guided my work. Since 2004, I have researched, among other topics, Vietnam War recruitment practices and its consequences for infantry personnel, and Canadian poets and their contributions to the understanding of our country in their time. One of my most cherished research works was tracking nine Bella Coola Nuxalk men who traveled from their home on British Columbia's northwest coast to Hamburg, Germany in 1885, to become participants in Carl Hagenbeck's ethnological tours to several other German cities where they performed their traditional dances and songs for one year. This investigative journey began when a fellow student in a Canadian Studies classroom gave a brief presentation about the story of men travelling from her community of Bella Coola to Europe in the late nineteenth century. She knew some of the story, but not the context. Several years later an opportunity came to me to explore the circumstances of this journey, and my research culminated in an undergraduate research conference presentation—an opportunity to share this extraordinary story.

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93 (Spring 2003): 87-92; Patricia Anne Mabrouk, "Survey Study Investigating the Significance of Conference Participation to Undergraduate Research Students," *Journal of Chemical Education* 86, no. 11 (2009): 1335-1340; and Ronald L. Dotterer, "Student-Faculty Collaborations, Undergraduate Research, and Collaborations as an Administrative Model," *New Directions for Teaching and Learning* 90 (2002): 81-89.[12] Alan L. Carsrud et al., "Undergraduate Psychology Research Conferences: Goals, Policies, and Procedures," *Teaching of Psychology* 11, no. 3 (1984): 144; John M. Galbraith, "Shepherding Undergraduate Students Through a Research Experience and a Professional Meeting," *NACTA Journal* 56, no. 2 (2012): 77; Lancy, "What One Faculty Member Does," 87.

[12] Alan L. Carsrud et al., "Undergraduate Psychology Research Conferences: Goals, Policies, and Procedures," *Teaching of Psychology* 11, no. 3 (1984): 144; John M. Galbraith, "Shepherding Undergraduate Students Through a Research Experience and a Professional Meeting," *NACTA Journal* 56, no. 2 (2012): 77; Lancy, "What One Faculty Member Does," 87.

[13] Merkel, "Undergraduate Research," 52.

In recent years, I have been very fortunate to participate in three research initiatives from their beginnings: the Untold Stories oral history project, a collaborative effort in conjunction with the Kamloops Women's Resource Group Society; the Tranquille oral history project, a shared undertaking with the Kamloops Heritage Society and Tranquille-on-the-Lake Developments, conducted under the auspices of TRU's Community-University Research Alliances Program (CURA); and, currently, a collaborative, multi-disciplinary project undertaken by the Undergraduate Conference Research Group (UCRG) at TRU, with contributions from past and present faculty and students of TRU and other Canadian universities.

Undergraduate Conference

An integral part of undergraduate research is communicating results to fellow students, faculty members, other institutional constituents, and the public. Several of my research projects have led me to participate in the faculty-organized TRU Undergraduate Research and Innovation Conference (URIC) since its inauguration in 2006, and I have also presented, from 2008, at the annual TRU Philosophy, History and Politics (PHP) undergraduate conference, a student-initiated and student-organized research conference.

Carsrud (1984) promotes research conferences as experiential learning tools essential to developing an appreciation of research concepts and applications, whether original research or new findings in replication of previous research. Asserting that undergraduates benefit from participation in the "final phase of the research process," Carsrud advocates student involvement in roles such as chairperson(s) with supportive faculty advisors.[14] I have assumed several roles in my participation at the TRU conferences. I have participated as a volunteer at several of the URIC conferences, and I particularly enjoy working the early-morning registration desk as it allows me an opportunity to meet other presenters and time to get to know the organizers and other volunteers. As a session room attendant, I perform tasks such as checking that media equipment is in working order, assisting students in preparing media set up, ensuring podium placement, and providing water for presenters. It is always interesting to work at the book sale, a fundraising venue. I usually end up with several books to add to my own collection!

[14] Carsrud et al., "Undergraduate Psychology Research,"144.

My participation as a session moderator contributed to my engagement with conference learning outcomes. In this capacity, I have attended sessions that I might not otherwise have attended, and discovered new knowledge while preparing questions for each presenter in an effort to show interest and to provide feedback; in this role, due to my own experience as a presenter, I became increasingly sensitive to the presenters' comfort zones. I also paid more attention to audience participation.

As a research presenter, I learned first-hand the daunting challenge of organizing a twenty-page paper into a fifteen minute presentation, which is no easy feat! Along the way, I also mastered the skill of preparing power-point slides to augment my presentation, and I learned the value of minimizing the number of slides as well as simplifying the content of each slide to maintain audience attention. Each of these learned skills underscores the efforts of my faculty supervisor to provide guidance for my research and essay composition, and of other faculty members providing instruction in, for example, public speaking. As well, I benefited from the support of fellow students organizing workshops to assist in technical instruction on media technology, such as computer-generated projection of presentation slides.

Faculty supervisor support is essential to the success of conference presentation. My first opportunity came about through encouragement from my second year Canadian literature instructor, Associate Professor Ginny Ratsoy. In her class, I delved into the mysteries of poetry and the poets who write it, and I submitted a paper for consideration to the inaugural URIC in 2006. With her assistance, I polished the essay into a concise analysis of the work of three Canadian poets: Archibald Lampman, F. R. Scott, and Irving Layton. In the process of preparing for the conference, I attended a workshop on computer projection of power-point presentations, technology that I was not familiar with, but learned quickly from the students volunteering to help in this aspect of the event. To my delight, family members attended my presentation, as well as faculty and students from TRU, and Ms. Ratsoy was there to give me moral support. From there, I was indoctrinated into the culture of undergraduate research and the importance of conference participation as a capstone to the process.

At the time I was unaware that this event would be precedent-setting for the university, the first of a now annual opportunity for undergraduates to share their research with fellow students and faculty at TRU, as well as a chance to showcase the advanced studies foundations

provided to post-secondary students within the small city of Kamloops. In 2008, the initiation of the annual Philosophy, History and Politics (PHP) undergraduate conference provided another venue for students to share research findings.

I have always been strong academically; however, undergraduate independent research opportunities have strengthened my personal engagement in scholarly studies and have provided me with knowledge outside traditional passive-learning lecture halls. Participation in undergraduate research conferences, and, in some instances, subsequent published research papers, completes the circle of research work. The hours of reading, analyzing and writing culminate in an opportunity to share your work with peers and faculty mentors, and to fortify the learning outcomes so valued at academic institutes. If the end game of scholarship is to obtain new knowledge, or to add depth to the understanding of existing knowledge, then the responsibility of the researcher is to disseminate this knowledge for future analysis and understanding.

Community Research

An interview I recently listened to introduced me to a phrase that emphasized the significance of community-based research: culinary historian, Michael W. Twitty, asserted that "history is not generic," that the personal stories inside the big historical events are important.[15] Recently I have been involved in community-based, oral history research, and I have revelled in the depth given to the big-picture history, the one we all know in a transient, side-glance way. The projects I have worked on illuminate the history of Kamloops, juxtaposing the personal stories of lives lived in the community onto the bricks and mortar institutions that anchor our small city to the confluence of the Thompson Rivers. I am in complete agreement with Garde-Hansen and Calvert (2007) in their assessment that "promoting undergraduate research through tying assessment to local community involvement may well be particularly enriching."[16]

The work I do, and enjoy the most, is storytelling. My work in Kamloops' oral history research included personal interviews with people involved in the formation of several of the city's significant social support organizations. As I worked with them, the participants became

[15] Michael W. Twitty, Canadian Broadcasting Corporation, *Q*: *CBC Radio One* (Toronto, ON: Canadian Broadcasting Corporation, 11 July2013). Interview by Jian Gomeshi.
[16] Garde-Hansen and Calvert, "Developing a Research Culture," 114.

increasingly aware of their work as an important contribution to the greater story of their community, thus establishing a greater sense of place in their memories. It is noteworthy that, with the exception of one, all my oral history work has been done in the voices of women, and many of these women began their stories with humility, saying, in essence, "you just do what has to be done."[17] The one male voice constructed organizational substance to the women's related stories, and, as occurred with the women, evoked his deep personal commitment to the people his work affected.

My experiences with the Government of Canada's New Horizons for Seniors Program's "Untold Stories: Valuing Women's Contributions to Community Life" oral history project and the Tranquille oral history projects produced revelations about the underpinnings of community development in Kamloops: the first through stories of a generation of women who volunteered their time and considerable knowledge to provide service to the community in a myriad of social and educational spheres, and the second with a focus on the economic, political and social influence of a large institute on the outskirts of the small city. The knowledge that evolved from these projects enhanced an understanding of the cultural, social and economic keystones in small city development.

Untold Stories Oral History Project

At the end of the winter semester of 2008, Ms. Ratsoy approached me in a campus parking lot to offer me an opportunity to work with a newly-formed research group. I had just completed a two-hour history final exam, and I was exhausted, so I thanked her and told her I'd get back to her sometime through the summer. However, within a few days, my innate curiosity prompted me to contact her to let her know I would indeed be interested in being part of this significant community research initiative.[18] My work began under the umbrella of a third-year undergraduate service learning course with Ms. Ratsoy as my faculty supervisor, and in June 2008 I became part of a collaborative research project between TRU and the Kamloops Women's Resource Group Society (KWRGS), under the direction of TRU social work associate professors Julie Drolet and Trish Archibald. An oral history project, the goal of the KWRGS was

[17] Trish Archibald and Julie Drolet, eds., *Not Just a Tea Party: Celebrating Women's Contributions to Community Life,"* Kamloops, BC: Kamloops Women's Resource Group Society, 2009: Introduction, xxi-xxiii.
[18] I am grateful to Ms. Ginny Ratsoy for offering me this research opportunity and for her constant and continued support for my undergraduate education goals.

to document "the stories of some extraordinary senior women who have made a difference in the social fabric of our community" through volunteerism during the twentieth century.[19] In the process, we discovered that several of these women continue their work into the present day, decidedly ignoring the concept of retirement. KWRGS gathered a group of female volunteers whose "mission was to get the stories, to pick up the threads of the tapestry from the past, and weave them into a cohesive textual and visual form."[20] The work culminated in two books being written by members of the group of volunteers to present the stories of twenty-two local senior women: *Not Just a Tea Party: Celebrating Women's Contributions to Community Life* (2009) and *One Action at a Time: Celebrating Women's Contributions to Community Life* (2013). I was honoured to write the stories of two of the women I interviewed for this project. The documents used to create the publication are stored at the Kamloops Museum and Archives.[21]

During my work on this project, I became interested in my fellow volunteers' motivation for participating in the Untold Stories research, and my inquisitiveness evolved into a second service learning course, again supervised by Ms. Ratsoy. In this case, I explored women's roles in volunteerism through interviews with members of the KWRGS volunteer group and a topical literature review. This research resulted in my 2009 paper, "In the Company of Women: The Work We Do," and in it I noted that my motivation to pursue this inquiry was that

> I became intrigued by the idea that a group of women, virtually unknown to one another, would embark on such a venture, and would be able to work so well together; we genuinely believed in the importance of the work we were doing, and a sense of camaraderie naturally formed.[22]

Unlike the KWRGS project, in which all of the women interviewed had been vetted by committee and the ethics approvals were in place before my work began, for my own project I contacted each of the fifteen women I had worked with, explained my research goal, and eight of the women agreed to participate in my research. Of course, Ms. Ratsoy and I were required to apply for TRU ethics approval, which involved

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[19] Debra Andrews, "In the Company of Women: the Work We Do," *Proceedings of the 4th Annual Thompson Rivers University Undergraduate Conference*, edited by Dr. Kelly-Anne Maddox and Dr. Mairi MacKay, Kamloops, BC: Thompson Rivers University Office of Research, Innovation and Graduate Studies, 2009: 26.
[20] Andrews, "In the Company," 26.
[21] Archibald and Drolet, "Not Just a Tea Party," Preface, xix.
[22] Andrews, "In the Company," 26.

thoughtful consideration of questions to be asked and confidentiality safeguards to be put into place. Everything about my independent research was underpinned by knowledge of oral history practices gained through my participation with the KWRGS project. In particular, the training I had received on audio-visual interviewing techniques and transcription of interviews was invaluable, as was the guidance of the project coordinator as she moulded us into effective, interchangeable working teams comprised of interviewer, audio recorder and video camera operator, roles transposable within teams.

My independent investigation into volunteering began with the advantage of having worked with each of the eight women, so a collaborative relationship had already been established between us; it was helpful that we had all received the same training on interviewing techniques. I am keenly aware that a trusting rapport, based on sincere mutual respect, is paramount when enquiring into a person's life-stories. These eight women were from disparate work places and life-phases. Included were two TRU faculty members; a local business woman; a full-time homemaker; a TRU student married with two young children; two inveterate volunteers with several social organizations in town; and, perhaps predictably, one of the senior women interviewed for the Untold Stories project!

My research goal was to gain a deeper understanding of three elements of volunteerism: "What motivates women to volunteer? How does volunteering benefit them? And, ultimately, what are the benefits to the communities in which we live and work?"[23] I had chosen my subjects well; each had an understanding of their own motivations in the volunteer work they took on. Several echoed motivations highlighted in Mueller's research into volunteer work by women. She asked why women "would find it rational to do work for free," and she recognized four reasons: "family need for an organization's service, human capital (skills training), individual prestige, and altruistic motivation."[24] The common thread throughout the narrative of these eight women was that they felt very strongly about acknowledging the unrecognized work that women take on to make their lives and the lives of others more valued and integral within their

[23] Andrews, "In the Company," 27.
[24] Marnie W. Mueller, "Economic Determinants of Volunteer Work by Women," *Signs* 1, no. 2, (1975): 327; Andrews, "In the Company," 28.

community. Within their eight stories, the histories of thirty-one different Kamloops community and cultural organizations were underscored: parent advisory councils, children's sports programs, fundraising for health research, political campaigns, crisis line monitoring, women's shelters advocacy, literacy programs, immigrant services and many more, such as the Japanese Cultural Society and the Kamloops Film Society. This group of women included a young, thirty-something student and mother, an eighty-something elder, and everyone in between. Women. Working.

Their recorded interviews and written statements supported the assertion that women are motivated to volunteer due to altruistic sensibilities, and that they are aware that their work provides benefits to themselves and to their communities. For the work on the Untold Stories project, each of the KWRGS women stepped forward to participate in what they deemed an important and worthwhile project for their community at large and each felt honoured to be involved. They recognized that the project was beneficial to the senior women in acknowledging their contributions to the community, and that the community would benefit by recognizing the value of these contributions and, perhaps, encourage others to take on volunteer work.

For my work on the Untold Stories project, Ms. Ratsoy encouraged me to apply to, and recommended me for, the British Columbia Social Policy Research Award; my application was successful and the funding received in the fall of 2008 was appreciated as I progressed in my volunteerism research project. In 2009, I presented my paper on this research to both the TRU PHP and URIC conferences, and it was most gratifying to have this paper chosen to be published in the *Proceedings of the 4th Annual Thompson Rivers University Undergraduate Conference.* For this work, I was chosen to be the recipient of the Canadian Studies Faculty Award in 2009. Quite unexpectedly, "In the Company of Women: The Work We Do" was identified as one of the top three submissions to the *Proceedings*, and I received a cash award from the TRU Research, Innovation, and Graduate Studies Department in March of 2010. The knowledge gained in undergraduate research has its own rewards, and recognition of the commitment and effort required to carry out such research is very much appreciated.

Tranquille Oral History Project

Community history research is circular, with beginnings and endings entwined and bound invisibly. My work with the Untold Stories project germinated into an account of the Canadian immigrant experience through the oral history of an immigrant from the Netherlands and her story of landing in Montreal during the height of the FLQ crisis in Quebec in October 1970. The woman in the immigrant story was my colleague on the Untold Stories project. Though not presented at one of the campus-wide conferences, I enjoyed presenting the story to my classmates and instructor, and I especially enjoyed spending time and drinking tea with my former collaborator. In 2012, one of the women I interviewed for the Untold Stories project offered the story of her work at Tranquille during the 1970s over a cup of coffee in her home; her story was part of my presentation at the two TRU conferences based on my work on the Tranquille oral history project.

The Tranquille project came to me from another TRU faculty member, Dr. Tina Block, Associate Professor of history. In the spring of 2012, she approached me about a research initiative being undertaken by TRU and the Small Cities Community-Research Alliance (CURA) in collaboration with the Kamloops Heritage Society (KHS) and Tranquille-on-the-Lake developers.[25] The initiative is an attempt to find the stories of people who had worked and lived at Tranquille, a tuberculosis sanatorium in the early 1900s and a health institution for individuals with cognitive disabilities from 1954-1985 and to create a repository for these stories. Dr. Block developed a directed studies course description, "A Social and Cultural History of Tranquille." She recruited another undergraduate student to be involved in the project, and the three of us collaborated on developing a set of questions to guide interviews that would gather information including biographical sketches, descriptions of Tranquille as a work site and home, and perceptions of Tranquille's location and physical and social landscapes. She also submitted a request for ethical review, and when the Certificate of Approval was returned, we were ready to get to work.

An initial meeting with the signatories of the Tranquille project revealed that the concept for the research was still in its formative stages, and that the basis of the research was a list of names of former Tranquille employees and residents that had been collected by the Kamloops

[25] I am grateful to Dr. Tina Block for encouraging me to become a part of this on-going project and for her continued support in my undergraduate education goals.

Heritage Society. Some of these employees had worked at the King Edward VII Tuberculosis Sanatorium, built and operated at the Tranquille site from 1907 to 1958, and their ages made it imperative to try to gather their remembrances as soon as possible.[26] Whereas in the Untold Stories project the interviewees were vetted and informed of the project by the organizers before I became involved, the KHS provided me and my co-researcher with a list of former employees and residents at Tranquille, and our work began by dividing the list in half and contacting the individuals to explain the project and ask for their participation. The KHS list consisted of just over sixty names, most, but not all, with contact information and a description of their time spent at Tranquille and duties performed. Responses to our telephone calls were varied. Most people we contacted were not interested or did not return our calls, but we eventually arranged interviews with seven people.

The KHS arranged for the two of us to attend one of the monthly luncheons held by former Tranquille employees since its closure in 1985. Reactions to our proposed research were mixed: some people were concerned about our intent, and others were happily willing to share their stories with us. One man we met at the luncheon was very enthusiastic about participating in our research, but, unfortunately, he did not return our calls.

I was privileged to interview three former staff members of the Tranquille Institution, for developmentally disabled persons, each at varying levels of responsibility in the day-to-day operation of the facility from 1963 to its closure in 1985. One interviewee, JR, worked at Tranquille as a caregiver, an inexperienced twenty-year-old who admired the dedication of her co-workers, especially her supervisor, and who accepted the vagaries of the residents. Her work there prompted her to become a registered nurse, and in her subsequent life-long career in psychiatric and mental health, she remained cognizant of the needs of disabled persons, such that, in an administrative capacity, she has been instrumental in the more recent closures of other large provincial institutes in British Columbia. Her memories of Tranquille were framed with humour and contemplative reflection of the impact Tranquille had on her later life. She felt that the closure of the facility in 1985 provided a better life for “a lot of the people [that] could do very well in the community in smaller group homes”; however, she maintains that there will

[26] Wayne Norton, *"A Whole Little City by Itself": Tranquille and Tuberculosis.* Kamloops, BC: Plateau Press, 1999.

always be "a core group of people that need that highly intensive, different kind of care that does not work in a community." She commented that

> when you look at Tranquille, Woodlands, Riverview, the grounds and the space that was allowed, these people could go out of their buildings and they weren't in somebody else's face . . . And I think that was important to them, it's important to the communities. And behaviour was accepted if you worked at those facilities, you accepted it. The community does not accept it, and that's hard on those people because they don't understand why they're not accepted.[27]

Another former caregiver, and also an interviewee in the Untold Stories project, Charmian Ferguson, recalls long drives out to Tranquille, and the camaraderie of the workers. As a nurse's aide, she worked directly with the residents with their personal care and daily activities. Echoing JR's sentiments, she felt that the closure may have been good for most of the residents, but that there were some who were not prepared for life outside the institution. She still recognizes several former Tranquille residents around Kamloops, and she is concerned about the lack of structure in their lives. The violent death of one them still haunts her; she recognizes his death as an example of the community's lack of acceptance for difference in people, an example of a person who was negatively affected by Tranquille's closure.[28]

Another interviewee, Alexander McIntosh, was hired as the Director of Resident Care at Tranquille in 1963. He remained in this position until he facilitated its closure in 1985. He was a registered nurse with training in psychiatric nursing care, and upon his arrival at Tranquille he knew that he "was coming to a different kind of institution" than he had worked at in Scotland and Edmonton, Alberta. He explained that Tranquille's care mandate was to prepare individuals for community placement, and that, during his tenure, over four hundred residents were placed outside of Tranquille, long before the announcement of its imminent closure. Unlike Woodlands residents, those at Tranquille "knew how to prepare a meal if they had to. They were accustomed to keeping their rooms clean and tidy," and he felt that placement into smaller, community-oriented homes, less crowded than the larger institute, caused positive behaviour changes for most of them. The closure of the institute and the transfer of Tranquille residents were

[27] JR, personal interview, July 7, 2012.
[28] Charmian Ferguson, personal interview, June 27, 2012.

accomplished in a very short time. There was much controversy about the location of the group homes, no matter which city or town they were set up in. Several former Tranquille employees set up and successfully managed group homes throughout the province.[29]

These interviews stimulated my curiosity and led me to investigate previous and on-going research into the legacy of institutionalization and deinstitutionalization of marginalized people from the 1850s to the present day. I was interested in the ideology that prompted the social, economic and political movement towards institutionalization through the nineteenth and early twentieth centuries, and the ideological changes that motivated the push for reform and closure of large institutions for developmentally disabled people in the mid-twentieth century. My central concern was Tranquille's place and time within these contexts. The interviews I was privileged to participate in, and relevant research regarding deinstitutionalization in a transnational context, provided insight into Tranquille's time and place in the evolution of mental health care. My work explored the history of Tranquille in the context of transnational sensibilities regarding mental and physical health, eugenics, institutionalization and deinstitutionalization, and the politicization of social reform. This research resulted in a classroom presentation to Dr. Anne Gagnon's Canadian history class as well as to Dr. Block's historiography students. As well, my paper was presented at the PHP and the TRU URIC conferences in 2013. The opportunity to disseminate this knowledge to undergraduate students in-class and to students, faculty and the general public at the undergraduate conferences intertwine the history of our small city with the academic community at TRU, thus emphasizing the symbiotic relationship between the two. Undergraduate research, in particular, oral history research, reveals the voices of people engaged in the building of the Kamloops community, thus connecting stories of personal accomplishment to the sphere of academia within our small city. The two undergraduate research conferences held annually at TRU provide the venues to share these narratives.

Undergraduate Conference Research Group (UCRG)

In the spring of 2013, Ms. Ratsoy offered me the opportunity to become involved in a multi-year research initiative regarding the learning outcomes of student participation in undergraduate research conferences. Without hesitation, I accepted the challenge; I hoped my

[29] Alexander McIntosh, personal interview, July 10, 2012.

past community-based research experiences and participation in several TRU undergraduate conferences would be integral to the outcomes of the project. As well, I am intrigued by the intellectual and logistical challenges of working with a large, diverse group of people – faculty members, undergraduate students and graduate students from TRU and other universities – focusing on the issues of student engagement and learner outcomes within the research site of conference presentation. Dotterer (2002) advocates a model of shared collaborative research experience between the teacher-scholar and undergraduate student to "achieve a fully integrated and effective model for learning;"[30] in this instance, I will be fully entrenched in this model with two faculty supervisors, Ms. Ratsoy and Dr. Block, to guide me as they, too, participate in their own research for the project.

At the beginning of this project, Ms. Ratsoy advised me of a funding opportunity through the Thompson Rivers University Students' Union (TRUSU) Research Program, and I am very grateful to be the inaugural recipient of the stipend offered through this innovative program established in support of research about post-secondary education. The intent of the program is to "link the research to community service [and to provide] reference in policy formulation and the Students' Union's advocacy effort." Digital documentation of research findings will be published on the TRUSU website, and a print copy will be available in its research library.[31]

As a fourth-year undergraduate student at TRU, one of my roles with the UCRG is to review existing research literature regarding undergraduate conferences in Canada and other countries. Several common threads were revealed in a review of research literature produced by faculty members in myriad disciplines, undergraduate students reflecting on their experience, and administrators providing support and program underpinnings for innovative undergraduate research. An over-arching consideration is the relationships among the three university constituents—students, faculty and administrators— and their outlook on the relevance of undergraduate research and subsequent conference presentation. Another task will be to survey Canadian universities to determine the prevalence of these events and to analyze models used as

[30] Ronald L. Dotterer, "Student-Faculty Collaborations, Undergraduate Research, and Collaboration as an Administrative Model," *New Directions for Teaching and Learning* 90 (2002): 88.
[31] "TRUSU Research Program," TRUSU Local 15 CFS website, accessed 22 August 2013, available at http://trusu.ca/advocacy/research-program.

frameworks for planning and organization. These research sites will provide a basis for analysis and insight into conducting and sharing community-based research.

My work with the UCGR is another opportunity to share observations gleaned from my community research and my involvement in the undergraduate conferences. Potter et al. (2010) note that although undergraduate conferences are becoming more prevalent, there is little research examining the impact on undergraduate student presenters. In their four-year study of undergraduate research conference presenters, they concluded that overall, the influence on this group is positive. Their study highlights beneficial interactions between faculty mentors and students, and it acknowledges the possible barriers present at post-secondary institutions, which influence faculty participation in undergraduate research and conferences: "mentoring undergraduate students remains a conundrum for faculty, as it is not valued by some academic departments and some University administrators. In many research universities, the pressures for faculty to publish do not provide appropriate incentives for mentoring undergraduate research."[32] Their research questions generated enticing results through analysis of demographic data and of experiential impact on confidence and empowerment, communication and presentation skills, enhanced research process knowledge, and recognition of university and the larger community connections. The activities of the UCRG will provide further investigative research in this area of undergraduate research and subsequent conference participation from the perspective of all three university constituencies: faculty, students and administration.

Conclusion

Decades of academic research have confirmed that undergraduate research is an essential component of a comprehensive and fulfilling university education, be it to prepare for graduate studies or employment, or to stimulate an interest in life-long learning—or all of the above. Scholarly inquiry is the antidote to rampant curiosity, not as a cure but as an enabling remedy, allowing an understanding of perceptions and connections between and among people and their communities of work, recreation and social spheres. From identification of a research site to communication of the results of academic examination at a conference, and perhaps publication

[32] Sharyn Potter et al., "Intellectual Growth for Undergraduate Students: Evaluation Results From An Undergraduate Research Conference," *Journal of College Teaching and Learning* 7, no. 2 (2010): 32.

in a research journal, the practice of academic inquiry provides a gateway to new knowledge and a better understanding of our world.

For the Untold Stories project, Drs. Archibald and Drolet brought together a group of women to record their life-time commitment to building the social texture of Kamloops. In the preface of their book, *Not Just a Tea Party*, they stated that the purpose of their work was to "contribute to creating stronger networks and associations between community members, community organizations, and governments, and improve our community's ability to understand our present by sharing stories of our past."[33] The Tranquille project offered a unique research site to engage in historiography practices, such as the creation of primary documents subsequent to interviews of former employees at Tranquille, and insight into the challenging process of collaborative research involving academics, non-profit organizations and corporate interests. The UCRG project brings together an eclectic group of academic professionals and learners, teacher-scholars and students, to examine the significance of undergraduate conferences in the scheme of higher education, as a forum for dissemination of knowledge realized through scholarly inquiry and synthesis. Each of these projects has contributed to my in-depth knowledge of the communities I live and work in, and has provided revelations and confirmations of time and place.

The opportunity to participate in each of these projects in their initial stages was presented to me by faculty who had confidence in my ability to contribute something of value to the collective. In particular, I want to acknowledge the continued support of Associate Professors Ginny Ratsoy and Tina Block for my undergraduate research work; their encouragement and guidance have allowed me to explore my community in unexpected places. Influence and support from faculty supervisors, fellow student researchers and the university community, as well as the larger Kamloops community, encouraged me to present my research at both undergraduate conferences. For my part, I appreciate the opportunity to contribute to historiographical knowledge of the communities of TRU and Kamloops, two communities intertwined in the journey I began several years ago. Each of these opportunities has buried any thought of "staid and somber" in relation to academic learning, and I have come to realize that academic "truths" are purposely elusive in the grand scheme of acquiring wisdom.

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[33] Archibald and Drolet, *Not Just a Tea Party,* Preface, *xix.*

Bibliography

Andrews, Debra. "In the Company of Women: The Work We Do." In *Proceedings of the 4th Annual Thompson Rivers University Undergraduate Conference,* edited by Kelly-Anne Maddox and Mairi MacKay, 25-37. Kamloops, BC: Thompson Rivers University Office of Research, Innovation and Graduate Studies, 2009.

Archibald, Trish and Julie Drolet, eds. *Not Just a Tea Party: Celebrating Women's Contributions to Community Life."* Kamloops, BC: Kamloops Women's Resource Group Society, 2009.

Carsrud, Alan L. "Undergraduate Psychology Conferences: Is Good Research Nested Under Ph.D.s?" *Teaching of Psychology* 2, no. 3 (1975): 112-114.

Carsrud, Alan L., Joseph J. Palladino, Elizabeth Decker Tanke, Lyn Aubrecht, and R. John Huber. "Undergraduate Psychology Research Conferences: Goals, Policies, and Procedures." *Teaching of Psychology* 11, no. 3 (1984):141-145.

Dotterer, Ronald L. "Student-Faculty Collaborations, Undergraduate Research, and Collaboration as an Administrative Model." *New Directions for Teaching and Learning* 90 (2002): 81-89.

Ferguson, Charmian. Personal interview. June 27, 2012.

Galbraith, John M. "Shepherding Undergraduate Students Through a Research Experience and a Professional Meeting." *NACTA Journal* 56, no. 2 (2012): 76-82.

Garde-Hansen, Joanne, and Ben Calvert. "Developing a Research Culture in the Undergraduate Curriculum." *Active Learning in Higher Education* 8, no. 2 (2007): 105-116.

Gonzalez, Cristina. "Undergraduate Research, Graduate Mentoring, and the University's Mission." *Science* 293 (2001): 1624-1626.

Haave, Neil, and Doris Audet. "Evidence in Support of Removing Boundaries to Undergraduate Research Experience." *Collected Essays on Learning and Teaching* 6 (2013): 105-110.

JR. Personal interview. July 7, 2012.

Katkin, Wendy. "The Boyer Commission Report and Its Impact on Undergraduate Research." *New Directions for Teaching and Learning* 93 (2003): 19-38.

Kenny, Shirley Strum, Bruce Alberts, Wayne C. Booth, Milton Glaser, Charles E. Glassick, Stanley O. Ikenberry, Kathleen Hall Jamieson, Robert M. O'Neil, Carolynn Reid-Wallace, Chang-Lin Tien, and Chen Ning Yang. *Reinventing Undergraduate Education: A Blueprint for America's Research Universities. Boyer Commission on Educating Undergraduates in the Research University.* Shirley Strum Kenny, Chair. New York: State University of New York Stony Brook, 1998. Available at http://www.niu.edu/engagedlearning/research/pdfs/Boyer_Report.pdf.

Lancy, David F. "What One Faculty Member Does to Promote Undergraduate Research." *New Directions for Teaching and Learning* 93 (Spring 2003): 87-92.

Mabrouk, Patricia Ann. "Survey Study Investigating the Significance of Conference Participation to Undergraduate Research Students." *Journal of Chemical Education* 86, no. 11 (2009): 1335-1340.

Merkel, Carolyn Ash. "Undergraduate Research at the Research Universities." *New Directions for Teaching and Learning* 93 (2003): 39-53.

McIntosh, Alexander. Personal interview. July 10, 2013.

Mueller, Marnie W. "Economic Determinants of Volunteer Work by Women." *Signs* 1, no. 2 (1975): 325-334.

Palladino, Joseph J., Alan L. Carsrud, Irene M. Hulicka, and Ludy T. Benjamin. "Undergraduate Research in Psychology: Assessment and Directions." *Teaching of Psychology* 9, no. 2 (1982): 71-74.

Potter, Sharyn, Eleanor Abrams, Lisa Townson, Cameron Wake and Julie E. Williams. "Intellectual Growth for Undergraduate Students: Evaluation Results From An Undergraduate Research Conference." *Journal of College Teaching and Learning* 7, no. 2 (2010): 25-33.

Schroeder, Charles C. “Reframing Retention Strategy: A Focus on Process.” *New Directions for Higher Education* 61 (2013): 39-47.

Seeman, Julius. “On Supervising Student Research.” *American Psychologist* 28, no. 10 (1973): 900-906.

Twitty, Michael W. Canadian Broadcasting Corporation. *Q*: *CBC Radio One*. Toronto, ON: Canadian Broadcasting Corporation, 11 July 2013. Interview by Jian Gomeshi.

TRU Student Motivations to Volunteer

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Economics

Supervisor: Ehsan Latif

Abstract:

The purpose of this study is to try to determine what main factors motivate a university student to engage in volunteer activities and with what frequency they will volunteer. University campuses have always been a good place to find volunteers; however, it is commonly known that students have little extra time for extracurricular activities, and must also juggle with work, family, studying and assignments, among many other variables. This study has been done to gain a better insight into why students are so willing to volunteer their time. This study looks into 8 different motivation factors based on a sample size of 88 university student volunteers. An analysis has also been done against certain demographic features of the respondents such as gender, year of study, academic program, and residential status (international or domestic student status). By discovering the characteristics of the student volunteers we may be able to support them and encourage more students to participate in volunteerism. If we discover that volunteering is based on a certain motivation, we may be able to reduce barriers and support the volunteers, thereby sustaining them and encouraging them to continue to provide assistance as volunteers. This study found that second -year students are more predisposed to volunteering based on overall samples, international samples, domestic samples and female samples. International students increase their volunteer frequency during the second and fourth years of study. The motivation factor 'Value' scored high for the overall sample and male sample categories, and the motivation factor 'Career' scored high for females. These results should be considered when volunteer activities are being created to increase the likelihood of volunteer frequency.

Introduction

Volunteering can have numerous benefits for the individual, such as networking opportunities (personal and non-personal), new skills development, leadership opportunities, resumé references, better job offers, confidence, chances to make new friends and self-satisfaction.

However, the individual is not the only one wh**o** benefits from volunteering; the entire community can gain by promoting volunteerism. Volunteer opportunities provide a scenario for people to meet others in the community while, at the same time, bettering the community in some way. Volunteering promotes cohesion, unity, and leadership within society. Volunteers are important for society's well-being.

On the TRU campus you will notice that many students volunteer; and some students are very dedicated volunteers spending most of their weekends working hard for no payment. But why do students decide to volunteer? Students are encumbered by numerous difficulties and time constraints so why do they give their time and energy away so readily?

Purpose of Study

Using data that was collected in a primary fashion from eighty -eight TRU students, this study examines the following research questions.

1: What are the main motivating factors of a university student volunteer?

2: Is there a difference in motivation and frequency to volunteer between domestic and non-domestic students?

3: Is there a difference in motivation and frequency to volunteer between academic programs?

4: Is there a difference in motivation and frequency to volunteer between the genders?

5: Is there a difference in motivation and frequency to volunteer between students in different years of study?

Methodology

Several studies have been done around the topic of volunteer motivations (Clary, Copeland, Haugen, Miene, Snyder & Stukas, 1998; Clary, Snyder& Stukas, 1996; Finkelstien, 2009; Gage & Thapa, 2011; Carlton, Jacobsen, & Monroe, 2012; Liao-Troth, 2005). However, very little research has been done on the motivations of, specifically, university students. "In 2010, about 58% of adults with a university degree reported doing volunteer work" (Crompton & Vezina, 2012) and this is the reason why I believe that university student motivations need to be studied. Gage et al. state that "[…] further examination of the motivations and constraints of undergraduate college students is needed." (Gage et al., 2011). Volunteerism can be a very important function of a community, and can lend to the prosperity of social order. Studies have been done on volunteer motivations and many factors have been pinpointed. Katz (1960) theorizes that there are six main factors that stimulate a person to volunteer: Values, Understanding, Social, Career, Protective, and Enhancement. The six motivations created by Katz are collectively called the Functional Approach to Motivation and are referenced and used in many of the other articles I have reviewed (Clary et al., 1998; Clary et al., 1996; Carlton et al., 2012; Gage et al., 2011). The Functional Approach to Motivation Theory has led Clary et al. (1998) to create a Volunteer Functions Inventory which includes five questions/statements for each function, totalling at 30 questions. However, six categories is hardly exhaustive; therefore Carlton et al. (2012) have added the Factor of environment, and Gage et al. (2011) have added two statements that were not originally included in the Clary et al. (1996) model: "Volunteering is a way for me to help the natural environment" and "I feel volunteering is a religious duty" (pg. 414) which brings the total to 32 questions.

Many of the resources I reviewed concluded that, although career was an important factor, and worthy of mention, it was not the most important factor which motivates a student to volunteer (Carlton et al., 2012; Handy et al., 2010; Finkelstien, 2009; Holdsworth, 2010). It is uncertain if a similar result should be expected in this study, as this study will be surveying only a student population.

Variables

The dependent variable is the intensity of the student's volunteer-activity participation which has four ordered categories: 10 or more times in a year, 7-9 times in a year, 4-6 times in a year, or 1-3 times in a year.

The primary independent variable in this study was motivation to volunteer. This variable was constructed based on the Volunteer Functions Inventory (VFI) created by Clary et al. (1996) and has also been used in many other studies which investigate volunteer motivation (Clary et al., 1998; Carlton et al., 2012; Gage et al., 2011). The VFI has six components (Values, Understanding, Social, Career, Protective, and Enhancement); I have included three statements for each of the six components, reaching a total of 18 statements. This study will have an additional two factors which were similarly included by Gage et al. (2011). The first of the factors is a religion factor, and the second is an environmental protection factor; these factors were included with the other four, and three statements from each of the factors were used. The respondents rated their agreement with the statements on a Likert scale of 0 to 4 (0= Strongly agree, 1= Agree, 2=Neutral, 3=Disagree, 4=Strongly disagree).

This study had the following control variables: gender, year of study, academic program, and residential status (International or domestic status).

Variable Interactions

Students have a purpose when they volunteer; they are motivated by a certain reward that is provided to them when they carry out a volunteer activity. The volunteer will not receive payment in a tangible way, but rather, will receive an intangible payment or reward which they may not even realize. The volunteer is motivated to perform these actions because of eight main motivations which I have determined the strength of. Although I can pinpoint eight main motivating factors, I have also looked into some other variables in order to determine if they are also reasons that are important in determining a student's likelihood of volunteering; these include gender, academic program, residential status (Domestic or International), year of study, and religion.

Residential Status

As a whole, students are educated, but inexperienced in their fields. Volunteer work is often seen as a way to gather experience which can be put onto their resumes. Non-domestic students may use volunteering as a way to gain work experience within the country.

Year of Study

I will be looking into the correlation between a student's year of study and their volunteer motivations, and hopefully answering these questions: are students more likely to volunteer in their last year of their program in order to gain more experience before entering the work force, or are students more likely to volunteer in their first year of study because they have more time?

Religion

Religion is an important factor in determining motivations of volunteers because often volunteering is synonymous with religion and religious acts. Many different religions are based on volunteering and providing a service for free.

Academic Program

Within Thompson Rivers University, there are some academic programs which encourage volunteering more than others. For example, TRU has Enactus, which is predominantly made up of Business students who volunteer their expertise to an organization for free.

Gender

I will be trying to determine whether or not one gender is more likely to volunteer than another. I am unable to find a study that looks into this type of gender related studies. I am unable to predict the outcome or result of my study, as very few studies have focused on the difference between male and female propensity to volunteer.

Estimation Method

The study will estimate the following model:

> Frequency of Voluntary Activity= f (values, understanding, social, career, protective, enhancement, environment, religion, gender, year of study, academic program, residential status).

The study will use an Ordered Probit Method to estimate the intensity of the volunteering model where intensity is represented by 4 categories ordered response variable (10 or more times in a year, 7-9 times in a year, 4-6 times in a year, 1-3 times in a year).

Sampling Design

The survey included thirty onequestions. Twenty four of the questions were taken from the Volunteer Functions Inventory, including the two statements which were used by Gage et al. (2011). The other seven questions were demographically focused. The twenty-four statements taken from the VFI were randomized on the survey as they were similarly done in the research of Clary et al. (1998) and Katz D. (1960). Using a Likert scale of 0-4 for each of the motivational statements, I have determined how much the respondents agree or disagree with each statement.

In order to qualify for the survey, the respondents were asked two questions: if they are current students at TRU, and if they have volunteered in the past year. The sample included student volunteers at Thompson Rivers University only. The sample also contained students from all years, all disciplines, any nationality, culture, race, background or age.

Surveys were administered in paper format and electronic format. The paper surveys were distributed and collected in classes with prior approval from the instructor, and electronic formats were sent using email and by using *Vovicii* survey software.

Findings

Table 1 Descriptive Statistics

Variable	Mean	Std. Dev.
How often have you volunteered in the past 12 months?	2.125	1.784
Female	0.472	.503
Male	0.528	.478
International	0.486	.503
Domestic	0.514	.493
Value Factor	2.181	1.841
Protective Factor	5.444	2.331
Social Factor	4.194	2.256
Environment Factor	2.931	2.203
Enhancement Factor	2.639	2.085
Career Factor	2.069	2.098
Religion Factor	7.056	3.184
Understanding Factor	2.014	1.631
First Year	0.223	0.418
Second Year	0.250	0.436
Third Year	0.222	0.419
Fourth Year	0.236	0.428
Fifth Year	0.069	0.256
Arts Program	0.181	0.457
Science Program	0.083	0.278
Business Program	0.583	0.496
Tourism Program	0.028	0.165
Other Program	0.125	0.333
Volunteer Frequency	2.500	1.343

Descriptive Statistics Results

In this study, 88 samples were collected, 47% of which were female, and 53% of which were Male. Among the sample of students, 48% were international or study abroad students and 51% were domestic (Canadian) students. Low mean scores for the factor variables indicate that on average, the students agreed with the questions in that factor. The understanding factor was rated as the lowest mean, and the second lowest mean factor was career. The highest mean factor was religion, which shows that the average respondent had disagreed with the questions within the factor. Year of study was evenly proportioned between years one to four; however, year five had a very low sample size -- only 6%. There is a high disproportion within the academic programs, with business having 58% of the sample size and the next largest being only 18% from the arts program.

Table 2 Frequency of volunteering activity by Academic Program, Residence, and Gender

Frequency of volunteer activity		**10 or more times/ year**	**7-9 times/ year**	**4-6 times/ year**	**1-3 times/ year**	**Total**
Program of study?	Other	4 (44.4%)	1 (11.1%)	1 (11.1%)	3 (33.3%)	9 (100%)
	Business	8 (38.0%)	4 (19.0%)	1 (4.7%)	8 (38.0%)	21(100%)
	Post Baccalaureate	6 (28.5%)	3 (14.2%)	4 (19.0%)	8 (38.0%)	21 (100%)
	Tourism	2 (100%)	0 (0%)	0 (0%)	0 (0%)	2 (100%)
	Science	0 (0%)	0 (0%)	1 (50%)	1 (50%)	2(100%)
	Computing Science	1 (25%)	0 (0%)	0 (0%)	3 (75%)	4 (100%)
	Arts	6 (46.1%)	2 (15.3%)	0 (0%)	5 (38.4%)	13(100%)
Total		27 (34.5%)	10 (13.8%)	7 (9.7%)	28 (38.8%)	72 (100%)
Current student status?	Domestic	18 (48.6%)	5 (13.5%)	2 (5.4%)	12 (32.4%)	37 (100%)
	International or Study Abroad	9 (25.7%)	5 (14.2%)	5 (14.2%)	16 (45.7%)	35 (100%)
Total		27 (37.5%)	10 (13.8%)	7 (9.7%)	28 (38.8%)	72 (100%)
Gender	Male	16 (42.1%)	5 (13.1%)	2 (5.2%)	15 (39.4%)	38 (100%)
	Female	11 (32.3%)	5 (14.7%)	5 (14.7%)	13 (38.2%)	34 (100%)
Total		27 (37.5%)	10 (13.8%)	7 (9.7%)	28 (38.8%)	72 (100%)

Frequency of Volunteering Results

This table provides descriptive statistics for the frequency of volunteering by gender, residence status, and academic program. The frequency for all groups seems to be similar; most of the sample will either choose to volunteer more than 10 times in a year or 1-3 times in year with the two alternate choices in between chosen to a lesser degree. Within the programs, Tourism had two samples and both indicated that they volunteer 10 or more times in year. In the Business program, 38% of the sample chose “10 or more times in a year”; however, 38% of the

business sample chose “1-3 times in a year”. 45% of the International students indicated that they volunteer 1-3 times in a year, and only 25% chose “10 or more times within a year”. 48% of the domestic students within the sample indicated that they volunteer more than 10 times in a year. For the males, 42% of the sample indicated that they volunteer more than 10 times in a year while only 32% of females chose that option.

Table 3 Regression

Variable	Overall Coef. (SE)	Domestic Coef. (SE)	International Coef. (SE)	Male Coef.(SE)	Female Coef. (SE)
Female	-0.091 (0.305)	0.396 (1.814)	-3.788** (0.538)	----------	----------
International	-0.088 (.494)	----------	----------	0.318 (.664)	-0.065 (1.177)
Business	0.251 (0.447)	0.193 (5.848)	7.016 (.548)	0.912 (.704)	-0.135 (1.174)
Science	-0.090 (0.699)	-20.219* (2.510)	1.830 (2.125)	0.323 (1.209)	-0.686 (1.256)
Tourism	8.28* (0.919)	-3.975*** (3.600)	12.404* (2.033)	7.155* (1.268)	7.932* (2.427)
Other	-0.064 (0.577)	-2.139** (6.709)	-16.005** (1.029)	0.378 (0.839)	-0.923 (2.104)
2nd Year	1.430* (0.472)	9.897* (4.662)	11.311** (1.589)	0.998 (0.640)	2.421* (0.942)
3rd Year	0.876 (0.567)	-0.867 (6.522)	10.642 (1.153)	1.543*** (0.919)	1.451*** (0.865)
4th Year	0.611 (0.598)	-1.459 (8.309)	15.085*** (1.102)	0.541 (0.840)	0.477 (1.212)
5th Year	1.211 (0.862)	-0.712 (3.378)	-3.506 (1.474)	0.592 (0.951)	11.006* (1.970)
Value Factor	-0.299* (0.120)	0.103 (0.574)	-0.881 (0.214)	-0.468** (0.187)	-0.394 (0.278)
Protective Factor	0.027 (0.082)	-0.134 (0.203)	-0.076 (0.121)	-0.016 (0.133)	0.131 (o.146)
Social Factor	0.008 (0.087)	0.072 (0.572)	-0.645 (0.125)	-0.012 (0.144)	0.072 0.157)
Environment Factor	0.032 (0.088)	-0.120 (0.449)	-1.020** (0.163)	-0.029 (0.154)	0.200 (0.188)
Enhancement Factor	0.054 (0.111)	0.259 (2.718)	-4.417 (0.180)	0.361** (0.202)	-0.086 (0.186)
Career Factor	-0.146 (0.110)	-0.254 (0.913)	0.551 (0.167)	0.047 (0.152)	-0.740** (0.319)
Religion Factor	0.018 (0.058)	-0.065 (0.427)	1.147* (0.088)	0.064 (0.095)	0.130 (0.126)
Understanding Factor	0.118 (0.143)	-0.198 (1.861)	3.878** (0.253)	-0.208 (0.201)	0.734* (0.284)
Sample Size	72	37	35	38	34

* = Significance at a p< .01

** = Significance at a p< .05

Variable	Overall Coef. (SE)	Domestic Coef. (SE)	International Coef. (SE)	Male Coef.(SE)	Female Coef. (SE)
***= Significance at a p< .10 Due to the reverse coding, (0= Strongly agree, 1= Agree, 2=Neutral, 3=Disagree, 4=Strongly disagree) a negative sign indicates a positive relationship for the factors only.					

Regression Results: Over-all Samples and frequency to volunteer

Through the regression over all of the samples, I discovered that there is a high positive correlation between the tourism program at TRU and the frequency of volunteering. A possible reasoning for this is that the tourism program often requires their students to participate in volunteering activities whereas other programs do not necessarily encourage their students. A cautionary aspect to note is that, out of the seventy-two participants, only two were from the tourism program so this may have also led the results to high significance due to a low sample size. I also discovered that there is a positive correlation between students in their second year and the frequency with which they volunteer. As students go from first year into the second year of their program, they become more likely to volunteer. Twenty five percent of the respondents were enrolled in their second year when they filled out the questionnaire, which I believe is a good representation of the total population on campus. The value factor, which I have used as a variable, refers to the respondent's personal moral values. I have found that students who have scored high in the value factor are more likely to volunteer at a higher frequency than those who have scored low in the value factor. The reason for the positive correlation is something I am unable to explain.

Regression Results: Female gender and frequency of volunteering

I discovered that female students in the second, third and fifth year of their programs have a higher propensity to participate in volunteer activities when compared to students in their first year. Additionally, I learned that there is a positive relationship between the career factor and female frequency of volunteering. This indicates that females are more likely to volunteer based on career building motivations. However, a highly negative correlation was found between females and their understanding factor scores. This could possibly indicate that females, rather than volunteering for the purposes of gaining a greater understanding of themselves or the

perspectives of others, could be motivated by building a career, making connections, or gaining experience.

Regression Results: Male gender and frequency of volunteering

A positive correlation was found between third -year male students and the increased frequency in which they participate in volunteer activities. This is different from females, who, I have discovered, increased their volunteer frequency during the second, third and fifth years of study.

The value factor and a male student's propensity to volunteer have been found to have a positive relationship. This information indicates that as a male student scores higher up on values, his frequency for volunteering will increase. Alternatively, a negative relationship was found for male students and the enhancement factor, which may indicate that males who are more focused on enhancing themselves mentally may volunteer less regularly.

Regression Results: Domestic students and frequency of volunteering

A highly negative relationship was discovered between domestic students who were also enrolled in science programs. This information indicates that domestic Science students will volunteer much less than domestic students studying in the Arts program.

A negative correlation was found between students who study in other programs (other than Business, Arts, Science and Tourism) and the frequency in which they volunteer. This information may imply that students who are not in Business, Arts, Science, or Tourism are less likely to volunteer than students who are -in those programs. A possible explanation for this negative relationship could be attributed to instructor and school encouragement for students in these other programs to volunteer.

A high positive correlation was discovered between second -year domestic students and their propensity to volunteer. Domestic students in their second year are more likely to volunteer than those in first year. I believe this is because new students are busy becoming acclimated to their new surroundings and the challenges that university life may bring them.

Regression Results: International students and frequency of volunteering

A negative relationship between female international students and their propensity to volunteer indicates that female international students are less likely to volunteer frequently. The decrease in likelihood of volunteering for female international students may be due to some cultural barriers or negative cultural views about volunteering.

International students in the second and fourth year of their programs have been revealed to volunteer more frequently than students in their first year of study. This is different from the information collected regarding domestic students. These findings may indicate that international students in their second year may have become more comfortable in their surroundings and coursework, and therefore have allowed themselves time for volunteering. In addition, fourth year students may feel more obliged to participate in volunteer activities when their required study time is coming to an end; this may explain the higher likeliness to volunteer in their fourth year.

My analysis indicates that international students enrolled in programs other than business, arts, science, or tourism, have been found to have a negative propensity to volunteer. The negative relationship could be a factor of other circumstances such as instructor encouragement to volunteer.

A positive relationship was also discovered between international students and the environmental factor, which indicates that international students will increase the amount they volunteer if the activity is based on environmental factors. It is possible that international students have greater commitment to the natural environment than domestic students.

International students were discovered to have a negative correlation with the religion factor. This shows that if a student scores highly on the religion factor, they will volunteer less frequently. This result nullifies my hypothesis that international students volunteer more frequently based on religious beliefs than domestic students.

The understanding factor had a high negative correlation with international students and their motivations to volunteer. As the understanding scores increased the frequency for

international students to volunteer decreased. This may indicate that international students are not volunteering in order to gain a better understanding of themselves or others.

Conclusions

In order to support student volunteers and encourage their participation in volunteer activities, volunteer program administrators should consider the results of this study.

This study examines the factors that determine frequency of volunteering for undergraduate students at Thompson Rivers University. This study's findings indicate that second year students will volunteer more frequently than students based on over all samples, for international and domestic students and for females. Therefore, it is recommended that requests for volunteers should be promoted to the second year student base in order to amplify the amount of volunteerism on campus.

My findings also indicate that the motivations for volunteering differ between the genders, and that the females in this study will volunteer more frequently based on the career factor, and the males in this study will volunteer more based on the value factor. With this information, volunteer activities can be specialized to accommodate the needs of the students on campus. In addition, volunteer opportunities that are related to career enhancement should be created to meet the needs of the female student volunteers who have indicated their predisposition towards that factor.

Through the analysis, it has been determined that international students volunteer more frequently during their final year of study It is recommended that volunteer administration create volunteer opportunities to encourage fourth -year international students. The value factor scored high over all the samples; therefore, volunteer administration should create volunteer opportunities that correlate with student values in order to increase volunteerism.

Limitations of study

The sample population was made up of only Thompson Rivers University students and cannot be generalized to the entire student population. The sample size that was wanted was around 300. However, that number proved to be difficult to obtain; because of this, I believe that if a larger sample size was able to be acquired, the results would be more representative of the

population on campus. This study did not discover the motivational differences between volunteers and non-volunteers, or compare the dependant variables between non-volunteers and volunteers. I believe that if non-volunteers were included in this study the sample size would have to be increased in order to get enough information to solve the research questions and the Volunteer Functions Inventory would need to be altered; therefore, I recommend that other studies be done to include non-volunteers in this type of research. This study could also be enlarged to gain information about non-volunteers and the differences between their motivations and those of the volunteer population.

References

Carlton, S. J., Jacobsen, S. K., & Monroe, M, C. (2012). Motivation and satisfaction of volunteers at a Florida natural resource agency. *Journal of Park and Recreation Administration, 30*(1), 51-67. Retrieved from http://js.sagamorepub.com/jpra

Clary, E. G., Snyder, M., Ridge, R. D., Copeland, J., Stukas, A. A., Haugen, J., & Miene, P. (1998). Understanding and assessing the motivations of volunteers: A functional approach. *Journal of Personality and Social Psychology*, *74*(6), 1516-1530. doi:10.1037/0022-3514.74.6.1516

Clary, G. E., Snyder, M., & Stukas, A. A. (1996). Volunteers' motivations: Findings from a national survey. *Nonprofit and Voluntary Sector Quarterly*, *25*(4), 485-505. doi: 10.1177/0899764096254006.

Crompton, S., & Vezina, M. (2012). Volunteering in Canada (catalogue no.11-008-x), *Canadian Social Trends*, Retrieved from Canada. Statistics Canada website http://www.statcan.gc.ca/pub/11-008-x/2012001/article/11638-eng.pdf

Cruce, T. M., & Moore, J. V. (2006). First-year students' plans to volunteer: An examination of the predictors of community service participation. Scholarly Paper Session, Track 4: Institutional Management and Planning. *2006 Annual Forum for the Association for Institutional Research*. Retrieved from http://nsse.indiana.edu/pdf/conference_presentations/2006/Cruce_and_Moore_2006.pdf

Finkelstien, M. A. (2009). Intrinsic vs. extrinsic motivational orientations and the volunteer process. *Personality and Individual Differences*, 46653-658. doi:10.1016/j.paid.2009.01.010.

Gage, R. L., & Thapa, B. (2011). Volunteer motivations and constraints among college students: Analysis of the volunteer function inventory and leisure constraints models. *Nonprofit and Voluntary Sector Quarterly*, *41*(3), 405-430. doi: 10.1177/0899764011406738

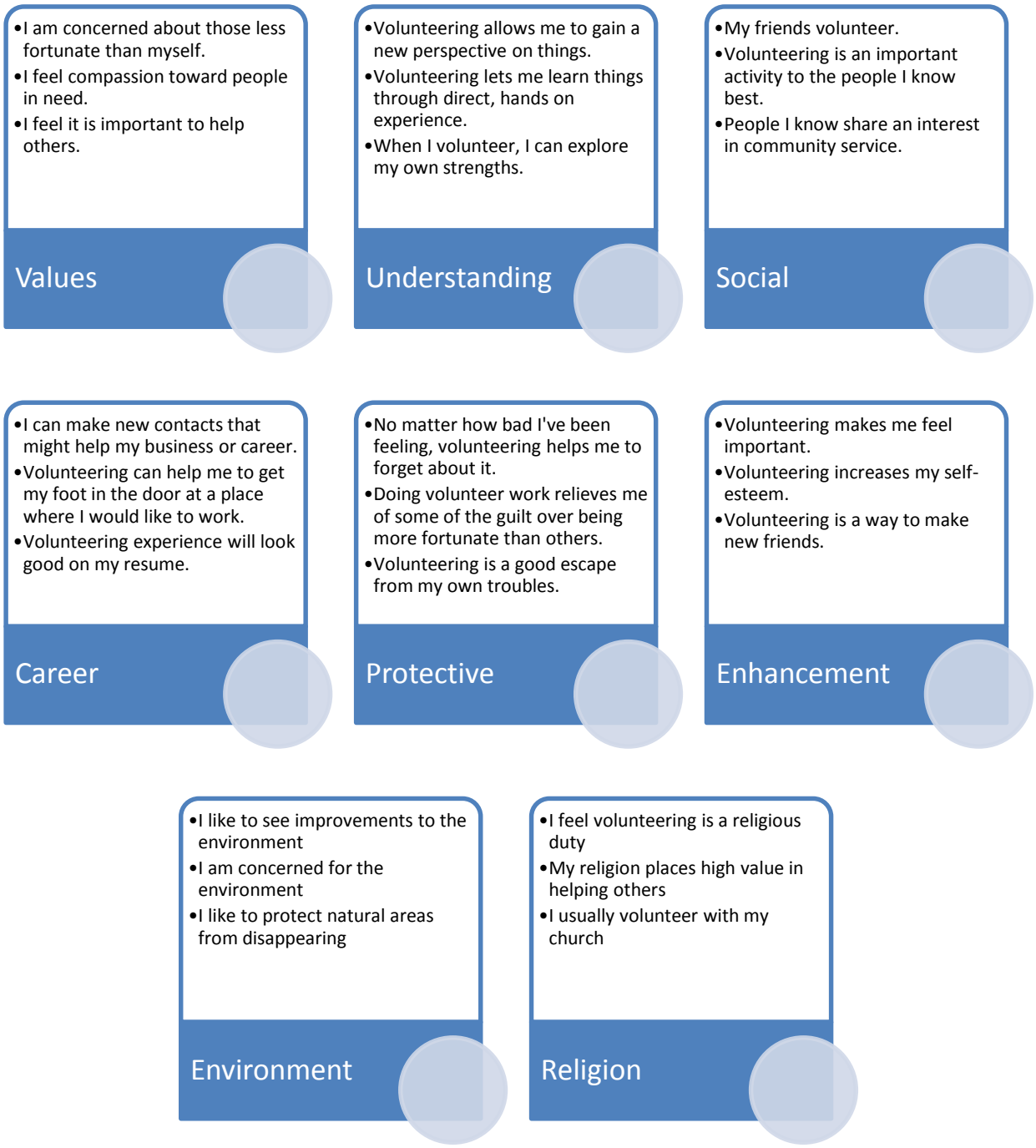
Holdsworth, C. (2010). Student volunteers: A national profile. February 2010. *Institute for Volunteering Research*. Retrieved from http://www.hecsu.ac.uk/assets/assets/documents/futuretrack/Student_Volunteers_-_A_National_Profile.pdf

Katz, D. (1960). The functional approach to the study of attitudes. *The Public Opinion Quarterly*, *24*(2), 163-204. Retrieved from https://poq.oxfordjournals.org/

Liao-Troth, M. A. (2005). Are they here for the long haul? The effects of functional motives and personality factors on the psychological contracts of volunteers. *Nonprofit and Voluntary Sector Quarterly*, *34*(10), 510-530. doi: 10.1177/0899764005279513.

Appendix

Image 1 Factors and related statements



Appendix Table 1 Frequency of motivation factors

Volunteer Frequency		**Frequency**	**%**	**Cumulative %**
Valid	1-3 Times a Year	28	38.9%	38.9%
	4-6 Times a Year	7	9.7%	48.6%
	7-9 Times a Year	10	13.9%	62.5%
	10 or More Times a Year	27	37.5%	100%
	Total	72	100%	
Gender		**Frequency**	**%**	**Cumulative %**
Valid	Male	38	52.8%	52.8%
	Female	34	47.2%	100%
	Total	72	100%	
Current student status?		**Frequency**	**%**	**Cumulative %**
Valid	Domestic	37	51.4%	51.4%
	International or Study Abroad	35	48.6%	100%
	Total	72	100%	
Second Year		**Frequency**	**%**	**Cumulative %**
Valid	No	54	75%	75%
	Yes	18	25%	100%
	Total	72	100%	
Third Year		**Frequency**	**%**	**Cumulative %**
Valid	No	56	77.8%	77.8%
	Yes	16	22.2%	100%
	Total	72	100%	
Fourth Year		**Frequency**	**%**	**Cumulative %**
Valid	No	55	76.4%	76.4%
	Yes	17	23.6%	100%
	Total	72	100%	
Fifth Year		**Frequency**	**%**	**Cumulative %**
Valid	No	67	93.1%	93.1%
	Yes	5	6.9%	100%
	Total	72	100%	
Business Program		**Frequency**	**%**	**Cumulative %**
Valid	No	30	41.7%	41.7%
	Yes	42	58.3%	100%
	Total	72	100%	
Science Program		**Frequency**	**%**	**Cumulative %**

Valid	No	66	91.7%	91.7%
	Yes	6	8.3%	100%
	Total	72	100%	
Tourism Program		**Frequency**	**%**	**Cumulative %**
Valid	No	70	97.2%	97.2%
	Yes	2	2.8%	100%
	Total	72	100	
Other Program		**Frequency**	**%**	**Cumulative %**
Valid	No	63	87.5%	87.5%
	Yes	9	12.5%	100%
	Total	72	100%	
All observations are valid, no missing data.				

Treatment Strategies for Language Problems in ESL Academic Writing: Teachers' and Students' Preferences

Meenakshiyogini (Meena) Balachandran

English as a Second Language

Supervisor: Jim Hu

Abstract:

Aptly put by Dana R. Ferris (2014), the purpose of English-as-a-Second-Language (ESL) teachers giving feedback to their students in academic writing courses is "not just about eradicating errors in writing but also about helping their students to develop control of academic language" (p. 69). However, are the present strategies for giving feedback on language problems in academic writing moving towards this goal? Do the end-users of these strategies - the students - see their writing improve over time? If not, what kind of guidance are students looking for? This study aims at addressing these questions by doing a comparative study of the feedback strategies used by teachers and those preferred by students. Their responses are further analyzed to study whether the preferences change with types, frequency, and timing of language problems, and whether there are other modes of feedback that are equally if not more effective. Drawing on the responses received from teachers and students, the study presents critical implications of such a comparison between the preferences on ESL academic writing pedagogy and provides practical suggestions for the teaching faculty.

Definitions

While the research focuses on language problems and feedback strategies for second language (L2) writers, it is imperative to clearly define what the terms 'language problems,' 'feedback strategies,' and 'L2 writers' mean in this study's context:

- **L2 or Second Language Writers**: Although the meaning of this term might seem apparent, there are three visibly different categories of L2 writers:
    - **"International/visa students" -** pursuing education in an English-dominant country where English is the relevant L2. Also called eye-learners, these students have already learnt some part of the L2 in their home country. Their L2 instruction involved formal grammar instruction and an emphasis on grammatical rules and terms. Consequently, they often enjoy a more structured approach to language instruction as this is how it was back home. (p. 4)
    - **"Resident immigrants" -** arrived in the English-dominant country as adolescents or young adults. Also called ear-learners, these students have very little knowledge of their first language or L1 and hardly know anything about the L2. They don't know the grammar rules or terms as much as the international students do. They know what sounds right based on their interaction with native residents and not based on what they have read or seen. (p. 5)
    - **"Children of resident immigrants" -** arrived in the English-dominant country at a very young age or who were born in the new country. Known as generation 1.5, these students have lived in the new country from a very young age and hence they have never been educated in a language other than the L2. (p. 5)

This diverse background of L2 writers has a bearing on L2 teachers in two major ways: the same feedback strategy might not work for all students; and to be really effective, teachers might have to conduct a comprehensive analysis of their students' previous knowledge of the L2, the mode of instruction they were taught in, and the areas that they are confident in and those that they need more work in. (Ferris, 2014, p. 4-7)

- **"Language Error"**: Defined by Ferris (2014) as "morphological, syntactic, and lexical forms that deviate from rules of the target language, violating expectations of literate adult native speakers." (p. 3) A morphological error – where the student forms and

structures words incorrectly – would be using the wrong plural suffix (example: childrens) or the wrong form of a past tense (example: putted) and so on (Jamie, 2008, n.p.). A syntactic error comprises errors such as incorrect order of subject and predicate in a sentence. (Shoebottom, 1996-2015, n.p.) A lexical error is when the student chooses the wrong word in the given context of the sentence. (Ray, 2010, n.p.)

In this research, analysis has been conducted on morphological, syntactic, and lexical errors, along with errors in spelling, punctuation, and upper/lower cases.

- **Language Problem**: This study has gone beyond the realm of the above definition of an error and has included other issues that students have with academic writing. These include using colloquial forms, questions in an essay's body, personal expressions, choppy sentences, and unclear expressions (Hu, 2011).
- **Feedback Strategies**: Some of the common error treatment strategies focused on are –
    - **"Indirect vs Direct Feedback"–** When teachers give indirect feedback, they indicate that an error has been made through circling, highlighting, underlining, or otherwise marking its location in a sentence, with or without a verbal reminder or an error code. The students are required to analyze the errors and make corrections themselves. On the other hand, when teachers give direct feedback, they clearly mark out the errors and also give the correction which students can transcribe onto the next draft. (p. 93)
    - **"Error Locating vs Error Labelling"** – Teachers either locate the presence of an error by circling it, highlighting it, or putting a checkmark in the margin; or label the errors using symbols, codes, or verbal comments. (p. 97)
    - **"Marking Broader vs Narrower Categories of Errors"** – Teachers have the choice of either marking all types of errors in a student's paper or selectively mark errors based on certain criteria. (p. 100)
    - **"Codes vs Verbal Comments" –** For more efficient correction, teachers use codes for each type of error, such as 'VT' for verb tense errors. Alternatively, they can use verbal comments in the margin. (p. 101)
    - **"Textual Corrections vs Endnotes" –** Teachers can either mark errors in the form of labels, codes, or verbal comments exactly where the error lies, or they can

write a summary of their comments at the end of the students' papers. (p. 102; Ferris, 2014, p. 93-102)

Background

This study was conducted at a Canadian university offering English for academic purposes (EAP) at five levels. Based on their performance on the Accuplacer, an English placement test, or TOEFL/IELTS scores, incoming students are categorized into basic-level 1, pre-intermediate-level 2, intermediate-level 3, advanced-level 4, and academic-level 5. A brief about the writing content taught at each of these levels is as follows:

- **"Basic - Level 1**: developing sentence structure; writing basic paragraphs to express the main idea in topic sentences"
- **"Pre-intermediate - Level 2**: recognizing and practicing grammatical structures and sentence patterns; introducing pre-writing and revision strategies"
- **"Intermediate - Level 3:** focusing on academic writing; introducing essay writing
- **Advanced - Level 4:** planning, developing, and revising of multi-paragraph compositions; practicing editing"
- **"Academic - Level 5:** reading, researching, discussing, and working co-operatively as part of the composition process"

Once ESL students successfully complete the level 5 course, they can apply for the Academic Writing course required for all academic programs at the university. (Thompson Rivers University [TRU], n.d.)

Literature Review

Almost all ESL teachers nowadays agree that error treatment in ESL academic writing is a must and is important to a student's language growth. However, ESL theorists a few decades ago thought very differently.

Before the 70s', English academic writing for L2 students was almost all about mastering the language and its various forms, along with acing the vocabulary. Consequently, there was utmost importance given to correcting errors and making students understand the nuances of English grammar. In the 70s' though, the focus gradually started moving from the language to the writers themselves; language was starting to be seen as a mode of learning and not the

learning itself. Concepts such as 'ideas,' "creativity," and "academic freedom" were taking shape, the presumption being that if L2 writers were allowed to choose their topic of writing, they would be motivated enough to produce a good document and language errors would be taken care of in the "editing" phase. This view, however, did not gain acceptance by all in the ESL community. (Ferris, 2014, p. 7-9) As Ferris (2014) points out, "because L2 students, in addition to being developing writers, are still in the process of acquiring the L2 lexicon and morphological and syntactic systems, they often need distinct and additional intervention from their writing teachers to bridge these gaps and develop strategies for finding, correcting, and avoiding errors." (p. 9)

Over the years and after much research into the benefits and disadvantages of error correction and feedback, it has been widely acknowledged by the L2 teachers' community today that error correction is an important component of second language acquisition for the following reasons:

- "Error feedback helps students revise and edit their texts". In the "short-term," giving feedback on errors can prove beneficial by making students fairly aware of their strengths and opportunities to work on. (p. 12)
- "Error feedback leads to accuracy gains over time". Several studies have showed that "using a controlled quasi-experimental approach with a pre-test/post-test/delayed post-test design, when corrective feedback was limited to several discrete categories (e.g. definite and indefinite articles), students receiving error feedback substantially outperformed those who received no feedback on both post-tests and delayed post-tests." (p. 12)
- "Students and teachers value error feedback". This argument can be traced back to the fact that a majority of the L2 writers in Canadian universities belong to the 'international/visa students' category who, as previously mentioned, are used to a formal method of language instruction in which error feedback plays a vital role. Moreover, L2 teachers feel that not giving error feedback could have a direct correlation with falling short of students' expectations. (p. 13)
- "Written accuracy is important to the real world". It is true if one says that knowing one's content is not enough; to be able to effectively communicate it is key. Be it the academic

> or the employment world, written accuracy is a sign of clarity in ideas and organization of thoughts. (p. 14) In Ken Hyland's 'Faculty feedback: Perceptions and practices in L2 disciplinary writing', he interviewed teachers from various disciplines to get their views on the importance of written accuracy. To quote an Economics teacher, "I would say the most important thing to learn is the conventions of argument. The students need to learn how to write a persuasive argument, providing evidence to support their arguments, evidence that has been obtained through reasonably good research. What is less important for me is creativity." (Hyland, 2013, p. 244). It is evident from this that expectations from L2 writers are very high and at par with native English-speaking the students. (Ferris, 2014, p. 12-14)

Now that it has been established that error treatment is required for L2 writers, the question that is being asked by way of this research is, how should teachers give feedback on these errors? Should the feedback strategy change based on certain factors such as the type of problem, the frequency of the problem, and the timing of the problem during a semester? Is only written feedback effective or are there other ways of giving feedback? What do the L2 writers prefer: do they find the existing feedback strategies conducive to their language development? And most importantly, what are the implications for academia if teachers' and students' preferences for feedback strategies differ? While research has investigated the views of L2 writers on error feedback strategies in academic writing (e.g., Hu, 2015; Lee, 2005, 2008; Leki, 1991) as well as L2 teachers' beliefs on how to respond to language problems, (e.g., Ferris et al., 2011; Lee 2009), little research has directly compared teachers' and students' preferences. This study attempts to fill this gap by understanding whether there are discrepancies in the preferences and if so why and what can be done by students and teachers to bridge these differences in ways that are beneficial to both.

Methodology and Participants

Methodology

Four teachers teaching ESL academic-level 5 writing in a Canadian university were approached for the study. They in turn recommended two or three students from their respective classes to participate in the study. The data was collected in the form of personal, semi-structured qualitative 30-minute interviews with the students and the teachers at a location within the

university. All the conversations were audio-recorded and kept confidential. In order to conduct the interviews, ethics approval was sought from the Research and Ethics Board of the university. All the teachers and students were made to sign a consent form indicating that their identities will be kept anonymous and that they are under no duress to participate in the study. As teachers were recommending students for the research, an additional clause was added in the teachers' consent forms that there will be no coercion or impact on the students' grade or progression if the students wished to withdraw or do not want to participate.

Participants

All the teachers had the required qualifications to teach ESL and at least five years of experience in teaching L2 writers. The table below gives brief details about the teachers interviewed in this research.

Table 1: Teachers' Information

	Gender	Highest Academic Degree	# of Years Teaching ESL/EFL at TRU	# of Years Teaching Level 5 Academic Writing at TRU
A	Male	M.A. Applied Linguistics	8	4
B	Female	M.A. Applied Linguistics	8	1.5
C	Female	M.A.T	20	5
D	Female	M. Ed.	26	9

As for the students, there were some important common features that drove the results of this study:

- A majority of the students belonged to the "International/visa students" category of L2 writers. In their home countries, they had studied English in high school with prominence

being given to grammar and vocabulary. However, it is the lack of application of the rules in real-time contexts that makes them reluctant to confidently use the language.

- Error correction was a major component of language instruction for everyone, though students were rarely given a chance to rework their drafts. There were few opportunities to have one-on-one conferences with their teachers regarding language clarifications.
- Only one-third of the students had taken a prior grammar class in this university and were therefore familiar with the grammatical rules. For the others, their grammar knowledge had fossilized.

Table 2: Students' Information

Participant	Gender	Native Country and First Language	ESL Courses Taken Before	Academic Program Taken
A	Female	India, Hindi	-	Post Bacc. in Marketing
B	Female	China, Mandarin	Level 4 Grammar, Writing, and Reading	M. Ed.
C	Male	Russia, Russian	Level 3 Grammar, Writing, and Reading Level 4 Writing and Reading	Masters in Comp. Science
D	Female	China, Mandarin	Level 4 Writing and Reading	M. Ed.
E	Male	China, Mandarin	Level 3 and Level 4 Grammar	Masters in Comp. Science
F	Male	China, Mandarin	Level 4 Writing and Reading	Diploma in Tourism
G	Female	China, Mandarin	-	M. Ed.
H	Male	Saudi Arabia, Arabic	Level 4 Grammar, Writing and Reading	M.B.A.
I	Male	India, Gujarati	-	Masters in Comp. Science

Limitations

The study was conducted in a Canadian classroom setting where the principles and methodologies of teaching are mostly North American. This might not encompass a large part of

the teaching strategies used in other parts of the world. Another major limitation of this study is that the interviewed students were chosen by their respective L2 teachers, thereby adding an element of bias. However, when interviewing the students and what is also evident in the results, the students have been candid in their views and have not shown any form of bias for their teaching faculty. Finally, the sample size is relatively small and therefore the results might not mirror the views of a larger L2 student population.

Results and Analysis

To begin with, L2 teachers and students were asked about their general preference regarding feedback strategies in the order of direct vs indirect; narrower vs broader category of errors; error location vs error labeling; error codes vs verbal comments; and textual corrections vs endnotes. Given that the biggest debate regarding feedback strategies is about being direct or indirect when marking errors, the study dug a little deeper to understand whether the preferences for direct and indirect feedback change with the following three factors:

- Type of errors; whether teachers and students prefer direct or indirect feedback depending on the kind of error, such as grammar, punctuation etc.
- Frequency of errors; if a student is making the same error in subsequent drafts, would teachers and students prefer direct or indirect feedback to address this issue
- Timing of errors; based on whether the errors are made at the beginning, during or towards the end of the course, which feedback method would teachers and students prefer

Finally, teachers and students were asked whether they would prefer a mode other than written corrective feedback, such as one-on-one conferencing. The results lead into the inferences drawn followed by implications and some suggestions for academia based on the study's results.

Questions

Q1. What strategies in general do teachers and students prefer when giving and receiving feedback respectively for academic-level 5 writing?

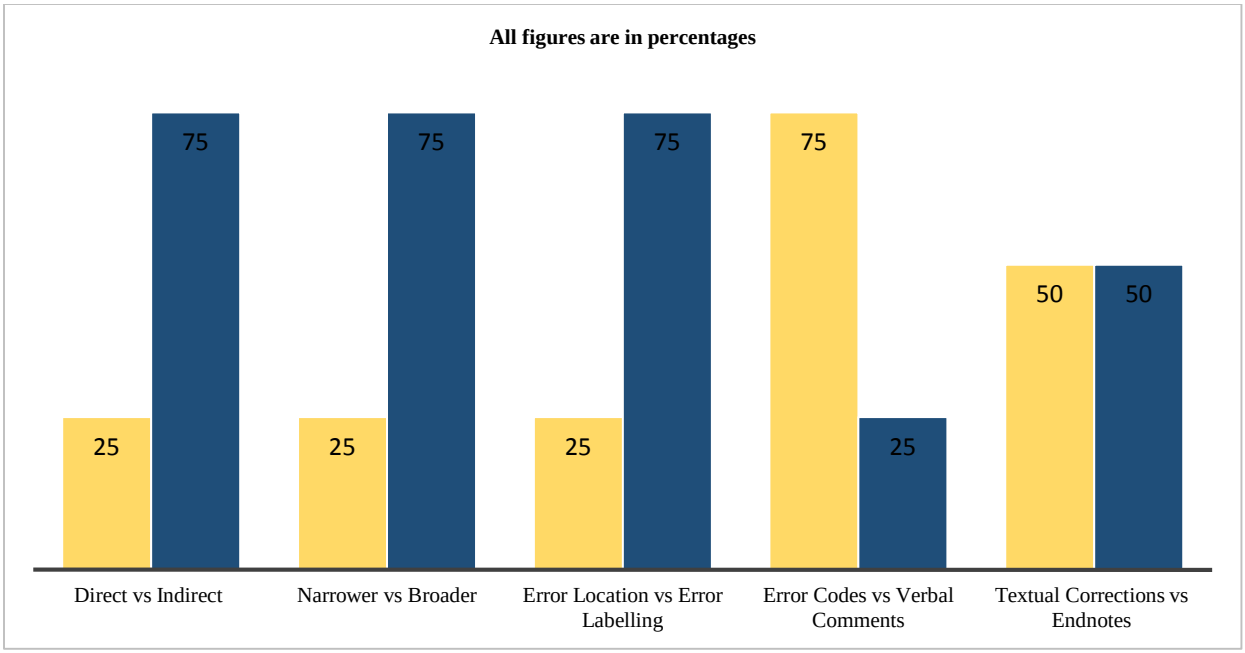


Figure 1: Teachers' Preferences

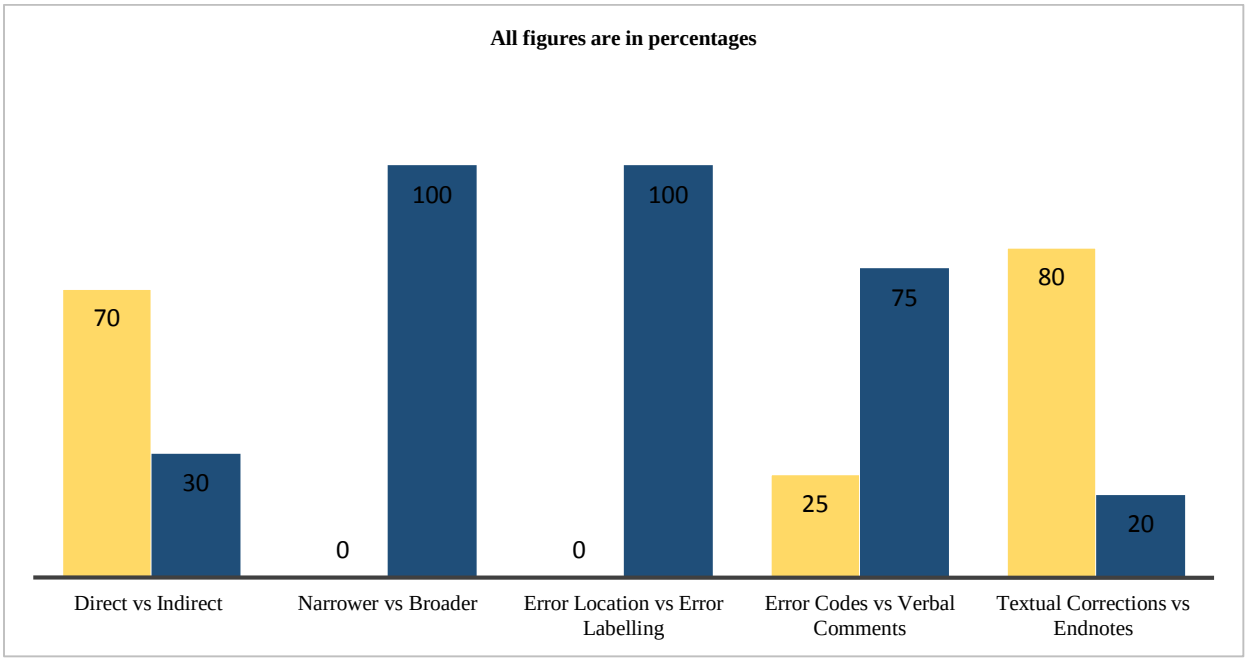


Figure 2

Direct vs Indirect Feedback

Most of the teachers preferred to give more indirect feedback by marking the error using a code or some verbal comments. The premise for this was that all the students in academic - level 5 writing have had some basic to intermediate instruction about English grammar and therefore

they should be able to correct the errors if told what kind of error it is. These set of teachers feel that giving the answer by marking directly will impede in the betterment process of students' language development. The few teachers who preferred marking directly – marking the error as well as giving the answer through verbal comments – chose to do this only in certain situations where they felt that students might not be able to correct the error by themselves, such as incorrect word choice. For every other issue, these set of teachers too preferred marking indirectly.

Students, on the other hand, mostly preferred that they receive direct feedback as much as possible. However, an interesting point to note here is that students, more than wanting the correct answer, are looking for help on two aspects: why the particular part of the writing was an error and how to correct the error. They strongly felt that merely marking the type of error was not helpful as they were not sure why they wrote what they wrote was incorrect. These views of the students have also been confirmed in a recent case study of ten L2 writers conducted by Ferris et al. (as cited in Ferris, 2014, p. 26) where one of the reasons for students not correcting all the errors marked by teachers was not knowing "how to correct the problem even when it was called to their attention."

Previous research done on the usefulness and drawbacks of using direct and indirect feedback have given mixed results. On one hand, it has been argued "that indirect feedback is more helpful to student writers in most cases because it leads to greater cognitive engagement, reflection, and problem-solving." (Ferris, 2014, p. 32). In recent times, however, several "SLA researchers" have found that direct feedback is better for "students' update and retention of information about targeted language forms such as articles". (p. 32) Essentially, there are 3 situations where teachers can use direct feedback "judiciously": "when students are at beginning levels of English proficiency; when errors are untreatable (such as idiomatic phrases, word choice, and word form where teachers cannot refer to a specific rule for error correction), and when the teacher wishes to focus student attention on particular error patterns but not others". (p. 95). One of the practical applications of direct feedback is the technique of "reformulation", where the teacher rewrites the incorrect or awkward sentences to suit the given context. (Ferris, 2014, p. 97) This approach though has not been accepted by the ESL community with a lot of

confidence as there has not been any definitive research to prove its long-term effectiveness in improving students' language proficiency, and it is time consuming for teachers.

To summarize, for "written accuracy", "clear, narrow, and explicit feedback (direct feedback) might help students to master the structure in question". For self-editing strategies, "a process of 'guided learning and problem-solving' (indirect feedback) may better serve the long-term objective of fostering student autonomy in monitoring their own writing." (Ferris, 2014, p. 33)

Narrower/Selective Marking vs Broader/Comprehensive Marking

This was one of the feedback strategies that both the teachers and students agreed on. They preferred to give and receive feedback respectively on all the error categories as opposed to just a few. This is because teachers do not want to convey the wrong message that the student in question has only those errors to work on that were marked in the document. Students as part of other research conducted on this aspect of error correction also support these results; in work done by Leki, Ferris and Roberts, and Rennie (as cited in Ferris, 2014, p. 45), most of the students preferred comprehensive error correction, except for a few who wanted feedback on their "most serious errors". However, some L2 writing experts think otherwise.

Many experts advise against marking comprehensively as it might "exhaust" teachers and "overwhelm" students. They suggest instead to mark "patterns" of errors so that the students as well as the teacher get to focus on fewer things, and the chances of the students being motivated to correct their errors is higher. However, some other experts feel that when L2 writers go out in the real world, the expectations from them are complete accuracy in their written work. This level of perfection can be reached only if students are made aware of all the areas of language that they need to work on, rather than just a few. (Ferris, 2014, p. 45)

If both the methods of feedback are equally beneficial, then which one should L2 teachers use? Ferris (2014) provides a good argument to settle this conundrum. She suggests that it is important that teachers, before choosing to comprehensively or selectively mark the errors, reflect on the purpose for which the work is being marked. If the intention is to make the students take cognizance of their major errors, or when the students are at a basic level of language development, then a selective approach might be useful. On the contrary, if students are at a higher level of language acquisition and are already aware of their error patterns, then a more

comprehensive method might work as students are nearing the stage of having an error-free document. (p.45)

Error Location vs Error Labelling

Rather than merely locating the error in a sentence or paragraph, most teachers prefer to locate and label the error according to the type of error made. This is done with a view to give students the precise type of error thereby making the work of students easier. On the same lines, all the students interviewed wanted teachers to label the errors. Some research suggests that students prefer error labelling to just locating the errors, such as the ones done by Ferris, Ferris and Roberts, Hedgcock & Lefkowitx, and Rennie (as cited in Ferris, 2014, p. 45). However, a study done by Ferris (2006) suggests that students were able to correct 75% of the errors that were just located and not labelled, and they were able to do this by relying on prior knowledge they had. (Ferris, 2014, p. 45)

Error Codes vs Verbal Comments

This comparison showed a sharp contrast between what the teachers and the students preferred. While the teachers liked to use error codes as it is concise and saves time, the students found that there are too many codes to refer to, which leads to spending a lot more time in understanding the codes than correcting the errors. Consequently, they prefer short, verbal comments. As corroborated by Ferris, "student writers resent cryptic codes or symbols that they do not understand (e.g., Ferris, 1995b; Straub, 1997)." In fact, some teachers also found it cumbersome to remember the coding system and most importantly use it consistently throughout the document. (Ferris, 2014, p. 103)

Textual Corrections vs Endnotes

While the teachers had equal reactions to both methods, the students tended to have a clear opinion. Some teachers preferred to make textual corrections – marking errors precisely where the error was made – because it is easier to review the document to assess the types of language problems the students have. The other set of teachers preferred writing summarizing notes at the end of the document when they want to focus more on the ideas and the construction of the writing than its grammatical aspects. Most of the students though preferred to have error marked next to the relevant sentence as endnotes seem vague and unhelpful to them when wanting to know the specific language problems they have to work on.

ESL experts suggest that a combination of textual corrections and comments at the end of the paper "may be very appropriate for advanced writers who are developing independent self-editing skills." It is also suggested that "if the teacher has implemented a program of tracking or charting student errors across drafts and assignments, a summary form that indicates the major errors marked and perhaps how many of each type there are may be a key component of the program." (Ferris, 2014, p. 103)

Q2. Based on the types of language problems, do teachers and students prefer direct feedback or indirect feedback?

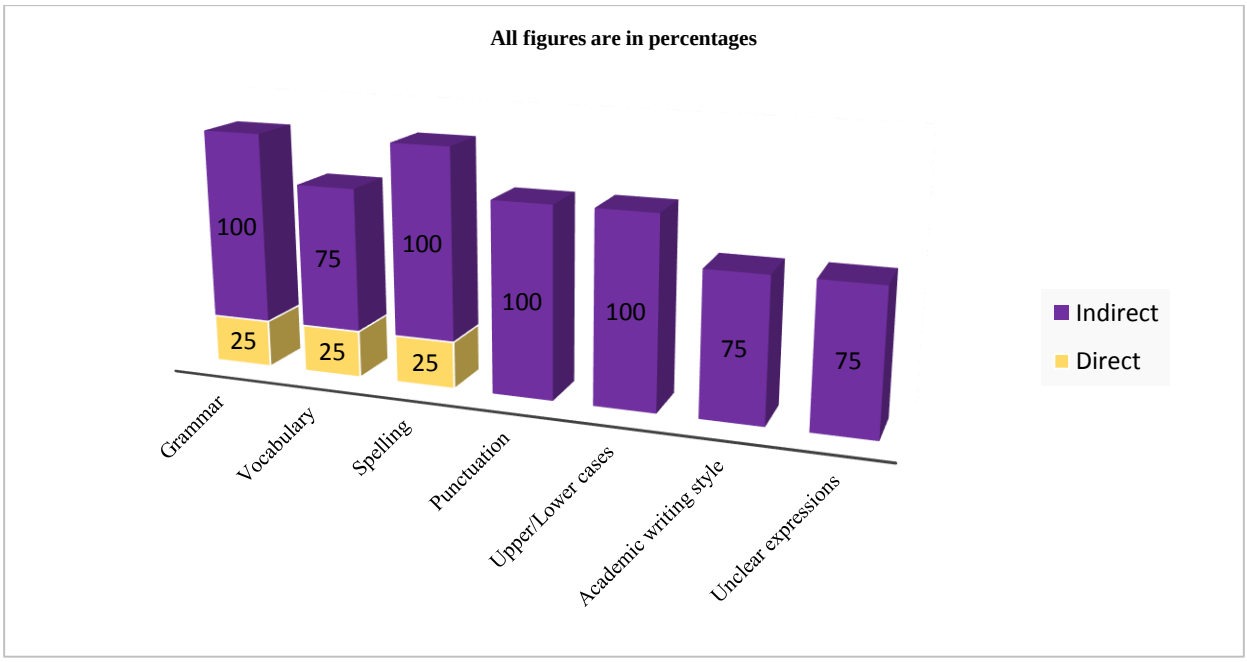


Figure 3: Teachers' Preferences

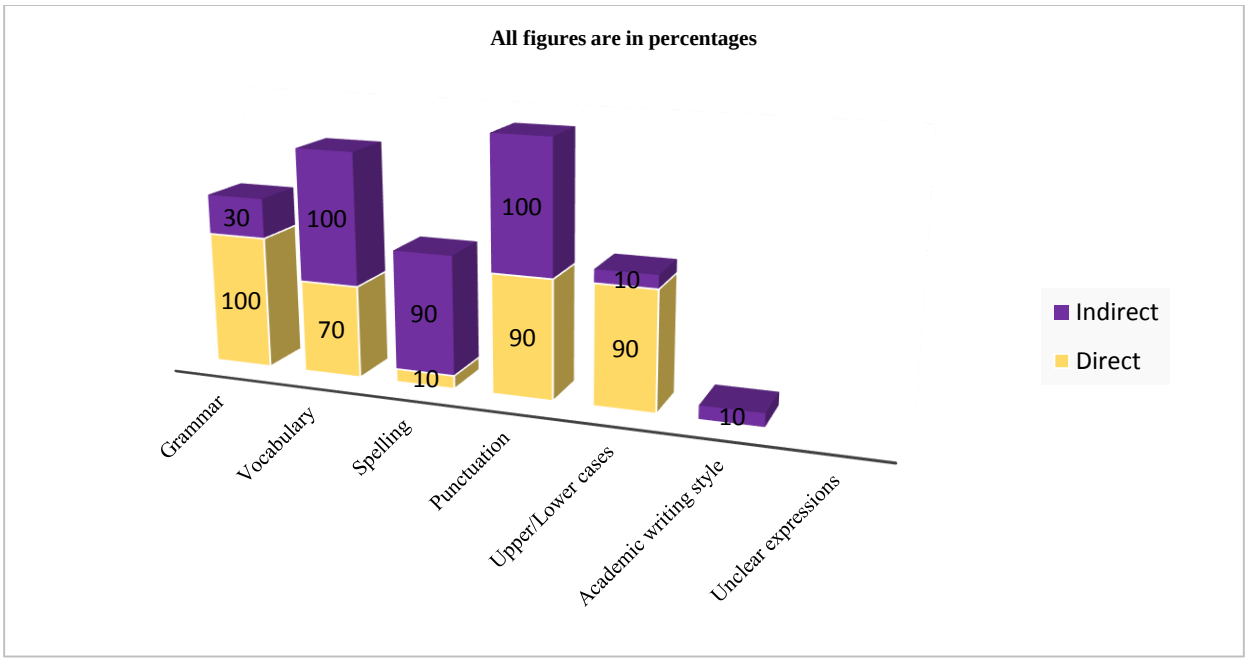


Figure 4: Students' Preferences

While the general instinct of teachers is to give indirect feedback to students for language problems in writing, when broken down by types of errors, they also consider giving direct feedback. For errors in grammar, spelling, punctuation, and upper/lower cases teachers feel that directly giving the answer will hamper the language development of students. There will be no motivation left from the students' end to try and find out how to correct the error and refer to grammar textbooks. Therefore, it might serve the immediate purpose of correcting the errors in the said document but the students will not learn from their mistakes and carry forward their learning to the next document.

The teachers are willing though to consider direct feedback in cases where the students might not be able to self-edit, such as incorrect word choice, academic writing style, and unclear or awkward phrases. Most students refer to online translation guides that might serve them well for most part of their document but might sometimes misguide them regarding choice of words. In such a situation, teachers prefer to write the exact word that suits the context of the sentence. Similarly, few of the students are aware of the academic writing style expected in a Canadian classroom; it is often completely different from what they are used to in their native countries. Therefore, teachers prefer to be explicit when it comes to giving feedback about this aspect. This

form of direct feedback is usually given by labelling the errors using error codes along with appropriate verbal comments.

The students, interestingly, have a very different view regarding feedback on specific error types. Students would generally prefer direct feedback for all error types. But given a choice, they would accept indirect feedback for problems with spelling, punctuation, and upper/lower cases. When probed further and asked whether giving direct feedback all the time will help them in the long run, the students had an interesting response. They were quite clear that when they said they wanted direct feedback, they were not really looking for the answer to the error, except for instances such as incorrect word choice, academic writing style issues, and awkward expressions where they were in sync with teachers' views. What they were really looking for is how to take the next step after knowing that it's a verb tense error or article error. They were not sure why the verb tense or article that they chose was incorrect, where to look for help with verb tenses or articles, and then how to ultimately correct the error. This perception goes in line with the fact that more than half of the students in this study have not taken any prior grammar courses where they were taught how to correct error and self-edit their work. This gap calls for some interventions from the teaching faculty, which are outlined in the 'Suggestions for Academia' section.

Q3. Based on the frequency of language problems, do teachers and students prefer direct feedback or indirect feedback?

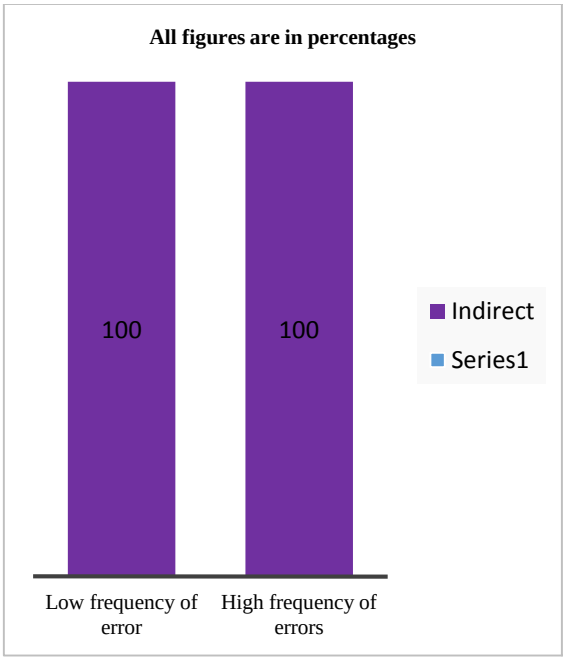


Figure 5: Teachers' Preferences

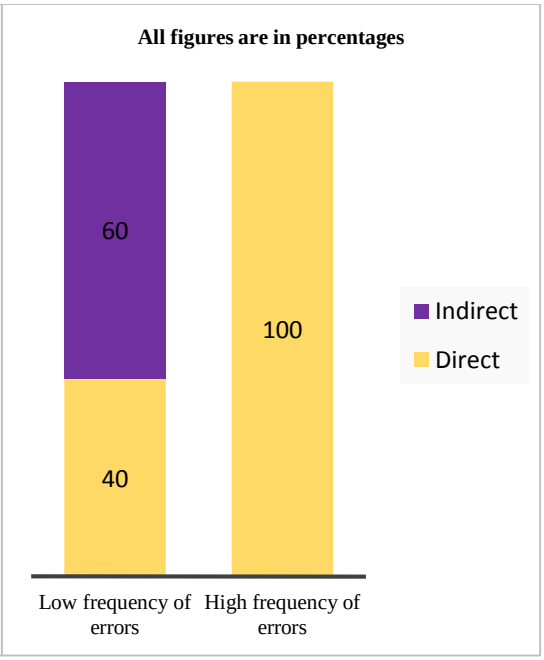


Figure 6: Students' Preferences

Whether a student is making the same error once or is repeating the error in subsequent drafts, most teachers do not change their method of giving feedback if a student is repeating an error. They feel that the student is repeating the error either because of negligence or lack of motivation, not because of not knowing how to correct the error. As a contrast, if a student is repeating an error in subsequent drafts, students prefer to receive more direct feedback as they have not been able to correct the error themselves. If the frequency of the error is relatively low, students are open to receiving indirect feedback in the areas of spelling, punctuation, and upper/lower cases.

Q4. Based on the timing of the language problems during a semester, do teachers and students prefer direct feedback or indirect feedback?

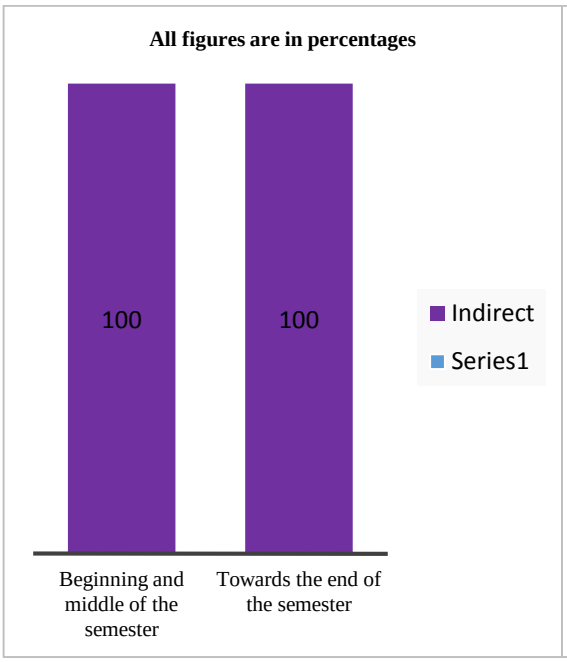


Figure 7: Teachers' Preferences

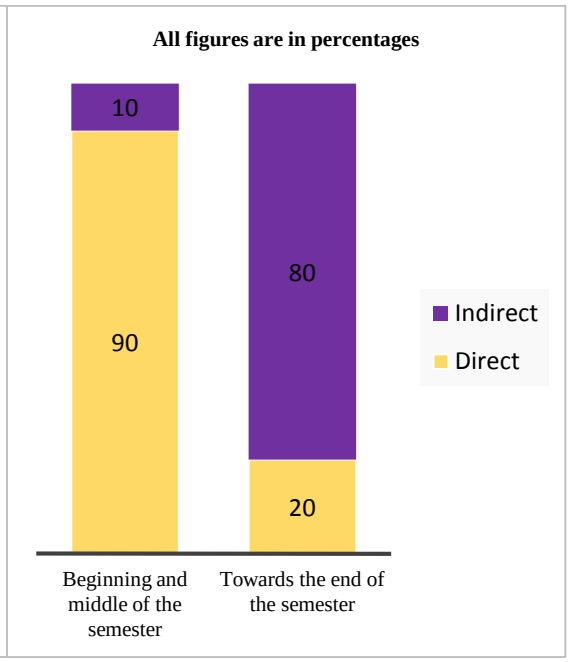


Figure 8: Students' Preferences

Irrespective of when the errors are made, be it at the beginning of the semester or towards the end, teachers only believe in giving indirect feedback. However, most students feel that during the start of the semester, teachers should give more direct feedback so that students can understand what the reasons for the errors are. Once they are about a month into the semester, they can receive indirect feedback as by then the expectation is that the student knows how to correct the error.

Q5. Other than written feedback, are other modes of feedback such as one-on-one conferencing used? If so, how useful are they as compared to written feedback?

Both teachers and students unanimously felt that one-on-one conferencing with the teacher was helpful. Further, they felt that neither written feedback nor conferencing would be as effective separately as they are as a combination. They preferred scheduling a conference with the teacher two to three days after getting written feedback. This way, the students got sufficient time to analyze the marked errors and go to the teacher with any residual clarifications.

Other Comments

In addition to the questions, teachers and students were given an opportunity to voice their other concerns and highlight practices that were working well for them. These comments are as follows:

- Some of the teachers felt that despite them marking comprehensively, students tend to repeat errors in subsequent drafts. Teachers then have to spend substantial amounts of time in correcting the same errors again and again.
- While talking to the students, some of them expressed that they were not sure of the various rules of APA and MLA citation formats.
- Students also felt that when choosing the appropriate word, they were not sure how to interpret the dictionary and thesaurus accurately.
- Some students also had difficulties in understanding the handwriting of teachers.
- While teachers were marking errors, students felt that substantial parts of their writing was being rewritten. The students were confused as to whether they were being marked for errors or for their writing styles.

Implications for Academia

For many years, ESL researchers have been trying to find out the most effective way of giving feedback to students for their writing. Some insist that say written corrective feedback is needed while others claim that giving feedback is hampering the natural thinking process of the student. At this point then, it is imperative to stop and step back to look at the big picture. But if larger picture were to be viewed, Manchon asks a very pertinent question: are ESL students "learning to write" or "writing to learn"? (as cited in Hyland, K., 2013, p. 241) To answer this and the other questions in this study, teaching professionals might need to step back a little and analyze the learning curve of an ESL student.

In almost all high schools around the world where English is taught as a second language, the curriculum is focused on teaching grammar with possible additions of reading short stories and writing descriptive essays. Outside the classroom, students seldom get a chance to apply their learning and feel more comfortable in conversing in their L1. Moving on to undergraduate study in a university where the medium of instruction is English, before they can be admitted into their chosen discipline, they have to prove their English proficiency by either taking a

standardized test such as TOEFL or IELTS, or they might have to take a test conducted by the university such as the English Placement Test conducted by the Canadian university in this study. In the ESL program, they are taught English integrating the four learning skills of reading, writing, speaking, and listening. For most students, this might be the first opportunity to apply their learning in the form of speaking and listening. In writing classes, where the focus is supposed to be on formulation of ideas and structural thinking, invariably teachers have to direct their feedback toward grammar as there are many grammatical mistakes even at this stage. When students then move on to their respective academic courses, academic teachers tend to look more for skills, such as writing reports, cohesively organizing thoughts, making clear arguments and writing logical essays. They are willing to overlook grammatical errors as long as the idea gets conveyed coherently (Hyland, 2013). Finally, when students enter the world of job-seeking, it becomes apparent that employers are not only looking at what academic teachers looked for, but they also expect that ESL students have all-round communication skills with no grammatical errors. (Hu & Hoare [in review])

It is evident from the previous discussion that the focus of ESL instruction and the expectations from ESL students vary considerably as they progress from high school to the workplace. The most significant jump in expectations though in the entire learning curve of an ESL student is from the ESL courses to the academic courses. ESL teachers see ‘writing effectively’ as the ultimate goal, whereas academic teachers see writing only as a tool to effectively communicate subject-related content. This contrast also has a direct impact on whether the goal of error correction is to correct the immediate errors in a document or to build a foundation to enable students to view the narrower picture of grammatical errors to the bigger picture of ideas construction. Consequently, to meet the twin objectives of enabling students in “learning to write” and “writing to learn,” the following section outlines some practical suggestions for ESL pedagogy.

Suggestions for Academia

As Ferris aptly remarks, “It is important for teachers (and students) to perceive error feedback as part of a larger strategy of building students' knowledge and strategy bases, not simply a "fix-it" list for a particular paper.” (Ferris, 2014, p. 108). Therefore, given the gaps that exist in the methodologies that are used by L2 teachers, the expectations of students, and the

expectations of academic teachers and prospective employers, given below are some suggestions for ESL teachers:

1. To prepare teachers for L2 error treatment, it is essential for teachers to be aware of the following:
    a. Teachers must study those aspects of grammar that are "particularly problematic" for L2 students: forms, meanings, and uses of the different verb tense and aspect combinations; use of active and passive voice; types of verbs; basic type of nouns and article usage; and clause and sentence patterns. After thoroughly studying these aspects, teacher should ask themselves, "Could they clearly, accurately, and concisely define the terms? Could they provide examples of the structure that are useful and unambiguous? Could they identify patterns of these types of errors in actual student writing?"
    b. Teachers need to have an understanding of the second language acquisition process to be able to understand error patterns made by students.
    c. As ESL courses are a stepping stone to academic courses, teachers should be familiar with the kind of writing that is expected of students by their respective academic teachers and should plan their lessons accordingly. (Ferris, 2014, p. 62-63)
2. Before deciding which feedback strategy to use, it will help L2 teachers to understand the following factors that might influence choosing one strategy over the other:
    a. "Students' English Language Learning Backgrounds"- Making a distinction between the three kinds of L2 students, namely international/visa students, resident immigrants, and children of resident immigrants – is essential. International students' "exposure to English has been largely formal. Such students tend to have a strong English grammar foundation, have a good grasp of key grammatical terms, and can articulate rules." However, what is key to note about these students is that it should not be assumed "this knowledge is always transferred accurately to student writing, as English instruction in non-English speaking countries often falls short in providing opportunities for students to apply formal knowledge to their own written production." (Ferris, 2014, p. 84)

b. “Influence of Specific L1s”- For instance, “native speakers of Japanese may struggle with using English articles, Chinese speakers may have trouble with the verb tense system, Russian speakers may have difficulty with word order, and Arabic and Spanish speakers may make errors in sentence boundaries”. (Ferris, 2014, p. 85). Having an understanding of these characteristics will assist teachers in tailoring feedback that addresses individual language concerns.
c. “Process of Second Language Acquisition”- Depending on which stage of acquisition they are in, vocabulary; morphology; phonology; or syntax, students “will make errors reflective of their SLA processes”. (Ferris, 2014, p. 10)
d. “Differences in L2 Proficiency”- To understand this, Brown’s taxonomy of stages of error recognition might be useful. For example, if the student is at the ‘random’ and ‘emergent’ stages, “learners are completely or partially systematic in their uses of particular structures.” For this kind of student, a more direct approach in giving feedback might help. At higher levels of proficiency, such as in the ‘systematic’ and ‘stabilization’ stages, students are able to correct error either by themselves or when told by the teacher. In such a case then, indirect feedback might work. (Ferris, 2014, p. 86)
e. “Global vs Local errors”- Some types of errors, called global errors, can interfere with the understanding of the context of a sentence or an essay. Other types of errors, such as lexical errors, are able to still convey the meaning of the sentence or the essay. Marking globally versus locally has a direct impact on whether L2 writing teachers would like to focus their attention more on students’ grammatical proficiency or on their ability to develop ideas and arguments. (Ferris, 2014, p. 88)
f. Type, frequency, and timing of errors- As is evident from the results of this study, students prefer to receive direct feedback for areas such as grammar, when errors are repeated, and during the start of the semester. Teachers who generally give indirect feedback might benefit from this perspective of students.

3. To be uniform in correction methodologies and to encourage standardization, the ESL department could discuss the standards of correcting a student’s paper: the parameters for

correction, the parameters where teachers are allowed to be subjective, whether to mark comprehensively or selectively, and the implications of each method.

4. Prior to beginning the curriculum of the ESL course, the teacher can conduct a diagnostic test in the form of a descriptive paragraph. This will give an idea to the teacher about the students' level of proficiency in both grammar as well as organization of ideas. With this information in mind, the teacher can then fine tune feedback accordingly.
5. After teachers correct the first paper of the students, three types of activities could be conducted as a follow-up:
    a. Teacher can make a class error profile list, which lists the percentage of errors for a student in each category of error. (Ferris, 2014, p. 89) Once the teacher gets an idea of which kind of errors are common for the class, the teacher can either have a special class to address them or direct students to the writing centre where the writing center can take a session on that topic. This way the pressure is off the teacher and the students also get a chance to clarify questions as a group. An important point to note here is that when teachers ask students to go to the writing center, the writing center staff should be advised beforehand that the focus of the session should be on the grammatical topic and not on grammatical accuracy of the specific paper.
    b. In addition to the teacher having a summary of the errors for each student, the students themselves could be asked to maintain an error log of the errors made in each section based on the type of errors marked. Especially relevant for instances where teachers mark errors comprehensively, these error logs can help students track their "error patterns" and subsequently focus on the most pressing errors. (Ferris, 2014, p. 41)
    c. For the first piece of work that is corrected, the teacher can have a session in class where students bring their marked paper and correct the errors in class. If the teacher finds that a number of students are coming to him/her with a common issue, it can be addressed towards the end of the class. This is a useful practice to follow that not only provides clarification to students on how to correct their errors after receiving feedback, but this will also reduce the frequency of errors in the following drafts.

6. Students might benefit if explained the five stages of error correction: locating the error; identifying the type of error; understanding why it is an error; knowing where and how to look for the correct answer; and finally correcting the error in the given context (refer to appendix)
7. An important learning intervention in most writing classes is mini-lessons on grammar. Firstly, the following "subskills" are required to prepare such a lesson:
    a. Identifying problematic aspects of grammar. To obtain this data, error charts prepared at the end of the first paper will help.
    b. Using grammar resources that explain the concept(s) in a simple manner and give relevant examples.
    c. Preparing practice material where students can apply what they've learnt in a mini-lesson. (Ferris, 2014, p. 65-66)
8. For more clarification on the various citation formats, as some students in this study had expressed difficulty in understanding, the Writing Centre could be requested to conduct a two-hour workshop.
9. For students who have not taken any writing or grammar courses prior to taking academic- level 5, it might help to give them names of some simple grammar books that they could refer to for correcting their language problems.
10. At the beginning of the semester, it might help to teach students how to effectively use a dictionary and thesaurus.
11. If correction is done using error codes, teachers can have one class dedicated to understanding the error codes, examples of errors that fall under those error codes, and how to correct the error using the code.
12. Apart from written feedback methodologies, teachers can also use methods such as peer editing. (Ferris, 2014, p. 147) This is especially helpful in the beginning where students are likely to make more errors and they get a chance to understand what it is like to proof-read a paper.
13. To move students towards academic language development, teachers can adopt the following practices:
    a. Selecting text for reading material- some of the points to consider here are the difficulty level of vocabulary used, the syntactic structures, and the readability.

Too many complex structures in the reading will make students lose interest. Given that students will be advancing to their respective academic disciplines after completing the ESL course, it would help to make the reading relevant to some of the academic disciplines that students have planned to take. (Ferris, 2014, pp. 162-165)

b. Balancing intensive and extensive reading- While reading exercises in class, also called intensive reading, is an important component of ESL writing, reading outside class or extensive reading is as important. Research also suggests that "strong, avid readers are much more likely to be successful writers than are those who do not read much or well." (Ferris, 2014, p. 167)
c. Selecting vocabulary- referring to the academic word list is a good starting point to identify words that might be useful for students in their academic disciplines. What is even more important than learning vocabulary is how to use these words in a sentence and in a given context. Developing practice exercises for students to apply their vocabulary knowledge will hold them in good stead for their language development. (Ferris, 2014, pp. 170-173)
d. Lastly, preparing a well-rounded feedback environment for students requires immense effort from the teachers which might ultimately lead to teacher burnout. (Ferris, 2014, p. 110) While seeking assistance from the writing centre is one of the ways to get the pressure off teachers, making students gradually move towards self-editing will considerably ease the efforts of teachers in the long run. By making students identify their persistent error patterns obtained from their error logs, students can keep track of their progress and will also be motivated to move towards producing error-free documents.

Further Research

An important aspect that required further study is whether the suggestions offered by the interviewed students as well as in this paper are effective in an actual classroom scenario.

References

Ferris, D. R. (2014). *Treatment of Error in Second Language Writing*. Ann Arbor: The University of Michigan Press.

Ferris, D.R, Liu, H., & Rabie, B. (2011). “The job of teaching writing”: Teacher views of responding to student writing. Writing and Pedagogy, 3, 39-77.

Hu, J. & Hoare, A. (in review). Language problems in ESL writing: Voices of employers. *The International Journal of Leadership in Learning.*

Hyland, K. (2013). Faculty feedback: Perceptions and practices in L2 disciplinary writing. *Journal of Second Language Writing*, *22*. Retrieved from http://dx.doi.org/10.1016/j.jslw.2013.03.003

Jamie, K (2008, Jan 2). What exactly is a ‘morphological error [Web log comment]. Retrieved from http://www.english-test.net/forum/ftopic21590.html

Lee, I. (2005). Error correction in the L2 writing classroom: What do students think? TESL Canada Journal, 22(2), 1-16.

Lee, I. (2008). Student reactions to teacher feedback in two Hong Kong secondary classrooms. Journal of Second Language Writing, 17(3), 144-164.

Lee, I. (2009). Ten mismatches between teachers’ beliefs and written feedback practice. ELT Journal, 63(1), 13-22.

Leki, I. (1991). The preferences of ESL students for error correction in college-level writing classes. Foreign Language Annuals, 24, 203-218.

Shoebottom, P. (1996-2015). *Syntax - English sentence structure.* Retrieved from http://esl.fis.edu/learners/advice/syntax.htm

Thompson Rivers University (n.d.). Academic English-as-a-Second or Additional Language (ESAL) Courses. Retrieved from http://www.tru.ca/hse/esl/academic_esal/courses.html

Appendix

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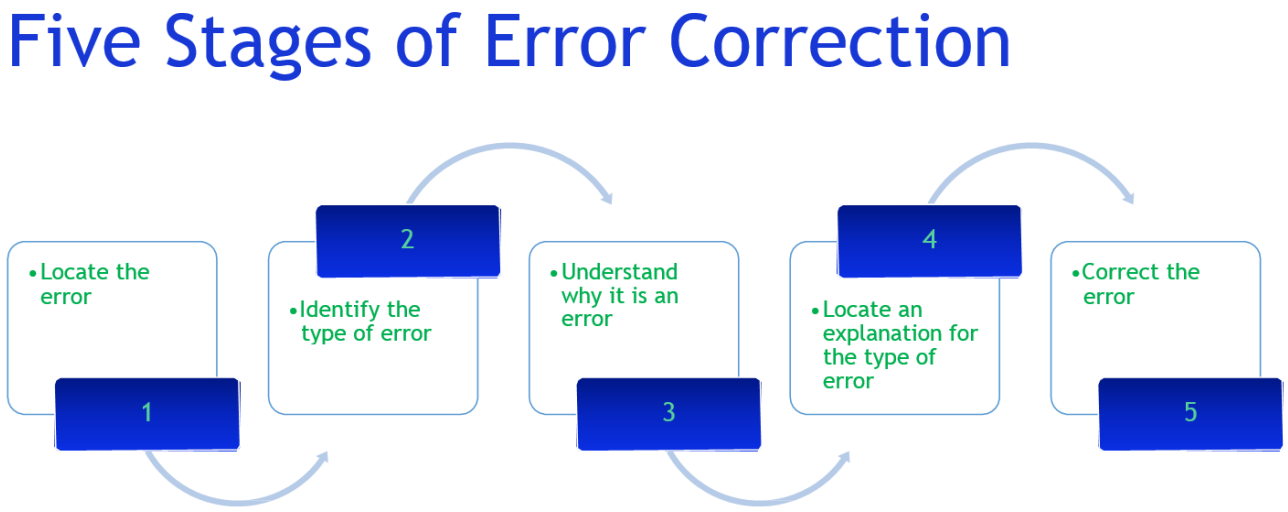

Roots of Past and Present

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Abstract:
Places are not simply the sites where our lives happen. Rather, they are made, produced and contested processes that happen, take place. They are both highly personal and collectively shared. Places are also inherently political as cultural values and power relations are built into, and reconstituted, through place. The very possibilities of place are constrained by structures of power and the dominant cultural imagination. This personal natural history essay is a starting point to explore the link between people, landscape, and the complexities of place-making. Specifically through interrogating my personal connection to place in the South Interior of British Columbia, this essay is an engaged personal reflection and examination of my relationship with what I have seen as a particular kind of place—"the natural world." By way of this reflection, the essay questions our relationships with place, specifically in those places seen as 'natural,' and opens up space for thinking about the complexities of place-making, personally and collectively.

"There is? There *will* be. It's not here yet!" My mother playfully, but with a tone of chastising, corrects my father. He is describing the house they plan to build. Lost in his own vision, he is gesturing to the freshly excavated soil, dust, and rocks around him, verbalizing what already exists in his mind. "Here's the sauna off the back side by the bathtub. Here's the kitchen, it has large south-west facing windows to look towards Fountain Peak when we're cooking breakfast. On this side is the kids' room and up top is ours, which will open up for fresh air in the summer." That was the summer of 1991 and the home eventually built in that space was a shadow of my father's original vision.

Three weeks ago, my brother Phillip and I bought that same piece of land, which my parents had sold 15 years ago. Applespring. Part of returning to the past is renewal. With friends and community lending hands, we put match to wood and burnt the house that was once our home. The relentless turning of time affects all things. The once brightly painted French doors that my mother so loved stood one-hinged and flaking into the soil below. Countertops where my father rolled out biscuit dough in the morning sat forgotten under layers of rat shit. Old Milwaukee cans lay spilling out of a black plastic garbage bag near the window where I once lay on a couch sneaking precious battery time on Phillip's Gameboy.

When we spend enough time in a place it is difficult to entirely erase the marks we leave behind. On one corner, near a doorway, scrawled marks remain, documenting the changing heights of growing children. "Leif—June 23, 1994. Phillip—April 2, 1996. Anna-Raye—July 28, 1995." Even now many years later, I feel some satisfaction in seeing the moment I became taller than my older sister Anna-Raye. On another wall I can see the tattered remains of a picture I painted and glued to the wall because, for some reason, magnets weren't working on the wood framed interior. Beside the house, the apricot pits I spit down the bank one summer have become small trees. Above, a trail we frequently walked is still evident in its winding open space among the Blue Bunch Wheat Grass. The searing heat of fire and the collective work of many hands takes most of this away though. Only memories and roots remain.

Applespring consists of two steep mountainside acres punctuated with five small horizontal flats edged out of the vertical landscape. The Little Apple—a river in the spring and a stream in late August—gushes down the north side of the property boundary. "Above our heads a 22-foot beam supports the roof. Below our feet is a concrete pad to support this post for the loft where our bedrooms are." After burning away the old house, I find myself talking about my own plans to build in the same space my father did 25 years earlier. "Here's the kitchen and living space, with windows to look out over the valley and a claw-footed bathtub in this corner. The woodstove is near the front door to easily bring in wood in the winter."

The present reverberates with echoes of the past. Place will do that. Water slips seamlessly from creek bed into culvert under the road in familiar ways, but a quarter

century of successive spring runoff has altered the current flow through annual scouring and depositing of gravel. Even in this dry, hot semi-desert landscape on the outskirts of Lillooet, the trees have managed to change. The same Douglas Firs and Ponderosa Pines grow roots into the landscape, but they're wider and taller. Conifers race to grow deeper roots towards the water table below as moisture becomes rare in the heat of July. They continue vying for sunlight above, both with each other and the high mountain ridgelines of the South Interior. At the base of their broad trunks, Canadian Goldenrod, Wild Onion, and Rattlesnake Plantain play out a similar narrative, searching both below and above ground.

As a young child the world is simpler. Trees are grouped into categories of having short needles, long needles, or leaves. But mostly they exist to climb—or at least to imagine climbing—as I watch Phillip grab the low pitchy Douglas Fir branches I can't yet reach. Summer stretches on for ages, each season an entire lifetime. Orbs of Salsify seeds stand delicate and inviting, waiting for my young hands to carry them onto new places. Alfalfa blooms in every colour imaginable on the side of the driveway—a favourite snack, tasting faintly of honey. Horsetails growing next to the Little Apple are endless jigsaw puzzles as they are pulled apart and reordered. The mountains above and the Bridge River far below at the valley bottom are taken for granted. These larger pieces of the world are akin to the sky and the earth, they seem a part of what always has been and always will be.

Walking on this landscape today with Phillip I am in the same physical space, but it has new and more complex meaning. "If we cut down this tree it will open up the view down the Bridge River valley towards Lillooet." I recognize trees as important for the larger ecosystem, but this is somehow disconnected from my day-to-day lived experience. The small wonders of seeding Dandelion and broad leafed Plantain are forgotten under my feet, in favour of the sweeping lines of Fountain Peak to the south-west and up into the Camoo to the east. This is the first time I have been here since the property title has been transferred to our names. As we walk together my eyes are drawn more towards the condition of the ruts in the driveway than the exotic mustard growing along the edges. The space around me isn't so different, but my focus has shifted.

Along with the Paper Birch and Engelmann Spruce, my own roots have continued to grow into this landscape. They reach further down and keep me grounded to this place, collecting and carrying the water and nutrients I need from deep forgotten places up into the light to support growth. But they are also less orderly, intertwining into themselves and others. At times my roots extend towards imagined water or nutrients that are too-late-discovered mirages, finding only bedrock. They reach out to explore in new directions, but finding nothing of value slowly turn back or wither away. But false starts and misguided paths are part of the process of life. Without this continual process of exploration and discovery both myself and the Douglas Firs around me would remain unchanged from 20 years ago.

Roots are also important beyond their direct individual function though. They hold the landscape together. They hold our communities together. Without them, the heavy summer rains would have long ago sent the mountainsides of Applespring into the Bridge River below. Roots counteract the erosion of soil and and also counteract the erosion of community. Roots hold together the landscapes upon which we all thrive, ultimately allowing the birth of new life in both plants and people. Roots have given meaning to a place called Applespring.

A Mango for Every Palate: Food as Identity in Madhur Jaffrey's *Climbing the Mango Trees*

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Abstract:

In her book, Climbing the Mango Trees: A Memoir of a Childhood in India (2006), Madhur Jaffrey, one of the most prominent Indian culinary authorities, illustrates how memory and the past are often best encapsulated by food. Jaffrey's memoir is well timed, as food culture is a burgeoning field of academic study due to the acknowledgment that food is an indicator of culture, geography, and time period. Culture and food are inextricably intertwined and, as Jaffrey reveals, food culture can be the ideal place for the expression of identity. Jaffrey does acknowledge how much cultural, and especially religious, identity shapes one's diet, yet she also exposes how cuisine is where her family expressed their cultural hybridity and how diet is inevitably altered to the individual's palate. These factors enable food to become an acceptable field for experimentation for Jaffrey, ultimately allowing her to adopt a culinary cosmopolitanism and consequently a multicultural identity distinct from her communal one. However, Jaffrey does not abandon her Indian character, choosing to maintain her culture through embracing Indian cuisine once abroad. For Jaffrey, food's dual nature, as both an important cultural signifier and an acceptable field for experimentation, renders cuisine the ideal method for enabling Jaffrey to develop a multicultural identity while still maintaining her heritage. This research will demonstrate the significance of food culture studies by exploring Jaffrey's depiction of food as a flexible medium for expressing the various types of identity.

In her book *Climbing the Mango Trees: A Memoir of a Childhood in India* (2006), Madhur Jaffrey, "one of the most prominent Indian culinary authorities," illustrates how memory

and the past are often best encapsulated by food (Black 1). Jaffrey's memoir is well timed, as food culture is a burgeoning field of academic study due to the acknowledgment that food is an indicator of culture, geography, and time period. Culture and food are inextricably intertwined for, as Jaffrey reveals, food can be the ideal site for the expression of identity. Jaffrey does acknowledge how much cultural, and especially religious, identity shapes one's diet, yet she also exposes how cuisine is where her family expressed its cultural hybridity and how diet is inevitably altered to the individual's palate. Her family's dietary hybridity and the individualistic nature of taste enabled food to become a field of cultural experimentation for Jaffrey, ultimately allowing her to adopt a "culinary cosmopolitanism" (Black 3) and consequently a multicultural identity distinct from her communal one. However, Jaffrey does not abandon her Indian character once abroad, choosing to maintain her culture by embracing Indian cuisine. Jaffrey's maintenance of her Indian culture, as part of her new multicultural identity, suggests that her particular brand of multiculturalism is about meeting her individual cultural "tastes" by drawing on all cultures while being bound to none. Food's dual nature, as both an important cultural signifier and field for experimentation, renders cuisine the ideal avenue for Jaffrey to develop a multicultural identity while still maintaining her heritage, ultimately allowing her to create her ideal cultural existence.

In her essay "Cooking up Memories: The Role of Food, Recipes, and Relationships in Jeanette Lander's Überbleibsel" Heike Henderson asserts that, "second to no other form of human expression, food embodies culture" (236-7). Scholars such as Shameem Black have noted that "an emphasis on food [as culture] is especially prominent in the construction of the South Asian diaspora" of which Jaffrey is a part (6). Jaffrey recognizes food as being predominantly a component of communal identity, as she says, "all social occasions," the times when communities come together, "are fueled by food and drink" (92). Because she grew up in the joint family system, Jaffrey is keenly aware of how food and eating can be a matter of what the group deems acceptable; for example, one of the effects of her family's leaving Kanpur to re-join the family in Delhi was "We would have to eat all of our main meals in Number 7," the family estate (71). On Jaffrey's family's annual holiday to the "hills" the "only organized activity … was the mountain picnic," an event centred around the consumption of food. The fact that choosing of the picnic site and all other preparations begins "weeks in advance", shows the significant role attributed to food by Jaffrey's joint-family community (109).

In addition to the communal nature of food consumption, Jaffrey depicts particular foods as being synonymous with a respective culture. Anita Mannur, in "Culinary Nostalgia: Authenticity, Nationalism, and Diaspora", reports that in immigrant literature, "[t]o be seen as 'Indian' implicitly demands a particular set of performative behaviours" (24). For Jaffrey one of these performative behaviours is the production and consumption of food. For example, Jaffrey's family's cultural position as part of India's elite is reflected in the drink "*daulat ki chaat,"* literally translated as "the snack of wealth," which was "the most ephemeral of fairy dishes" made with dried sea foam (14-5). Their wealth, along with their British influence, is the reason why Jaffrey's parents insist on keeping napkins clean and the proper use of finger bowls (60). The connection of food with one's national community is highlighted by Jaffrey's description of lunches at her British Convent school. The culturally British children ate sandwiches and leftover roast as opposed to Jaffrey and her sister's curries; one presumably culturally mixed girl's food alternated between Indian dishes and "English sausage" (52). The children's lunches reveal how culture, not individual preference, was the primary influence on their diets, testifying to Jaffrey's belief in the centrality of food to identity.

In her analysis of Jeanette Lander's following of Jewish kosher laws, Henderson states, "[w]hat is eaten has the power to transform our bodies and thus ourselves, which is one of the reasons why so many cultural and religious rules covering food … exist" (240). Jaffrey discusses in great detail how, in India, the food one eats is greatly determined by one's religion. When speaking of her religiously diverse school friends' lunches, Jaffrey claims that "there also hovered over each dish an air of indefinable religious sensibility that could be seen and tasted but eluded pinpointing," labeling her friends Abida and Zahida's foods distinctly "inner-city Muslim" (176). Jaffrey often identifies food as belonging to particular religions, such as "earthy Punjabi village *parathas* … Syrian Christian … *idlis* (steamed rice cakes) and coconut curry … orthodox Jain … boiled potatoes and some mixed spices," etc. (204). Even in Jaffrey's liberal family, members were expected to maintain their Hindu cultural identity with, as Jaffrey relates "[w]e could question anything, and we did, but we followed Hindu family traditions" (146). Often these are culinary traditions such as the Hindu taboo on unclean foods or the celebration of the "Thirteenth Day Feast" as part of mourning rituals (188, 236). In Jaffrey's eyes, the clearest sign of a person's culture, whether religious, class, or national, is his or her cuisine which demonstrates how central food is to her personal cultural identity.

Jaffrey and her family's multifaceted cultural background leads to food being the primary way in which their hybridity is expressed. Jaffrey's family "was Hindu by origin, but heavily veneered with Muslim culture and British education" (31). This Hindu-Muslim-British identity is reflected in their meals; Jaffrey records that "[b]reakfast was, except on weekends, Western," "[l]unches were Indian," and "[d]inners were often a mixture" (43, 59). The family's hybridity extends to their method of consumption, with meals involving the switching between using hands or cutlery (59). Unlike most Indian families, Jaffrey's crosses the religious culinary barrier with Sunday lunches featuring either a Hindu or a Muslim dish, and the males possessing a love of Muslim style kebabs (194, 189). The family even has unique dishes; as Jaffrey claims, "[w]e knew no other community that pickled dumplings," suggesting they possess a distinct micro-culture (145). As perhaps best communicated by the "*masala* [spiced] omelet with bacon, " food was where Jaffrey's family most aptly expressed their hybrid cultural identity (15).

However regulated cuisine may be by cultural identity, food has an inherent focus on "the idiosyncratic and unique" tastes of individuals "that defy national or group identification" (Black 15). What one eats is largely culturally determined, but it is also determined by the individual's palate. For example, Jaffrey's mother could not add "too much chili powder, as my father could not stomach very hot food" (61). At the family gatherings centred around the *khomcha-wallah* vendor visits, "[t]hose who wanted a mild cumin … got only the black mixture … Those who said gleefully, as I did, 'Make it very hot' also got the yellow and red mixture … If one had an extra craving for a sweet-sour taste one would ask for a tamarind chutney" (75-6). The respect and accommodation for the individual's taste preference is even present in everyday family evenings with the choosing of favourite nuts for beverages and the choice between mild or spicy *pakoris* (94). Even at the highly planned and regulated annual family picnic in the "hills" there are mangoes provided for every taste: "*langras* from Benares for those who liked their mangoes tart; *dussehris* from Lucknow for those who liked them sweet and smooth; and *chusnis*, small suckling mangoes, for those who preferred …to suck the juice straight from the skin" (109). Within the rigidity and crowdedness of Jaffrey's joint family there is allowance for individual autonomy in the highly significant category of food; however, the degree of autonomy permitted is all within the bounds of Jaffrey family's food culture.

The combination of her family's diet modeling its unique identity, and the food being flexible with individual desires made food a safe area for Jaffrey to experiment with culture. At

"the age of four … I began to explore the hot and sour" Jaffrey tells her readers (4), revealing how at a young age she was allowed to explore specific taste preferences. Experimentation with food culture, as an acceptable type of deviance, is demonstrated by the behavior of Jaffrey's mother. When Jaffrey desires to have *paratha* from vendors in the old city, she acknowledges that her "father frowned on all bazaar foods so my mother at first denied my request." Yet Jaffrey's mother eventually "capitulated" feeling that it was a harmless form of disobedience (130). Jaffrey's family's "genuine spirit of tolerance to all faiths," beyond establishing their acceptance of other cultures, also indicates that they accept the food of other cultures, as culture and food are so intertwined (22). Jaffrey also has particular room to negotiate her personal identity as an eater, due to her place in the family, declaring, "I was given the luxury of rebellion … I was way beyond the heir and the spare" (39). Her place in the family, being "way beyond the heir," made Jaffrey not responsible for upholding family traditions, thereby giving her the freedom to shape her own personal culture while still remaining tied to the family.

Jaffrey delights in broadening her cultural horizons, loving the *paratha* for "what a taste it was … pure Old Delhi," in other words, for being a gateway to a wholly different world from that of her privileged, hybrid community (131). Rejecting her family's home-produced milk, Jaffrey comes to favour Western-style "homogenized milk from a proper dairy" (158). In addition to their clothes, the culinary cultures of her Muslim, Jain, and Punjabi school friends are adopted by Jaffrey. Jaffrey relates how "there was one other way at school of sharing –and actually tasting- the inner city … that was at lunch, which we ate together, as far away from the stone school building as possible" (175). The mention of eating away from the school coupled with Jaffrey's statement, "I always found my own food the least interesting and barely touched it," implies that sharing lunches with her school friends was Jaffrey's way of breaking free from her communal food identity to one she found more amenable (177). This acceptance and enjoyment of the food of all of India's cultures very much reflects how Jaffrey was a "firm follower of Mahatma Gandhi" and his championing of a multicultural India (179). In her article "Recipes for Cosmopolitanism: Cooking Across Borders in the South Asian Diaspora," Black identifies that Jaffrey demonstrates that a "gustatory relish for the food of 'Others' [helps] contribute to an appreciation of their presence in the national community" (6). Mannur notes how, in her cookbooks, Jaffrey treats the sharing of food as a way to ease cultural friction, strengthening the view that for Jaffrey the dinner table is the place to adopt multiculturalism (27). Just as Gandhi's

"prayer meetings were nonsectarian, nondenominational," so too is Jaffrey's diet illustrating how her experimentation with food led to a distinct personal identity (179).

After India gains its independence in 1947, a generation gap develops in Jaffrey's extended family as the young begin to seek out their autonomy (180). The flexibility of culinary identity is why food is where the generation gap is seen to creep in, for the "younger generation in our family … regularly patronized restaurants," whereas, the elder ones did not (194). The young are drawn to the outbreak of restaurants, as they are "the place to express" the new, heavily Punjabi-influenced, national spirit of India that they enjoy (192). Leftover K-rations from World War II are prized by Jaffrey's generation, who "open them as if they were Christmas presents" (194). The older generation, although tolerating the children's personal experimentation with these foods, insisted they "stayed out of the dining room" for they did not perceive them to be a part of the communal food culture (194). Beyond giving her generation a separate identity, Jaffrey views her experiences with K-rations as the beginning of her exploration of Western culture, for they were her first taste of standard Western foods like olives and fruit cocktail (194). Jaffrey, with her British influenced upbringing, was always exposed to some Western foods such as "decorated Easter egg[s]" and "odd pastries and cakes" (61, 191). However, once she is an adult Jaffrey begins to seek out cuisines beyond India's borders, a foreshadowing of her move to Britain. The greatest example of this is her embracing of Coke, which Jaffrey equates with her "newfound internationalism" (240). Jaffrey's ability to seek out a new place in the world in order to find a more amenable lifestyle was precipitated by her developing a transcultural identity through experimenting with food.

Jaffrey confesses that, "When I left India for England, I could not cook at all" and that she failed cooking in school, yet when she arrives in England she finds herself "writing home to my mother begging her to teach me" (6, 229, 242). In her work, Mannur observes how "food becomes an intellectual and an emotional anchor" for those who move away from their homeland (11). Jaffrey's need for her culture's food is part of a recognition that she cannot, and does not want to, extricate herself fully from her culture, even though she wishes to live apart to gain more freedom. Jaffrey is aware of how Indian culture is an intrinsic part of her; she records how all the Indian flavours of her childhood were "somewhere in my depths …ready to be drawn up when the moment was ripe" (240). The novelist Lander, as quoted by Henderson, once disclosed, "cooking connects all of my worlds" (236). Jaffrey echoes this sentiment, reporting how "I hardly

knew that my old and my new worlds would start to mingle as soon as they touched, and that so much of my past would always remain in my present" (242-3). The relative portability of food culture enables Jaffrey to remain tied to her heritage even when isolated from her community. When the children were sent to the convent school, Jaffrey's father "trusted us to withstand the tsunami of Westernization … and to hold on to our Indianness as he and his father before him" (41). For Jaffrey this is ultimately accomplished by holding on to her community's food culture, facilitating her development of a multicultural identity that is both free of some of the restraints of Indian culture while retaining the elements she cherishes.

Through *Climbing the Mango Trees,* Jaffrey confirms how "Eating habits are concrete symbols of cultural and personal identity" (Henderson 244). Jaffrey clearly does not feel that food allows for a fluid expression of both cultural and individual identity, only because it is a non-significant aspect of culture. The story Jaffrey composes for Masterji's class demonstrates the centrality of food as two archetypal Indians, a traditional Hindu and a privileged hybrid, come together for a meal (202). The meal's significance to the story emphasizes that food is both an important and a shared aspect of most cultures. Although for some, the "globalization of culinary traditions [provokes] dystopian anxieties about world-wide homogenization" Jaffrey does not share these fears (Black 5). The very reason why the family's caterers' hands are "magic" is because they "could easily prepare the lamb meatballs of our erstwhile Moghul emperors and the tamarind chutneys of the streets with equal ease," in other words, because the caterers' are able to move between different cultures' cuisines while still representing them authentically (5). These cases demonstrate how food is both a signifier of a distinct culture and a site to experience multiculturalism, which is why Jaffrey uses food to remain tied to India while living a cosmopolitan lifestyle. Even with something as inherently simple and Indian as mangoes, through acceptance of the individual palate, there is room for personal and communal identity to be expressed in harmony and for the traditions of the past to be joined with the innovations of the present.

Works Cited

Black, Shameem. "Recipes for Cosmopolitanism: Cooking Across Borders in the South Asian Diaspora." *Frontiers: A Journal of Women's Studies* 31.1 (2010): 1-30. Web. 24 Nov. 2014.

Henderson, Heike. “Cooking up Memories: The Role of Food, Recipes, and Relationships in Jeanette Lander’s Überbleibsel.” *Women in German Yearbook* 22 (2006): 236-257. Web. 24 Nov. 2014.

Jaffrey, Madhur. *Climbing the Mango Trees: A Memoir of a Childhood in India.* Toronto: Random House of Canada Ltd., 2006. Print.

Mannur, Anita. “Culinary Nostalgia: Authenticity, Nationalism, and Diaspora.” *MELUS* 32.4 (2007): 11-31. Web. 24 Nov. 2014.

Fusion: The Circle of Life

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Philosophy

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Abstract:

Through naturalistic observation and analyses of the powwow dance, I was able to witness Native epistemology, first hand. In this paper, I will explore this epistemology. The teaching method of Native culture is their ontology, and has been passed from generation-to-generation, and is their way of life; it is a way of showing and doing—providing essential life skills. This practice—a way of living—emphasized the importance of communication, cooperation, and interaction. In that sense, there are other underlying dynamics—the energy—presenting itself to enhance peoples' wellbeing through their interrelatedness, their interdependence, and their interconnection. In their ceremony, nothing is as it seems; the energy generated underneath, while dancing, brought the Indigenous people together in unity. And, from another perspective, the reuniting of the people fulfilled, through action, psychological needs by conversion of energy. Native epistemology also permits children to discover life for themselves—to explore and create their own paradise, in conformity with the Sacred Circle, like their ancestors—dancing and creating their own universe.

On the gym floor, I see the people creating their own universe. At the Tiny Tots' 4th annual Powwow, I am standing on top of the bleachers, and I am watching an ancient way of knowing and being—of teaching. There is a large gathering of Indigenous people on the gymnasium floor, and they are practicing an ancient custom of singing and dancing. They are

demonstrating to the people a pristine way of life—a way to live a life that is filled with caring, kindness, joy, unity, and love. The showing-how to live is not complex; it is simple Native epistemology. There is no right or wrong, only the necessity to do, when shown. I see the dancers: ladies dancing the traditional, the fancy, and the jingle dress. I see the men dancing the traditional and the warrior dance. The Indigenous people are expressing their language and culture—expressing their worldview—singing and dancing—passing these traditions onto the next generation. They are bringing people—life—back to the Sacred Circle.

On the floor, they are bonding and creating their own universe—focusing their thoughts and energy. I am drawn to this place where no harm can come to a person; everything is in unity because they are showing their essence. The particles of light are dancing. I feel the energy around me—the positive, pulsating energy arising from the drum, the singing, and the one nation on the dance floor—emanating from their heart and soul. I use Einstein's theory of relativity—energy converts to matter; it cannot be created or destroyed because it is shared, and it makes up this vast universe. The experience of being on the floor—dancing—and the demonstration by the older males nurtures a child's growth; the positive energy stays with the children. The sharing and caring is stored in their implicit memory. The love that is created is light, our actions, being shown to the world. Helen Steiner Rice reiterates those sentiments in her poem. She states, "The meaning of true love: it is sharing and caring, giving and forgiving, loving and being loved, walking hand-in-hand…For love that is being shared is a beautiful thing. It enriches the soul and makes the heart sing" (inspirational card, 2008). The people are focusing on much more than what can be seen.

I am watching this ceremony and I see what Seeds and Backman (2013) describe: "atoms that collide may form bonds with each other by exchanging or sharing electrons. Two or more

atoms bonded together form a molecule" (p. 128). The energy they are creating—the binding energy—is a ceremony to give thanks and honour our spirit helpers; also, it is to merge the physical and spiritual realm—creating awareness and an esoteric oneness. The knowing is in our souls; it is the feeling. The ceremony shows our gratitude and appreciation for all life, and it is a call for wisdom and guidance.

I like what Bertrand Russell (1912) said: "Philosophy…has at least the power of asking questions which increase the interest of the world, and show the strangeness and wonder lying just below the surface even in the commonest things of daily life" (cited in Pojman, 2003, p. 8) His view is consistent with that of my ancestors: the world is made up of energy. Underneath the illusions, there is life—something that is beautiful, spiritual, wonderful, and miraculous. Seeds and Backman (2013) state, "Now you can consider a common misconception." Most people, without thinking about it much, imagine that matter is solid, but you have seen that atoms are mostly empty space. The chair you sit on, the floor you walk on, are mostly not there" (p. 128). They, the matter, are particles of light that make up this universe. Seeds & Backman (2013) also state "Light has both wavelength and particle-like properties, and how it behaves depends partly on how you treat it….Radiation refers to anything that radiates from a source" (p. 101). The singers and dancers are exciting those tiny atoms of the participants and filling that empty space. According to Seeds and Backman, (2013), "Electromagnetic radiation can act as a wave phenomenon—that is, it is associated with a periodically repeating disturbance, a wave, which carries energy" (p. 101). The light generated— interweaving strands—is connecting people to the web of life.

What I saw at the powwow was one voice, one nation, conjoined—moving forward. They were fusing their energy and weaving the web of life, constantly enlightening the spirit within.

Woodrow (2013) states, “No point in looking at individual knots in a fishing net. It is the strings between the knots that make the whole function” (PowerPoint, 2013). The people were reaching out and teaching the young about togetherness. I saw a raging fire: the flames flickering, dancing, and prancing—light chasing away and illuminating the darkness—in all directions, but still a part of a merging flame. Wilson (2008) states, “Constructivism takes the ontology of a fluid reality one step further in the belief that there is not merely one fluid reality, but many realities specific to the people and locations that hold them. Reality then is what you make it to be” (p. 37). The people are using this avenue—the powwow—to find out who they really are, their true selves. Our ancestors, the light, live inside of us all. Teaching the young about who they are is giving them their identity, instilling pride and integrity. When they learn their history, they will remember who they are and it will give them direction, wisdom, and guidance. The people were awakening an inner-desire that sought fulfillment. Seeds & Backman (2013) state, “An atom is mostly empty space” (p. 127). An Elder, George Thunder, once told me that when you pray you are asking for energy. So, with praying—giving thanks—we are asking to fill that space with awesome energy, love-energy.

I reiterate the sentiment that the world is made up of energy, and the Native people knew how to utilize it to the best of their ability; they live and experience that life of caring, sharing, and loving life unconditionally. Their actions and focus spoke those views, and every one of them was a leader in their own way. When they prayed to the four cardinal directions, they were praying to the Grandfather, Grandmother Spirits because each spirit holds a special, different unique element. The people called upon them for wisdom and guidance to help strengthen the circle. One time, I heard a wise Elder say when we focus on something we give it energy. When

we are kind to others we are giving energy to those people. Values convert to energy, and energy is psychological needs fulfilling; people need to feel included, to be a part of something.

In fusion, smaller atomic nuclei fuse to combine and form more massive nuclei. Seeds and Backman (2013) state, "The molecules and atoms in any object are in constant motion, and in a hot object they are more agitated than in a cool object. You can refer to this agitation as thermal energy" (p. 131). Through their singing and dancing, they were connecting and enhancing their relationships on both physical and spiritual levels. Wilson (2008) says, "The interaction between the investigator [individual explorers] and the subjects [singers and dancers] is the key to this epistemology, with reality made up of socially constructed concepts that are shared. The goal is a coming together between researcher and subjects to create a mutual reality and to find common meaning in the natural world" (p. 37). In this atmosphere, the people are, mutually, illuminating the circle of life. Their presence and participation builds relationships, balancing heart and mind.

I often hear from my Elders that the children are our future; the next generation will carry on our traditions and lead—unifying all people. When I was observing the men's traditional dance, I saw a child, not much older than five years old, dancing and copying the men. The people did not try to move him off the floor because the men, and the rest of the people, wanted that child to learn on his own accord, to make his own choice. This is our way of passing on traditional knowledge; the old ones show how things are done, and the younger generation are left to figure things out for themselves. In this way, the young are free to develop their own individual expression, but in a structured manner that conforms to the sacredness of the whole. In this sense, there is one difference between an Elder and an instructor: an instructor gives you all the materials and an Elder will only show or tell you a teaching, one time.

While watching all the people on the gym floor, I saw the circle of life illuminate those individual cells—bringing light to the world. Governor General David Johnston (2011) stated, "History shows that advancement comes from rich and intense collaboration…The candle represents enlightenment. When you light your candle from my candle, my candle is not diminished, it is enhanced" (guest speaker at Yukon College). I saw the people enlightening and sharing their traditions with the world to help others elevate their lives. It was like what Wilson (2008) stated, "knowledge …is not seen as the ultimate goal, rather the goal is the change that this knowledge may help to bring about….[R]esearch is not seen as worthy or ethical if it does not help to improve the reality of the research participants" (p. 37). The passing, and learning of their own accord, of knowledge helps empower their intrinsic ability to sustain positive growth.

An old friend told me that there are two things needed for wisdom—experience and teachings. Experience without teachings is a life of chaos, and teachings without experience are just words. These two concepts cupped together make for wisdom. And, as I was watching the performers, I saw them providing teachings to all people and the choice being given to the people was theirs to make if they wanted to experience and open up to the light, the love. And, this (2013) "flows from tribal knowledge. Information gained through *relationship—with* people in a specific place, *with* traditional understanding and culture, *with* the source of the research information, and *with* people who tell the story that provides information" (Woodrow, PowerPoint).

At the powwow, some people may think it is just singing and dancing, but some see it differently, as philosopher Bertrand Russell (1912) states: "The one thing we know about it is that it is not what it seems" (as cited in The Theory of knowledge, p. 8). The performances are, on a much deeper level, a way to pass on an ancient custom. Wilson (2008) states, "It is a

ceremony for improving your relationship with an idea. It takes place every day and has taken place throughout our history" (p. 110). The ideas enhance and enrich one's own perspective on his or her relationship with one's self, with one's environment, and with the universe. They teach about the circle of life. While watching the people, I saw them representing a symbol—a symbol of the Creator. The circle, which is a symbol of creation, is also symbolic of who we are as a people. I learned the Creator resides in me and all other life. The performers, and the light they teach about, represent the love-energy from the Great Spirit. They show how to live and behave accordingly to the Creator's law.

The Indian, Indigenous, Native ways of knowing come from the same source, the heart, and it is not opaque but common sense—a way to live, a relationship with all life. Wilson (2008) iterates, "Reality is not an object but a process of relationships, and an Indigenous ontology is actually the equivalent of Indigenous epistemology" (Wilson, p. 73). This shared reality is an outlook to build and strengthen relationships. Woodrow (2008) reiterates Wilson's view: In Indigenous "epistemology … the relationship with something (a person, object or idea) is more important than the thing itself" (p. 73). The people understood the importance of relaying essential *life-giving* information; they did that to keep the circle strong.

It takes a community to raise a child, and starts with the elders. They are the experienced ones; the knowledge they possess has been passed down from generation to generation. The knowledge continues to trickle down to their children, nieces, nephews, and then the grandchildren. The Indigenous knowledge-experiential approach differs from a Western knowledge system. I think the only thing complex about an Indigenous approach is whatever teaching a person is presented with is that he or she has to figure the problem out on his or her own, but it has to function, in accordance, with the holistic concept: living. The young were

taught, whatever it may be, only once so they could develop, through practice, their own skills—learning through trial and error and to think for themselves. The children were given guidance, but only to a certain point; in this way, patience, and other intrinsic life-sustaining skills were cultivated in the child. All, mostly, were that of a hands-on approach which was contrary to Western systems of knowledge.

Indigenous people have always performed ceremony to honour and give thanks for being a part of something that is really, really great: life. Their ways of knowing and being are inherent; they live life from the heart. And it is legitimized by the fact that Native epistemology has survived—passed down—from time immemorial. This recognition by dominant Western systems of knowledge has only been recent. They are integrating Indigenous concepts, curriculum, and activities into the mainstream educational system. Thompson Rivers University and many other universities are setting precedents by incorporating an ancient knowledge system. They are slowly starting to understand that ceremony—the Tiny Tots' Powwow—is the circle of life. That everything a person needs to learn to know is in the Circle. The participants at the Powwow were demonstrating the Creator's way of life—giving light to the world by singing, dancing and filling the empty space. The Powwow is another way of Native Epistemology; it teaches the participants and helps balance the four aspects of their being—simultaneously exciting the atoms of the mental, the emotional, the physical, and the spiritual—helping them grow and love. "When you are more loving, the more intelligent you become" (Keisha Crowther, 2010). The fusing of relationships, of ideas, of knowledge, and of ontology presents a Native way of life. In retrospect, the legitimacy of holistically living has been passed down through ceremony, story, and language; it is a natural way of life.

References

Pojman, L.P. (2003). The theory of knowledge: Classical and contemporary readings. (3rd ed.). Wadsworth, Cengage Learning. Belmont, CA.

Seeds, M.A. & Backman, D. E. (2013). Stars and galaxies (8th ed.). Brooks/Cole, Cengage Learning. Boston, MA.

Wilson, S. (2008). Research is ceremony: Indigenous research methods. Fernwood Publishing. Black Point, Nova Scotia.

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