

Arbor



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Arbor

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Letters from the President and Editor



Readers,

Arbor is meant to serve as a journal which seeks to place the joy of learning at its forefront, a necessary undertaking which I hope will alleviate the intimidating standards associated with published academia.

I speak for the entirety of ASSU in saying that with *Arbor*, we hope that students whose works are featured know that dedication at the University of Toronto culminates into opportunities to share, learn, and appreciate the ideas and expertise that have been voiced. I especially hope that you, the reader, will see the merit ingrained within each of these pieces, and gain a newfound understanding of the breadth of arts and science research that occurs right here on our campus.

I find that the greatest problem we have yet to solve with *Arbor* is having to eventually, and sadly, include the back cover.

Sincerely,

Ikran Jama
President, Arts and Science Students' Union



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Readers,

I am excited to present to you the inaugural volume of *Arbor*, a new multidisciplinary journal for undergraduate arts and science research at the University of Toronto. Since its inception by the Arts and Science Students' Union, *Arbor* has set out to showcase the work of undergraduate students at one of the most distinguished research universities in the world. The University of Toronto is a premier venue for conversations about arts and science research and *Arbor* hopes to celebrate the research talent of the university's undergraduate students through an annual issue featuring the best from the social sciences, humanities, and sciences (life and physical). Concurrently, *Arbor* seeks to provide the unique opportunity for undergraduate arts and science students to publish their research and expertise regardless of particular discipline.

In this first volume, you will find a breadth of representation from different programs, topics, and approaches to research, ranging from discourse analysis to controlled experiments. Many of the articles published challenge conventional narratives, uncover new insights, promote possibilities for future research, and tackle timely topics - such as Canada's immigration policies and the disastrous effects of climate change on human health. I invite readers to think critically as you go along the pages and encourage you to read an article you normally wouldn't. By the end, I hope you feel inspired to join the conversation surrounding arts and science research on our campus.

Enjoy,

Foti Vito
Editor-in-Chief, *Arbor*
Executive, Arts and Science Students' Union

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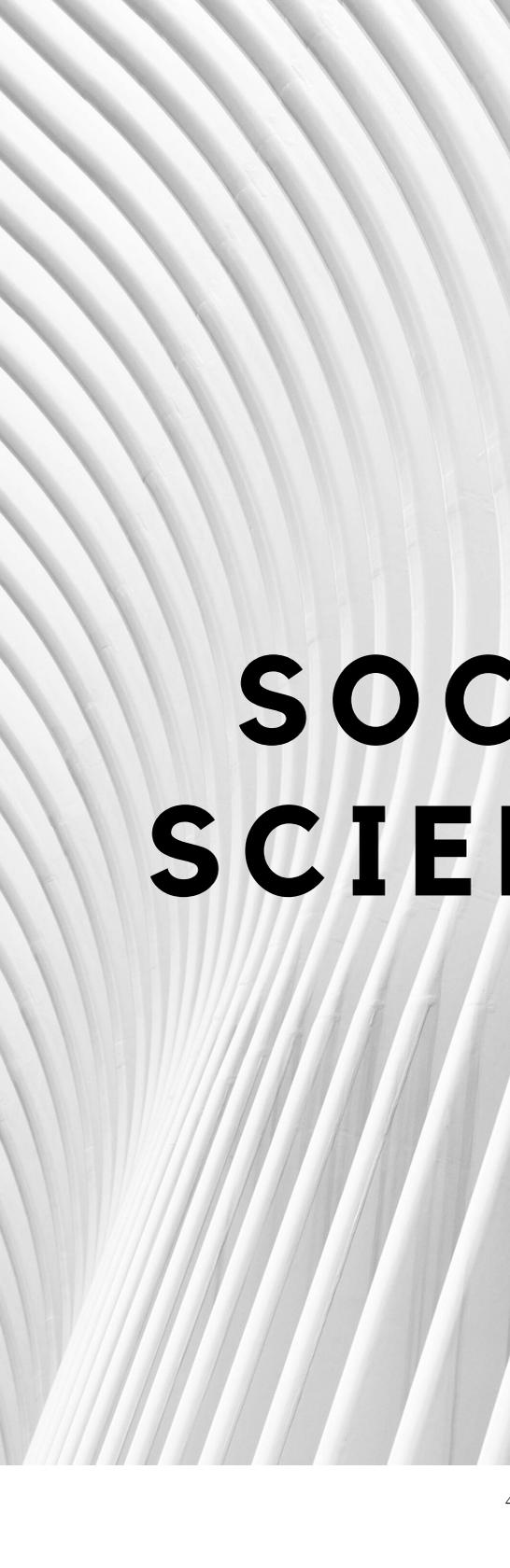
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SOCIAL SCIENCES

The Inherent Tensions between International Humanitarian Law and Cyberspace Operations

Venus Wang is a recently graduated Peace, Conflict & Justice Studies and Criminology & Sociolegal Studies student.

In 2010, Mike McConnell, former Director of National Intelligence, told Congress that cyberwarfare “rivals nuclear weapons in terms of seriousness” (May, 2017). Disruptive cyber operations have become an indispensable part of 21st century armed conflict (Kilovaty, 2016, p. 116), and their increasing proliferation is cause for concern considering there is much debate regarding how international humanitarian law (IHL) should be applied to them (Swanson, 2010, p. 316). While scholars agree that IHL ought to extend to cyberspace, there is no state consensus nor sufficient state practice regarding IHL’s actual application towards cyberspace operations (Beard, 2014, p. 75). IHL governs state actions by using a predictive framework – states are to weigh, for example, the military advantage that they predict to be gained from an attack against the projected civilian casualties and damage to civilian infrastructure (Beard, 2014, p. 78). This paper submits that this effects based analysis is fundamentally incompatible with the nature of cyber operations, which leads to IHL’s seeming inability to govern cyberspace effectively and consistently, and which opens the aforementioned debate for scholars and policy-makers alike as to how best to apply IHL in cyberspace in a way that fulfills its foremost purpose of shielding civilians from hostilities. Specifically, this paper will first establish that IHL guides state action through an effects-based approach. Second, the effects-based approach will be examined vis-à-vis the nature of cyber operations. Their incompatibilities will be underscored and are demonstrated to be obstacles to realizing the principal purpose of IHL. Lastly, though largely out of the scope of this paper, some directions on where IHL can be improved to mitigate the incompatibilities will be explored.

It is worthwhile to briefly conceptualize cyberspace operations, since the term itself can be quite nebulous. First, denial-of-service programs flood systems with requests such that it renders said system unusable (McDowell, 2009). This can range from a minor annoyance to a persistent threat when deployed in conjunction with kinetic military operations by shutting down essential services (Pool, 2013, p 301).

Second, malicious programming accesses a user's computer to corrupt data. There are many variations of this, including programming that lies dormant until activated by the user, or ones which changes its computer code each time it replicates in another computer, rendering such attacks incredibly difficult to catch (Cyberspace Operations, USA Armed Forces). Third, cyber espionage targets retrieval of information, and IHL's applicability to this particular kind of cyber operation is debatable (Pool, 2013, p. 306). It is undoubtedly a violation of sovereignty, yet that does not seem sufficient on its own to be considered under IHL frameworks. In general, there is a lack of clarity amongst states regarding what constitutes a cyberattack subject to IHL (Pool, 2013, p. 322).

There are a number of important limitations to the scope of this thesis. First, while this paper attempts to use concrete examples where possible, the unfortunate reality is that most cyber operations have not been able to be attributed to states, which means their pertinence to IHL and international law at large is questionable (Beard, 2014, p. 76). Moreover, this paper focuses exclusively on the international armed conflicts realm of IHL, since it is hard to discern whether non-international cyber operations fall under the purview international law as opposed to domestic criminal law (Droege, 2012, p. 549). Finally, although how *jus ad bellum* ought to apply to cyberattacks is important, it is ultimately outside the scope of this article. *Jus in bello*, or international humanitarian law, is independent from *jus ad bellum* because their conflation renders it difficult for IHL to protect civilian lives (Blanck, 2011, p. 735): a "just" cause does not mean all action taken in armed conflict is legal, just as an "unjust" cause does not mean all action taken in armed conflict is illegal (Blanck, 2011, p. 708). In order for IHL to fulfill its mandate, it must thus be applied every time, and as consistently and apolitically as possible in order to retain its legitimacy (Moussa, 2008, p. 968). For that reason, despite *jus ad bellum* being theoretically and ideally applied to attacks prior to *jus in bello*, the focus on cyberattacks for this paper will discuss *jus in bello* exclusively.

IHL as an Effects-Based Approach

The effects-based approach is inherent as the starting point of IHL analysis: when it is determined whether IHL can be applied to a conflict at all (Swanson, 2010, p. 317; Chang, 2017, p. 31; Beard, 2014, p. 108). There are multiple thresholds to be met before IHL application is triggered, and each threshold relies on the predicted effects tied to the

military action. The first step in determining whether IHL applies is that the situation in question must constitute an armed conflict. Common Article 2 of the Geneva Conventions dictates that "[T]he present Convention shall apply to all cases of declared war or of any other *armed conflict* which may arise between two or more of the High Contracting Parties, even if the state of war is not recognized by one of them." (Swanson, 2010, p. 313; Chang, 2017, p. 30). Similar terminology around "armed conflict" and "armed forces" applies to IHL in NIAC. Thus, in order for IHL to govern, the situation must first be deemed as an armed attack. (Swanson, 2010, p. 313). The exact threshold which constitutes armed conflict, however, is not defined in any treaties (Droege, 2012, p. 543), but was clarified in the *Tadic case*, which decided that "An armed conflict exists wherever there is resort to armed force between states or protracted armed violence between government authorities and organised armed groups or between such groups with a state." (Voitasec, 2015, p. 128). The notion that "Armed forces" is a criterion for "armed conflict" is reflected in both Additional Protocol 1 and 2 as well (Schmitt, 2002, p. 372). Yet it is generally agreed that the existence of armed forces cannot be the sole indicator, and this is where the consequence-based approach is directly relevant. It would be outrageous to categorize an "accidental border incursion" by armed forces an armed conflict – there exists at least some threshold of intensity or duration even if not explicitly written into IHL. That threshold, though never explicitly defined, can be extrapolated by reading into the object and purpose of IHL in order to clarify the ambiguity (Swanson, 2010, p. 314; Schmitt, 2002, p. 372). IHL aims to protect people who are outside of the conflict or are no longer participating in active hostilities, and this protection is framed in terms of "death, injury, damage, or destruction." That is, the definition of armed conflict, which is necessary in order to discern whether a situation triggers the application of IHL, is heavily reliant upon a set of consequences that must have occurred or be foreseeable by the states in order for it to meet its appropriate threshold.

The second part of determining whether IHL applies is in determining whether a situation within an armed conflict constitutes an attack (Kilovaty, 2014, p. 117), which is defined in Article 49(1) of the Additional Protocol 1 as "acts of violence against the adversary, whether in offence or in defence," which is also an effects based approach (Chang, 2017, p. 34). The International Court of Justice affirmed that if the dictionary definitions suffice and that ambiguities are to be resolved

through returning the object and purpose of the treaty: in this case, the term “violence” in the Oxford Dictionary is physical in character (Kilovaty, 2016, p. 128). The ICRC, one of the foremost authorities with regards to IHL takes the stance that “attack” denotes “combat action” and excludes psychological, economical, or political means of warfare (Chang, 2017, p. 34). However, where the means of attack are ambiguous in regard to their physical force, IHL resorts to governing them based on their consequences (Chang, 2017, p. 34). This was clarified in the *Nicaragua* case, in which the ICJ said that an armed attack would be judged under a “scale and effects” test (Pool, 2013, p. 311). For example, the use of biological or chemical weapons constitutes an attack not because they are physical in nature but because their consequences rise to a threshold of physical violence. Lethal cyber operations are similarly non-physical means of attack yet governed by IHL and are analyzed in a consequentialist framework *because* they are not kinetic in nature – otherwise, the existence of physical force or the use of armed forces would be sufficient to triggering IHL application.

The Effects-Based Approach and Cyber Operations

An approach anchored by analysis of predicted effects is problematic with regards to cyberattacks for three key reasons. First, “injury, death, damage, or destruction” is extremely vague on its own, but this is exacerbated significantly by the fact that the effects of cyber operations are hard to measure and predict. Second, the actual consequences of cyberattacks are too far removed to consider a consequence-based approach. Third, a consequence-based approach assumes that the consequences would be made known, which constitutes the primary mechanism for accountability and enforcement for states who violate such norms. This is often not the case with cyber operations.

On the first, the consequences described in IHL thresholds, which are essential to its applicability in international law, are extremely vague. Assessing whether the damage from an attack meets a threshold is one of the key considerations of whether or not an attack complies with IHL under the principle of proportionality: cyberspace is unique in that the damage incurred by an attack is extremely hard to quantify (Kilovaty, 2016, p. 122). This has two primary outcomes. At worst, its ambiguity with regards to the thresholds of attack render it a pawn of manipulation for states to skirt responsibility under IHL. It purports to be a threshold mechanism yet clarifies very little, and for that reason

states can set their own definitions according to their agendas to determine which actions are and are not under IHL's purview. At best, the excessive ambiguity renders the entire "threshold" meaningless altogether. To demonstrate, one scholar says of Russia's cyberattacks on Georgia in 2008: "[it] did not result in the kinds of consequences necessary to rise to the level of an armed conflict...An argument could be made, perhaps, that damage or destruction was done to Georgian property, even if death or injury did not occur. Nevertheless, because it appears that the main results of the Georgian attacks were confusion and inconvenience, the attacks were thus permissible" (Swanson, 2010, p. 323).

Second, often the true effects of cyberattacks are often too distant the attack to be considered in the consequence-based approach. IHL mandates that the consequences, in order to be attributable to the attack, must have a direct link of causation or otherwise be reasonably foreseeable (Chang, 2017, p. 51). There are two key characterizations of this. First, the dual-use nature of many cyber infrastructures in that they serve both civilian and military purposes, in a way that a cyberattacks effects on civilians are uniquely complicated in cyberspace (Geib & Lahmann, 2012, p. 381). That is, cyberattacks are more likely to have indirect yet foreseeable effects that harm civilians or civilian infrastructure. For example, the Stuxnet malware, though engineered to damage Iranian nuclear infrastructure, affected civilian banks outside of Iran (Chang, 2017, p. 45). However, the lack of consistency in state practice on deciding how this dual-use issue affects proportionality calculus, in addition to the challenge of attributing cyberattacks to specific states at all, means that there is ample space for states to avoid responsibility for illegal damage in a consequence-based analysis because the damage caused to civilians is more removed from the attack than traditional IHL considers. Second, because the target in cyberattacks is often information itself (Beard, 2014, p. 73), how the state acts upon the information from a cyberattack is arguably too far removed to be considered under IHL, even if it may cause harm to civilians. Consider, for example, China's cyber-espionage of computers in Dharamsala, India, where the Dalai Lama and the Tibet Independence movement is based has resulted in the imprisonment of human rights activists within China (Glaister, 2009). The cyberattacks are international in nature but targeting information under the status quo does not meet the legal

threshold for IHL application (Beard, 2014, p. 126) despite it resulting in danger to civilians.

Third, the very purpose of cyber operations is sometimes to remain undetected. This means that a consequence-based approach is fundamentally incapable of governing such attack at, especially given the issues of attribution and legal maneuvering which are unavoidable in cyberspace. In 2015, sensitive information of over 20 million Americans was stolen from a US governmental agency (May, 2017). The leading suspect was China – yet an effects-based model is nearly meaningless to apply *ex post facto* in this type of situation and undermines the type of pre-emptive analysis that lies at IHL's core: IHL must be considered *before* an attack is initiated in order to protect civilians. Theoretically, there seems to be more recourse in IHL if the perpetrating state is carrying out a protracted cyberespionage mission to spy on governments and civilians more generally, as opposed to finding specific information, but this is purely speculative insofar as these cases are few, and where we do know of cyberespionage it has not been positively attributed to a state.

Many of the above incompatibilities seem not to be exclusive to cyber operations. For example, biological warfare can produce a number of second order attacks and may be carried out in isolation, where IHL can similarly only offer recourse after the fact. There are two key reasons why cyber operations are unique *vis-à-vis* other means of warfare, which also seem to escape effects-based thresholds. First, because IHL expressly issues a blanket ban on the use of biological weapons, states are reliably deterred; they are aware in advance of the attack of the consequences should they employ such weapons, and IHL thus fulfills its purpose of protecting civilians. Second, there is also almost no way for biological weapons to not violate principles of distinction and proportionality, hence their blanket prohibition to begin with. On the other hand, IHL application to cyber operations is not concrete, clear, or consistent enough to achieve the deterrence effects of a blanket ban, nor is a blanket ban desirable. Cyber operations range widely with regards to their targets, their intensity, and their duration, such that some cyber operations are legitimate in IHL. In order for IHL to achieve maximum adherence and legitimacy, it must be reasonable and reflect the realities of conflict. Thus, it has an incentive to not be overbroad in reach: cyberwars are an inevitable and inextricable part of 21st century conflicts and beyond (Pool, 2013, p. 300). On the second, the programmability and customization of cyber weapons means that with the right incentive

structure, states should be fully able to comply with IHL in cyber operations in a way that does not violate the principles of distinction and proportionality. In fact, some scholars have argued that cyber operations may be safer and thus preferable because they can be programmed to be so (Rid, 2017). For instance, had there been insufficient cyber capabilities, the US and Israel may have resorted to bombing the Natanz nuclear facility in place of Stuxnet, which probably would have resulted in more civilian injury and death (Pool, 2013, p. 315).

The main thrust of this paper is not that IHL should not apply to cyber operations, nor that IHL is wholesale incapable of doing so. In fact, the principles of proportionality and distinction are paramount in conflict. IHL provisions also inherently account for the evolution of technology and expressly includes its applicability of developments in war that are not otherwise considered in the provisions. The Martens Clause in IHL, which is a part of customary international law provides that whenever a specific situation is not explicitly delineated in the Convention that “civilians and combatants remain under the protection and authority of the principles of international law derived from established custom, from the principles of humanity, and from the dictates of public conscience” (Schmitt, 2002, p. 369). Furthermore, Article 36 of Additional Protocol outlines the High Contracting Party’s obligation to determine whether the employment of a *new* weapon would, “in some or all circumstances, be prohibited by this protocol or by any other rule of international law” (Voitasec, 2015, p.130). Scholars agree that IHL ought to extend to cyber operations; *how* it is and should be applied for maximum efficacy is the crux of the debate (Kelsey, 2008, p. 1430). The main point of this paper is to show that issues of applying IHL to cyber operations thus far has roots beyond the traditional problems tied to state behavior in cyberspace, such as the lack of attribution or the lack of enforcement mechanisms. Rather, the consequences-based approach which lies at the heart of determining IHL applicability is incompatible with the nature of cyber operations themselves, or at the very least, ill-fitting such that states can maneuver around them.

The Future of IHL

While outside the scope of this paper, it is worthwhile to briefly discuss the theoretical direction that international laws governing cyberspace could take. States engaging in cyber operations need an

incentive structure which focuses on the means of the attack instead of the outcomes. That is, the permissibility of the use of a cyber weapon, or the threshold that determines its ability to be used, should not be grounded in the predicted physical effects of the attack to be deployed, but rather within the act itself. For example, there should be guidelines for states focusing upon the development process of cyber weapons to ensure that they comply with IHL obligations, as opposed to using the analysis of predicted outcomes currently used by states in traditional operations. The evolution of IHL should also accommodate not just for the variance in cyber weapons but for their extraordinary programmability and customization (Kelsey, 2008, p. 1447).

Of course, there exist issues fundamental to cyber operations that are, for now, unavoidable: the dual-use nature of cyber infrastructure to serve both civilian and military purposes (Geib & Lahmann, 2012, p. 381), the difficulty of tracing origins of cyber operations to a state (Droege, 2012, p. 543), or tying individuals as acting behalf of a state (Beard, 2014, p. 84), the inability of investigators in the victim state to access information transnationally (Greenberg et al., 1998). The goal of the adjustment is ultimately to make IHL more consistently and predictively applicable to the wide range of cyber operations and cyber target, such that states who employ such weapons can use IHL to weigh proportionality and distinction before the operation and know they will be held to account for violating IHL provisions. IHL functions because states know what they can and cannot do under the framework before the act is deployed (Pool, 2013, p. 313): cyber operations complicate that equation, and thus, is arguably subject to abuse.

Conclusion

In sum, while IHL's seeming inability to consistently apply to cyberattacks stems in part from the inherent qualities of cyberspace in general, it also stems from the interactions between how IHL has been conceptualized and how cyberspace functions. Despite difficulties, there is still scholarly agreement that IHL ought to apply to cyberspace (Beard, 2014, p. 70), but IHL's core assumptions should be reassessed with respect to cyberspace to reconcile the incompatibilities. Insofar as cyber operations are becoming increasingly employed in conflicts and beyond (Kilovaty, 2016, p. 116), these legal questions must be clarified.

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The Responsibility to Protect When Convenient? Security Council Inconsistency and the Case for Judicial Authorization

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In 2001, the International Commission on Intervention and State Sovereignty (ICISS) released a report arguing that in cases of grave humanitarian concern, “the principle of non-intervention yields to the international responsibility to protect.”¹ Seventeen years later, this idea of the “Responsibility to Protect” (R2P) remains a controversial norm that has been cited in memorable contexts, but also debated by many and frequently ignored. This paper contends that the effective application of the R2P doctrine has been limited by the exclusive authority of the United Nations Security Council (UNSC) to authorize appropriate action. It specifically argues that the delegation of authority to a great-power political body has resulted in inconsistent application of the doctrine. Based on relevant literature as well as state practice, the paper identifies three possible solutions to address the problematic nature of exclusive UNSC authority. It ultimately endorses the third option- Dr. Aidan Hehir’s proposal that international judges should have the authority to sanction R2P-based humanitarian intervention.

Background: What Exactly is the Responsibility to Protect Doctrine?

One must distinguish between the original R2P doctrine, outlined in the 2001 ICISS report, and what political scientist Thomas Weiss calls “R2P lite.” The latter refers to the version adopted by the UN General Assembly (UNGA) in 2005. It is viewed as watered down because it only permits R2P-based intervention if approved by the UNSC.² This stands in contrast to the original ICISS report, which allowed for potential General Assembly action (under “Uniting for Peace” resolution) while also contending that “concerned states may not

¹ International Development Research Centre, *The Responsibility to Protect Report of the International Commission on Intervention and State Sovereignty* (Ottawa: International Commission on Intervention and State Sovereignty, 2001), XI.

² See, [Jon Western](#) and [Joshua S. Goldstein](#), “R2P After Syria: To Save the Doctrine, Forget Regime Change,” *Foreign Affairs*, March 2013.

rule out other means” in the case of UNSC paralysis.³ For the purpose of this paper, the R2P doctrine refers to the 2005, UN-approved conception, since this version achieved international consensus and is more in line with international law.

It is also worth noting that this paper defines ‘effective application’ of R2P as consistent UNSC-authorized intervention in situations where one or more of the four R2P humanitarian criteria (war crimes, ethnic cleansing, genocide, crimes against humanity) are evident. As Robert Pape has argued, the success of R2P should not be measured based on rhetorical popularity or the number of UN references to the concept, but rather on the consistency of armed intervention to save lives when R2P-standards demand it.⁴ While some might argue that ‘effective application’ should also consider factors such as subsequent rebuilding efforts, the fact remains that the fundamental issue of sanctioning intervention in the first place remains so rare and controversial that such authorization remains the most basic marker of success.

The Responsibility to Protect When Convenient? Inconsistency as Ineffectiveness

The nature of the UNSC as a great-power dominated political body has led to inconsistent application of the R2P doctrine. Following this logic, the national interests or even indifference of the permanent-five (P-5) members prevent intervention in cases where it is necessary. Such a theory is not difficult to confirm based on state practice. According to Stephen Marks and Nicholas Cooper, there were at least eight examples of humanitarian crises between 2005 and 2010 where R2P was not applied despite appropriate circumstances.⁵ Considering the recent case of Syria, Russia serves as an example of a permanent member that will veto humanitarian intervention based on a strategic interest in supporting an ally and protecting geopolitical influence.⁶ The Rohingya crisis in Myanmar provides another contemporary example. While governments such as Canada have condemned genocide, UN

³ ICISS, *The Responsibility to Protect Report*, XIII.

⁴ Gareth Evans & Ramesh Thakur, Robert Pape (2013) “Correspondence: Humanitarian and the Responsibility to Protect,” *International Security*, 37: 4 (Spring 2013), 211.

⁵ Stephen P. Marks & Nicholas Cooper, “The Responsibility to Protect: Watershed or Old Wine in a New Bottle?” *Jindal Global Law Review* 2:1 (2010), 122.

⁶ See, [Jon Western](#) and [Joshua S. Goldstein](#), “Humanitarian Intervention Comes of Age: Lessons from Somalia to Libya,” *Foreign Affairs* (November/December 2011).

intervention based on R2P is inconceivable.⁷ One finds it hard to imagine support for intervention from the United States, in the era of “America first,” not to mention from China. The latter is the regional power with an interest in positive relations with Myanmar, historic support for non-intervention, and its own history of discriminating against Muslims.⁸ As these brief examples should make clear, Hehir is correct to observe that the UNSC maintains the “discretionary right to intervene which is totally dependent on the interests of the P5.”⁹ In this context, it is no surprise that the R2P doctrine has been applied inconsistently, and thus ineffectively. While President Obama claimed that inaction in Libya (in 2011) would have undermined the credibility of the UNSC, there is ultimately no shortage of cases where the Council has killed its’ credibility as an actor that can effectively exercise the international community’s responsibility to protect.

The nature of the UNSC as an inconsistent actor is ironically further strengthened by occasions when R2P-based intervention *has* taken place. In the 2011 cases of Libya and Ivory Coast, typically viewed as the primary examples of coercive UNSC measures based on R2P, specific political circumstances allowed interventions.¹⁰ This reinforces the contention that R2P has only been in applied in selective cases based on the political calculations of five countries.

In both cases, factors such as broad international opposition to the domestic government and a lack of competing great power interests facilitated the consensus needed for UNSC authorization.¹¹ Perhaps the most significant circumstance that enabled the use of force, however, was regional support. In Libya, Russian and Chinese abstentions on

⁷ See, for example, Amanda Connolly, “House of Commons unanimously votes to call Myanmar Rohingya killings a genocide,” *Global News*, September 20, 2018, <https://globalnews.ca/news/4470455/canada-declares-myanmar-rohingya-genocide/> ;

⁸ See, Lyn Kuok, “While the World Sleeps, Myanmar Burns,” *Foreign Affairs*, September 28, 2017, <https://www.foreignaffairs.com/articles/burma-myanmar/2017-09-28/while-world-sleeps-myanmar-burns> ;

⁹ Aidan Hehir, *The Responsibility to Protect: Rhetoric, Reality and the Future of Humanitarian Intervention* (New York: Palgrave Macmillan, 2012), 259.

¹⁰ Evans, and Thakur, “Correspondence: Humanitarian and the Responsibility to Protect,” 204, “the reality is that Libya in 2011, and the less-noticed Côte d’Ivoire resolution at the same time, are the sole examples of coercive action being authorized by the United Nations under the rubric of R2P.”

¹¹ See, for example, Alex Bellamy and Paul Williams, “The new politics of protection? Côte d’Ivoire, Libya and the responsibility to protect,” *International Affairs* 87:4 (July 2011), 825; Hehir, *The Responsibility to Protect*, 16

Resolution 1973 have been attributed to their respect for the views of regional organizations such as the African Union and the Organization of Islam Cooperation. The Chinese Ambassador to the UN explicitly stated that while China generally opposes the use of force, it also “attaches great importance to the position of African countries and the AU.”¹² Alex Bellamy and Paul Williams have labeled this regional phenomenon “gatekeeping,” and have demonstrated its applicability to the Ivory Coast as well.¹³ In this case, UN officials and resolutions specifically referenced support from regional organizations to protect the democratically elected government as well as civilians threatened by the repressive existing leader.¹⁴ The Economic Community of West African States, for example, stated that it may be necessary to use force to address the crisis.¹⁵ In this light, the specific circumstances existing in Libya and Ivory Coast provide a further reminder that the R2P doctrine will only be applied in select cases when particular political factors either motivate the P-5 or dissuade them from objecting.

Before moving on, it is worth briefly explaining two additional, although less explicit, ways that these 2011 interventions shed light on the central idea of UNSC inconsistency. First, although Libya and Ivory Coast are frequently cited as major examples of R2P, the concept was not strongly and explicitly embraced in both cases. With respect to Libya, Jennifer Welsh has suggested that Resolution 1973 still demonstrates a lack of UNSC consensus regarding R2P, as it fails to explicitly note the international community’s “responsibility to protect” and does not portray the authorized action as a function of that responsibility.¹⁶ Explicit R2P language was similarly lacking in Resolution 1975

¹² See, Aidan Hehir, “The Permanence of Inconsistency: Libya, the Security Council, and the Responsibility to Protect,” *International Security* 38:1 (Summer 2013), 138, 153.

¹³ Bellamy and Williams, 839.

¹⁴ See, Bellamy and Williams, 832, 837; Marco Chow Oved, “In Côte d’Ivoire, a Model of Successful Intervention,” *The Atlantic*, June 9, 2011, <https://www.theatlantic.com/international/archive/2011/06/in-c-te-divoire-a-model-of-successful-intervention/240164/>

¹⁵ Bellamy and Williams, 837; Western and Goldstein, “Humanitarian Intervention Comes of Age,” *Foreign Affairs*, “Supporters of the action included not just the UN Security Council and Western governments but also the African Union, neighboring West African countries.”

¹⁶ See, Jennifer Welsh, “Civilian Protection in Libya: Putting Coercion and Controversy Back into RtoP,” *Ethics & International Affairs* 25:3 (2011), 1; Hehir, *The Responsibility to Protect*, 13.

concerning Ivory Coast.¹⁷ Furthermore, President Obama's address to the nation regarding Libya made no reference to R2P.¹⁸ The minimal attention given to R2P ultimately suggests that the P-5 were reluctant to fully accept the obligations of the doctrine, which is not a good sign for consistency moving forward.

Secondly, both interventions generated controversy regarding right intention and the "clear objectives" operational principle from the ICISS report.¹⁹ These concerns contributed to negative perceptions of the doctrine among certain countries, notably Russia, and therefore make it more difficult to achieve consensus in future situations involving R2P. In Libya, the fall of the Ghaddafi regime generated questions about R2P as a disguised form of regime change.²⁰ In Ivory Coast, as in Libya, Moscow argued that the intervening force inappropriately expanded its mandate.²¹ The UN caused additional concern by supporting Alassane Ouattara (as the winner of the November election in Ivory Coast) despite opposition from the country's Constitutional Council.²² In this light, controversy and disagreement among countries remain with respect to the R2P in practice. This will likely reinforce the existing problem of inconsistent UNSC action.

How do you Solve a Problem like Security Council Authority? Three Potential Options

The nature of the UNSC as a political body has prevented dependable, merit-based interventions and consequently harmed the

¹⁷ UN Security Council, *Security Council resolution 1975 (2011) [on targeted sanctions against individuals meeting the criteria set out in resolution 1572 (2004) on arms embargo against Côte d'Ivoire]*, 30 March 2011, S/RES/1975(2011).

¹⁸ See, The White House Office of the Press Secretary, "Remarks by the President in Address to the Nation on Libya," National Defense University, Washington DC, March 28, 2011, <https://obamawhitehouse.archives.gov/the-press-office/2011/03/28/remarks-president-address-nation-libya>; Hehir, *The Responsibility to Protect*, 15.

¹⁹ ICISS, *The Responsibility to Protect Report*, XII-XIII.

²⁰ See, for example, Evans, and Thakur, "Correspondence: Humanitarian and the Responsibility to Protect," 206

²¹ Bellamy and Williams, 825-826; Kenneth Rapoza, "Russia and China Team Up Against NATO Libya Campaign," *Forbes*, June 17, 2011, <https://www.forbes.com/sites/kenrapoza/2011/06/17/russia-and-china-team-up-against-nato-libya-campaign/#248b13036ff1>

²² See, Bellamy and Williams, 835; United Nations Secretary-General, Press Release, "As Côte d'Ivoire Plunges into Violence, Secretary-General Says United Nations Undertakes Military Operation to Prevent Heavy Weapons Use against Civilians," SG/SM/13494- AFR/2157, April 4, 2011, <https://www.un.org/press/en/2011/sgsm13494.doc.htm>;

legitimacy of R2P as an effective doctrine. How can the international community overcome this fundamental problem in order to ensure that action is taken every time civilians face the horrific circumstances outlined by the ICISS? Based on relevant literature and state practice, this paper pinpoints three possible solutions to address the problem of exclusive UNSC authority.

Morality Trumps Legality: Abandon “R2P Lite”

The first potential solution involves ignoring the UNGA’s 2005 interpretation of R2P and returning to the original ICISS conception. As previously mentioned, the authors of R2P left open the issue of right authority, suggesting that states can undertake humanitarian intervention without UNSC approval. It is worth noting that countries such as the United Kingdom have appeared to embrace this logic. Following air strikes against chemical weapons targets in Syria, the government argued that in exceptional cases with “no practicable alternative to the use of force,” international law allows states “to take measures in order to alleviate overwhelming humanitarian suffering.”²³ While unilateral humanitarian action has been taken in the past, reframing R2P in this manner is unlikely to result in broad international support. It would undermine the authority of the UNSC, disregard international law, and spark fear of unilateral interventions based on false humanitarian pretenses. In this light, while abandoning R2P lite could theoretically allow states to act when the UNSC fails, it would make interventions even more controversial in terms of debates about authority and the specific intentions of states. This could spark conflicts between states and would make it difficult to establish consistent responses to humanitarian crises. Thus, it does not appear likely to appropriately address the ineffectiveness of the R2P doctrine.

Clarifying the Rules: Develop a P-5 Consensus

A second option is achieving P-5 consensus regarding humanitarian intervention. This involves agreeing on a code of conduct to ensure that intervention can be authorized when the R2P doctrine clearly applies to an international crisis. France has taken the lead in this realm.²⁴ In 2013, President Francois Hollande told the General Assembly that “in the event of a mass crime” the P-5 should “decide to collectively

²³ Government of the United Kingdom, Prime Minister’s Office, Policy paper: Syria action – UK government legal position, Published 14 April 2018.

²⁴ See, Alex Bellamy, “The Responsibility to Protect Turns Ten,” *Ethics and International Affairs* 29:2 (2015), 180.

renounce their veto powers.”²⁵ France subsequently proposed a code of conduct, which called for a suspension of the veto in cases where R2P-related crimes were evident. However, it failed to bring the other four members on board.²⁶ While such an agreement, if ever reached, would likely improve the consistency of R2P-based interventions by eliminating veto power, it would still not guarantee that the Council would initiate an R2P-based resolution in all appropriate cases. Therefore, it would be an incomplete solution to the issue of R2P ineffectiveness.

Keeping Politics Out of It: Allow International Judges to Authorize R2P Interventions

A third notable solution was recommended by Dr. Aidan Hehir in 2012. He proposes the creation of an international judicial body with the power to act when P-5 paralysis prevents a response to any of the four R2P crimes.²⁷ The body could authorize states to use force unilaterally, or if necessary, deploy forces from a standing UN army (created for instances when states are unwilling to volunteer troops).²⁸ Viewing the International Criminal Court structure as a model, Hehir suggests that judges would be elected by UN member states, and that the judicial body would be accountable to the General Assembly.²⁹ His call for reform appears to be the best way to address the problem of UNSC inconsistency. Such a judicial body would result in merit-based, as opposed to political, decision-making when it comes to humanitarian intervention. This would not only result in a more consistent application of the R2P doctrine, but could also contribute to weakening the controversy regarding R2P as an neo-colonial political idea.³⁰ While certainly an ambitious proposal, Hehir is correct to contend it would “preserve the basic ethos of sovereignty while enabling intervention in limited circumstances according to objective criteria and independent judgement.”³¹

²⁵ Jean-Baptiste Jeangène Vilmer, “The Responsibility Not to Veto,” *Global Governance: A Review of Multilateralism and International Organizations* 24:3 (2018), 5.

²⁶ Jeangène Vilmer, 9-10.

²⁷ See, Hehir, *The Responsibility to Protect*, 12.

²⁸ *Ibid.*, 232, 235.

²⁹ *Ibid.*, 235.

³⁰ For an example of this concern, see Evans, and Thakur, 202.

³¹ Hehir, *The Responsibility to Protect*, 264-65.

Conclusion

This paper has demonstrated how the UNSC has prevented dependable, merit-based humanitarian interventions and consequently harmed the legitimacy of R2P as an effective doctrine. The international community ultimately has to decide whether R2P will remain an idealistic doctrine that will be applied when convenient or become the binding humanitarian obligation that its authors envisioned. If they choose the latter, the Security Council should accept that its failure will be compensated by an independent judicial body with the power to determine when the R2P doctrine should trigger intervention. Only by acknowledging its own shortcomings and abandoning some power in favor of non-political decision-making will the Council truly fulfill its envisioned role as the body responsible for international peace and security.

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Linguistic Relativity in Legal Discourse

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The theory of linguistic relativity or Sapir-Whorf hypothesis can be applied to the legal discourse of the Canadian Charter of Rights and Freedoms to determine the significance of language as the framework to perception. Language acts as the underlying force, driving motivation, desires, and consciousness towards a certain direction, affecting how those familiar with these texts perceive basic concepts of everyday life. Linguistic relativism, or the Whorf hypothesis, as theorized by Edward Sapir and Benjamin Lee Whorf, refers to the phenomena of “a particular language [influencing] how its speakers classify, perceive, and understand the world” (Danesi, 2016: 162). The specifics in which a language is formulated, presented, and structured conveys meanings that unconsciously tailor readers to particular perspectives relevant to the social context. Linguistic relativism resonates with Labov’s theory that “language, thought, and culture are intrinsically intertwined – one depends on the other” (Labov, 2001), in turn suggesting that language simultaneously mirrors the needs of a society as well as informs society of its needs. The Canadian Charter not only influences the framework for formal legal matters, but also acts as the moral compass and foundation for our perception. The language both includes and excludes certain groups from legal protection and representation, while contributing to the overall tone of divine authority and hierarchy presented by the Charter. The Charter is structured beginning with concise personal individual rights and concluding with more intricate syntax to describe legal and enforcement matters, requiring the expertise from professionals.

Using discourse analysis as the primary methodology, particular attention will be drawn to the syntax, tone, literary devices, and terminology used in the Canadian Charter of Rights and Freedoms to examine how the linguistics correlate to how Canadian citizens perceive everyday life. The Canadian Charter is chosen as the main discourse due to its all-encompassing essence of institutionalized law. Examples from court cases will be analyzed in terms of how the Charter has affected their results, regulating our everyday lives at a bureaucratic level and outlining the implications of certain language structure. The court cases

will be used to provide intel to how both the defendant and judicial review regard the language of the Charter. The Charter will be examined in divisions of the sections of fundamental freedoms, equal rights, preamble, legal rights, and enforcement rights. Examining language at the institutional level and applying the principle of linguistic relativism to more ethnographic studies of everyday life provides insight to the structure and basis of society, as well as the potential effect that societal institutions has on personal life. This anthropologically studies the correlations between those of the society and individuals by combining language and interpretations of the civilization that follows it.

The Charter of Rights and Freedoms documents the basic rights and freedoms possessed by all Canadian citizens. This entails rights regarding fundamental freedoms, property, mobility, legal rights in circumstances of arrest, democratic rights, equality, languages, education, and enforcement as well as application of the rights as indicated in the Charter. Due to the Charter's focus on individual rights and behaviours deemed legally acceptable, it also acts as a moral compass and blueprint as to what is socially acceptable and virtuous in the current community. An example can be taken from section 2 of the Charter, which lays out the fundamental freedoms relating to identity and expression. The repetition of the word "freedom" emphasizes the characterization associated with the nation. Studying the Charter from a foreign perspective, one may be able to infer Canada as a country that values independence and liberty to express individual personality. There is a relation between the linguistic stress demonstrated in the primary document of the nation and the behaviours and values society views as the desired standard. According to Danesi, the relativity principle involves being "conditioned to believe that the concepts encoded by our language are natural and universal, not specific to our historical needs" (2016: 10), resonating in terms of the creation of the Charter following the independence of Canada from its status as a British colony. By retaining English law and adding the element of guaranteed rights, Canada establishes itself as an independent country, politically differing from Britain. The significance of liberty as a nation is mirrored onto how individuals should perceive themselves to be independent beings free to express and assume their desired identity. This perspective is shown in Cory J.A.'s statement, "the exchange of ideas is vital to a democratic form of government and to its citizens" (R. v. Andrews, [1990] 3 SCR 870, 1990) on the significance of freedom of expression as written in section

2 (b) of the Charter. Language of the Charter interprets the reality and history of Canada as well as subliminally influences the current reality into maintaining the image of autonomy. Majority of the sections begin with “every citizen of Canada has the right to” or “everyone has the following fundamental freedoms”, using tautology to emphasize the monological order of the inclusive atmosphere which is projected to the reality where equality is strived for, regardless of identity. There are no adjectives or pronouns used, disregarding personal attributes and haphazardly including everyone in the fundamental freedoms. Section 15 includes a particular list entailing the morality of not using one’s “race, national or ethnic origin, colour, religion, sex, age or mental or physical disability” (1982: section 15.1) to exclude individuals. Citizens are compelled to treat discrimination as a moral breach to society. Society is meant to not only view everyone as equals, but those who advocate and boost certain individuals to an equal standing are seen as enforcers of justice, especially since there is an invocation of sympathy with the words “disadvantaged” and “disability”, requiring particular assistance to gain equal status. The categories listed are used by readers as ways of potential division of society and socialization. Society is relatively conditioned by the moral connotation of treating the disadvantaged with particular care in terms of equality, as seen in the case of *Weatherall v. Canada (Attorney General)* 1993, where the appellant objected to cross-gender touching during a frisk search and insisted on a violation of section 15 of the Charter. The appellant argued for the inappropriateness of female guards touching male inmates when female inmates are not subjected to cross-gender frisk searches, however, was reputed, for “equality does not necessarily connote identical treatment and, in fact, different treatment may be called for in certain cases to promote equality” (*Weatherall v. Canada (Attorney General)*, [1993] 2 SCR 872, 1993). This logic derives from the language used in section 15 (1) of the Charter, encouraging specific care to provide equality for the disadvantaged, for “women generally occupy a disadvantaged position in society in relation to men” (*Weatherall v. Canada (Attorney General)*, [1993] 2 SCR 872, 1993), therefore, require an unequal treatment in order to balance the preexisting inequality.

Despite the ability for language to be inclusive, discourse can also be read as exclusive to certain groups. According to Goodrich, law as a linguistic register consists of “systematic appropriation and privileging of legally recognized meanings, accents, and connotations

(modes of inclusion), and its simultaneous rejection of alternative and competing meanings and accents...(modes of exclusion)” (1987: 3). In the attempt to account for all categories, section 15 controversially sets up a formal list using concrete language, setting boundaries as if these are the only categories legally guarded from discrimination. Sexual orientation is excluded from the list of prohibited grounds of discrimination, potentially allowing society to deem mistreatment of those differing from heterosexuality as morally acceptable. An example highlighting the detrimental impact of the choice and structure of language is the case of *Haig v. Canada*, 1991. The applicant Joshua Birch was a member of the Canadian Armed Forces but was denied promotions, postings, or further military career training upon announcing his homosexuality based on the policy directive regarding homosexuals in the Armed Forces. Birch raised the question of “whether sexual orientation is an analogous ground of discrimination for the purposes of s. 15 (1) of the Charter” (*Haig v. Canada*, 1991 CanLII 7348 (ON SC)), proving the extrinsic mode of exclusion through the selected language used. The specificity of section 15 of the Charter is structured as an exclusive catalog in which members of society may interpret in its denotative form, disregarding anything that does not literally fall under the terminologies mentioned. The limitations of language surface when distinct perspectives view legal linguistics according to the dichotomy of denotative and connotative.

The objective of the constitution is to not only provide law and order with an arbitrary institutional document, but to promote a sense of security and content with one’s nation through the use of reward and punishment. This can be exemplified by the language used in the Charter of Rights and Freedoms, emphasizing the authority of the law. The reduced use of expressions and emotional phrases imposes a sense of impartialness and solemn omniscience. The allusion to God is specifically used in the preamble of the Charter, “whereas Canada is founded upon principles that recognize the supremacy of God and the rule of law”. This line being placed at the top of the document makes readers subconsciously associate the following rules with the will of God. The word “supremacy” demonstrates dominance and hierarchy, potentially instilling fear in deviating from the rules. This hierarchy places the law above citizens, who are both exonerated from positions of power and stripped of control. The law is cognitively placed as words of God which are seen as absolute, discouraging citizens from diverging from

the path of righteousness. Citizens can then perceive society to be orderly as long as the rule of law is obeyed accordingly, because the unseen force of God will ensure it. These rights may be viewed as the manifestation of supernatural powers and displace such powers in those who uphold the laws, performing the work of God. For example, the divine right of king's subjects' monarchs to the right to rule from the will of God. This is parallel to how documents hyperbolize a breach in law as mimicking a sin being committed, placing those who prevent these breaches as sacred characters acting for God. The metaphor relating God with the law frames how concepts and morals can be interpreted with the combination of religion and politics, for "metaphor structures ordinary thinking and speaking" (Schane, 2006: 12). For example, in the case of *R. v. Demers*, 2003, Professor Tuomala uses divine law to argue for his freedom of expression against abortion. Professor Tuomala argues that "God's law dictates that the human foetus is a person with a right to life confirmed by s. 7 of the Charter" (*R. v. Demers*, 2003 BCCA 28), incorporating divine law with Canadian law while drawing upon the preamble to the Charter and claiming "certain 'inherent' or 'inalienable' rights, including foetal rights, are a gift of God, not a state creation" (*R. v. Demers*, 2003 BCCA 28). Tuomala believes that the common law should not contradict or diverge from divine law since it is written to impose the will of God. The relationship of law and power is used to categorize legal language as hierarchical, authoritarian, monologic, and alien (Goodrich, 1987: 3). The link between divinity and law and order portrayed by the Charter depicts sanctions that are beyond celestial control, influencing society's worldview on the hierarchical and jurisdiction of the law being in control of the commonwealth's rewards and punishments in accordance to the law.

Common law is designed to preserve a sense of order and regulation for the benefit of a well-structured society, which in turn ensures freedom and security as desired by individuals. The Charter of Rights and Freedoms illustrates a machinery in the language, framing law as systematic with a formulaic format, which generates a textual style that psychologically implies that this document is not comical or ironic and should be taken seriously but not overly archaic. (Mattila, 2013: ch.4.3.2). The Charter avoids noise, such as extensively long discourse with irrelevant information, cutting to the point and ensuring the main element does not fade into the background. This asserts a sense of strictness; what is stated should be taken as is. In contrast to the

fundamental freedoms, the legal rights of sections 7-14 contain more detailed descriptions using hypothetical words such as “if” and “except” to present multiple scenarios and resolutions, therefore, “the law is based on experience drawn from the real world but that it regulates hypothetical future cases” (Matitila, 2013: ch.3.1). A sense of confusion and intimidation can arise from such language, for it highlights the experience and vastness of knowledge needed to understand the law in its entirety. The ambiguity and polysemy of the language are the prime sources used to construe the denotational meaning by using society’s connotations of language. The technical elements of vocabulary are gateways to multiple interpretations, representing how open-ended the law is viewed in society and invoking anxiety for the possibility to manipulate the convolutedness of language. The language adds a layer of complexity in sections regarding legal rights and enforcement. These sections use jargon such as “detention”, “habeas corpus”; and allusions to the military law, international law, and the Royal Proclamation of October 7, 1763, implying the need for a professional to decode the implications of such sophisticated and field-specific language. Section 10 (b) implicitly reflects the significance placed onto professional assistance by society with the right “to retain and instruct counsel without delay and to be informed of that right”. The severity of this right indicates dire consequences if legal counsels are not present to advise the defendant. For example, in the case of *R. v. Brydges*, 1990, the accused was acquitted since “the police did not assist the accused in exercising his right to counsel” (*R. v. Brydges*, [1990] 1 SCR 190, 1990 CanLII 123 (SCC)), violating section 10 (b) of the Charter. The impression that legal aid from a counsel is necessary and sincerely recommended derives from the language of the Charter echoing concerns from society of lacking a complete understanding of the legal language; “linguistic relativity thus claims that diverse linguistic interpretations of reality yield demonstrable influences on thought” (Niemeier and Dirven, 2000: 10). The accused was described as being “faced with an immediate need for legal advice” (*R. v. Brydges*, [1990] 1 SCR 190, 1990 CanLII 123 (SCC)), further illuminating societal apprehension on the manifold of legal discourse.

Through discourse analysis, insights on societal expectations, concerns, and frameworks can be drawn in relation to the language administered in the Canadian Charter of Rights and Freedoms. The Charter represents the nation’s historical as well as present values and aspirations while extending abstract messages through the medium of

language. In terms of the relativity principle, language from a nationally renowned legal document influences the perception of the world but does not reach the level of linguistic determinism. While the Charter is at the core of Canadian law, there is a network of influential discourse that coordinate and overlap with the implications of common law. Nonetheless, narrowing in on the debatably central compaction of Canadian legal discourse serves as an institutional representative of a society and apparatus of societal morals, categorization, beliefs, and emotions associated with the law itself. The logical order of the Charter simultaneously mimics and is reflective of the perceptions of Canadian society, elementally imposing subtle implications of a hierarchical and monologist structure. Language resumes an active role in powering foundational viewpoints of a society that relies on language to provide concreteness to abstract concepts and societal means.

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An Unlikely Coalition: The Social Movement Dynamics of the 1996 Canadian Census Campaign

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During the 1996 Canadian Census Campaign, politically diverse women's groups fought to have their unpaid reproductive labour recognized and valued. They did so by successfully advocating for the inclusion of a Census question quantifying unpaid work. Using archival data from newspaper articles and the women's groups' own publications, this research examines the internal dynamics of this social movement. This paper answers the question, "How did various politically diverse participants manage to work together toward a common goal?" by drawing upon and extending Ghaziani and Baldassarri's (2011) notions of "cultural anchors" (180) and "thin coherence" (182). Arguably, the policy goal of Census inclusion served as a politically neutral cultural anchor that sufficiently united the women's groups. Because this anchor created a thin coherence between them, the groups were able to pursue collective action and create change. This paper concludes by discussing the formal and processual ways in which the case of the Census Campaign extends the theoretical concept of a "cultural anchor".

The 1996 Canadian Census Campaign

The 1996 Canadian Census Campaign was rooted in the 1985 Third United Nations World Conference on Women, which called for the recognition of "the remunerated and unremunerated contributions of women in national economic statistics and the gross domestic product" (Status of Women Canada 1990:120). Inspired by this call to action, Canadian women's groups began to mobilize around the idea of a national accounts system that would recognize their unpaid work. However, it was not until 1991 that organized collective action began in earnest. This action was galvanized by Carol Lees, a rural homemaker who risked arrest when she refused to fill out the 1991 Census because it did not recognize her domestic labour.

What ensued was a dynamic social movement that engaged the public and the federal government in a debate over the economic value of unpaid work. Through newsletters, public forums, letter-writing campaigns, and educational workshops, the participating women's

groups problematized the definitions of such basic economic terms such as 'work' and 'Gross Domestic Product' (Lees 1997:14). They argued that unpaid work is real, economically valuable work. Said Lees, "I happen to work a 16-hour day, seven days a week. I absolutely will not fill in any box stating I've never worked in my lifetime. It's downright insulting." (Canadian Press, Hamilton Spectator, 1992).

Ultimately, their efforts culminated in the inclusion of Question 30 on the 1996 Canadian Census, which asked how many hours respondents had spent doing unpaid "housework, yard work or home maintenance" and providing "unpaid care to one or more of [their] own children, the children of others...or to one or more seniors" in the past week (Statistics Canada 1996:20).

Diverse Movement Participants

One of the most intriguing characteristics of the movement is the unlikely coalition of women's groups that pursued the inclusion of the Census question. These groups were politically and ideologically diverse, falling on opposing ends of the political spectrum. Groups like Mothers are Women (MAW) explicitly allied themselves with the liberal feminist movement; Realistic, Equal, Active, for Life Women (REAL Women) and Kids First were conservative, anti-feminist groups that emphasized women's place in domestic work and childcare; and the Canadian Alliance for Home Managers (CAHM) situated itself in the center of the political spectrum (Luxton and Vosko 1998).

Before the 1996 Census Campaign, these groups had been diametrically opposed. Public disagreements between them were likened to "street brawls" (Dulude, Windsor Star, 1987). In particular, REAL Women was described as a "thorn in the side of the feminist movement" (Henderson, Montreal Gazette, 1987). Catherine Betz, a leader of MAW, used even darker language: "We're feminists and we're *really scared* of REAL Women. They seem to be always wanting to draw the line between the good people and the bad people." (Davis-Barron, Ottawa Citizen, 1992, emphasis added).

These groups' differing political positions also led them to disagree on various policy initiatives. For example, the conservative groups did not support the liberals' and centrists' plans to boycott the 1996 Census if it did not include a question on unpaid work (Luxton and Vosko 1998). Meanwhile, the liberal and centrist groups did not endorse

the conservatives' proposal to include the career of "homemaker" as an occupational category on the 1996 Census (Lees 1997:27).

Cultural Anchors and Thin Coherence

Given these serious disagreements, how did the women's groups manage to come together and work towards a common goal? Ghaziani and Baldassarri (2011) offer a helpful analytical tool. They study how participants in social movements acknowledge, manage, and organize their differences so that these differences do not inhibit collective action. In the LGBT marches that are their focus, participants had diverse goals, identities, and reasons for marching. This resulted in "[bitter] fighting" amongst them (2011:196). Ghaziani and Baldassarri (2011) argue that the movement's ultimate success was rooted in its choice to recognize and accommodate participants' differences, rather than to manufacture an artificial consensus. The movement performed cultural work to manage these differences, employing a "cultural anchor" in order to construct a "thin coherence" among the diverse participants.

Ghaziani and Baldassarri (2011) define a cultural anchor as something that simultaneously fulfils two criteria: first, it allows for differences, and second, it builds consensus. Specifically, it is a set of "recurring and interconnected ideas" (180) that is "general enough to accommodate debate and dissent" (198), while also "elicit[ing] broad consensus among involved actors" (198). LGBT advocates had vastly different reasons for marching, ranging from raising awareness about HIV/AIDS, to resisting anti-gay legislation (186). However, the purpose that ultimately united them was "community building" (186). This idea was an effective cultural anchor: first, it built consensus because it resonated with the other purposes for marching—for example, both raising HIV/AIDS awareness and opposing anti-gay laws could build the LGBT community's collective identity; at the same time, the idea of "community building" was also general enough to allow participants to march for the more specific reasons.

Evidently, the consensus created by a cultural anchor is neither absolute nor universal. Thus, Ghaziani and Baldassarri (2011:182) call it "thin coherence". Thin coherence is characterized by its incorporation of heterogeneous ideas and units, and its dynamic and potentially non-permanent nature (Ghaziani and Baldassarri 2011:183).

An Anchoring Policy Goal

During the Census Campaign, the policy goal of Census question inclusion played a key role in uniting the opposing women's groups. In fact, this goal fulfilled Ghaziani and Baldassarri's (2011:180) two criteria for a "cultural anchor": it simultaneously accommodated the groups' ideological differences and created a degree of consensus between them.

The policy goal of Census question inclusion accommodated the women's groups' differences. Its generality and neutrality allowed the groups to support it for differing reasons that resonated with their own ideological stances. The most liberal feminist groups saw the collection of data on unpaid work as the first step towards government-paid "guaranteed incomes" and "pension plans" for homemakers—public policies that would force the direct, public, economic recognition of the value of women's work (Canadian Press, Kitchener-Waterloo Record, 1991). Other feminist groups envisioned public daycare policies, which would free women from childcare and afford them the time and energy for other pursuits (Canadian Press, The Gazette, 1993). Conservative groups were strongly opposed to these policies: REAL Women saw payment for housework as "an infringement on the individual by the state," and public daycares as slippery slopes towards the corruption of the family (Lees 1997:27). Instead, these conservative groups believed that the Census data could be used to support tax credits for stay-at-home wives, which would increase women's incentives to fulfil their duties as mothers and caregivers (Erwin 1998). The centrist groups fought for the equal recognition of paid and unpaid workers and saw Census inclusion as one way that this could be achieved "in the public record" (Lees 1997:5). The policy goal accommodated the women's groups' differences because the groups were each able to attribute *different meanings* to the same policy of Census question inclusion.

If the women's groups attributed such different meanings to this policy goal, how did they come to agree to pursue it? Census question inclusion was effective at creating a degree of consensus because the women's groups did not have to *collectively confront* these differing meanings while advocating for the policy. For example, the liberal and conservative groups' differing rationales for supporting Census question inclusion amount to differing normative statements about how the resulting data should be used: to inform daycare policies and tax credits, respectively. However, both groups could support Census question

inclusion because valid data on unpaid work was needed for *either* daycare or tax policies. The *inclusion* of a data-collecting question on the Census necessarily preceded the *use* of the data for further public policy: “If we are not present in the statistical record, we are not present in public policy...The only way we can be included is to be named and numbered,” explained Carol Lees (Mitchell and Silcoff, *The Globe and Mail*, 1996).

Thus, while the Census question itself was seen as an ideologically neutral entity, the use of its resultant data was politically charged: the Census question was a neutral means to a political end. As a collective unit, the women’s groups supported Census question inclusion for its neutral data gathering potential. In doing so, they could temporarily put off the controversial collective confrontation of the question, “How should the resulting data be used?” Thus, rather than mobilizing around data *use*, they were able to mobilize around data *collection*. In this way, the policy goal of Census question inclusion facilitated women’s groups’ collective action by generating a thin coherence between them.

A Temporary Coherence

Tellingly, however, this thin coherence did not last. After the policy goal was achieved and the question included on the 1996 Census, the social movement became fragmented, with each women’s group pursuing different goals through different venues. The question of data use could no longer be ignored. The liberal groups began advocating for public childcare. The conservative groups attacked the feminists, stating that they had failed to recognize that staying at home was “what is...right for our children” (Luxton and Vosko 1998:73). Meanwhile the centrists pursued a completely different goal: they held nationwide public forums in order to formulate a representative definition of “unpaid work” (International Centre on Unpaid Work 1997). Without the ideologically neutral cultural anchor of Census question inclusion to unite them, the women’s groups were forced to confront their insurmountable ideological differences in policy preference. The cooperation between them rapidly dissolved. This further reinforces the anchoring role played by Census question inclusion and demonstrates that the coherence between the women’s groups was fragile and “thin” (Ghaziani and Baldassarri 2011:182).

The Forms, Process, and Nature of a Cultural Anchor: Discussion and Avenues for Further Research

An analysis of the 1996 Canadian Census Campaign allows us to raise new questions about cultural anchors and extend Ghaziani and Baldassarri's (2011) analysis in multiple ways. First, this case shows that a cultural anchor can take on a number of different forms. Ghaziani and Baldassarri (2011) define cultural anchors as "recurring and interconnected ideas" that serve as "conceptual handle[s] or peg[s]" (180). In contrast, the anchor takes the form of a concrete, highly specific, clearly articulated policy proposal in the case of the Census Campaign. This encourages us to explore the other forms that cultural anchors may take on. For example, can leaders, laws, symbols, and identities be cultural anchors? Do they act differently than ideas or policy proposals?

An examination of the Census Campaign also reveals that temporality can be an important part of the process of cultural anchoring. The anchoring function of Census question inclusion had a chronological dimension: it allowed the women's groups to *put off* their differences until a future date. We can then investigate the other dimensions on which anchoring processes might differ: Spatially? In duration? In scope?

A focus on process also allows us to raise a fundamental question about the nature of cultural anchors: Do movement participants explicitly, intentionally choose cultural anchors in order to manage their differences, or is the unifying effect of an anchor the mere residual of its instrumental functions? In the case of the Census Campaign, the policy of Census question inclusion evidently played a dual function. First, it fulfilled the movement's instrumental goal—that is, the recognition of the economic value of unpaid work. Second, it united the movement participants to a certain degree. This observation allows us to question how exactly Census question inclusion was chosen to be the movement's policy goal. Did the women's groups choose it solely for its instrumental function, leaving its uniting effect a mere coincidental residual? Or, was this policy chosen with its uniting potential in mind? Or was the decision a combination of the two? A full answer would require an investigation that moved beyond the *fact* that Census question inclusion was the movement's chosen policy goal, and towards the *process* of this choice. This would be a rich avenue for further research.

Conclusion

The 1996 Canadian Census Campaign was remarkable not only for its successful push for the recognition of the value of unpaid work, but also for the ideologically diverse coalition of women's groups that participated. These groups fell on the opposite ends of the political spectrum and disagreed on most policy goals. However, the policy of Census question inclusion was a "cultural anchor" (Ghaziani and Baldassarri 2011) that accommodated their differences by allowing each group to attribute it a different meaning. It created a degree of consensus between them by putting off the contentious consideration of their differences. The thin coherence that this anchor created was imperative to the women's groups' achievement of this policy goal. However, the coherence was temporary, and the women's groups ultimately returned to their original ideological positions and goals.

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The Peg That Doesn't Fit: Immigration and the Jamaican Experience in Colonial Canada

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Settler colonial logics of Canada's past constructed the archetypal Canadian—and the “desired” immigrant—as white: legal bodies of the state were attempting to form a body politic that reflected a white European hegemony (Anderson, 1987). Under this paradigm, previous immigration policies openly sanctioned the exclusion of blacks from the country. The exclusion of blacks from Canada during the 18th and 19th centuries can be seen in the heightened scrutiny that they received during medical examinations, the refusal of railway companies to sell train tickets to blacks, and the 1910 order-in-council that banned blacks from immigrating to the country for a year (Bashi, 2004). However, the settler colonial state has attempted to divorce itself from its racist past, as seen in the implementation of the 1967-point system, which affords perspective immigrants entry into the country based on merit, not race (Bashi, 2004). The research question guiding this essay is as follows: is race/racism still operationalized in immigration policies and labour bills in Canada today? This paper will argue that present day Canadian immigration policies continue to be guided by race/racism. The “inclusionary” economic template used by the point system simply acts as a veil to conceal this reality. This topic will be explored through the lens of the Jamaican experience in Canada. First, the way in which the Canadian immigration policy that governs the removal of immigrants deemed serious criminals—subsection 36(1) of the Immigration and Refugee Protection Act (Bill C-11)—has been used to disproportionately expel Jamaican immigrants from the country will be explored. This discussion will be followed by a dialogue concerning the Seasonal Agricultural Workers Program (SAWP), addressing how it has been mobilized to exploit Jamaican labour without providing these same workers with avenues to full citizenship. These facets, coupled together, display how Canada's immigration policies and labour bills continue to operationalize racism, disproportionately restricting Jamaicans' access to Canadian citizenship.

Canadian immigration policies that govern the removal of immigrants deemed a serious criminal—subsection 36(1) of the Immigration and Refugee Protection Act (Bill C-11)—has been mobilized to disproportionately expel Jamaican immigrants from the country. Bill C-44, which was implemented in 1995, set the precedent for subsection 36(1) of the Immigration and Refugee Protection Act (Aiken, 2007). The latter stipulated that permanent residents deemed a danger to the public—being those that have committed a federal offence—must be served a deportation order (Aiken, 2007). This bill was implemented following the 1994 murders of Constable Todd Baylis and Georgina Leimonis by Jamaican immigrants (Davis-Ramlochan, 2013). These murders spurred alarm in the country, as media outlets began to conceptualize Canada as a nation inundated by “criminal” Jamaican immigrants (Davis-Ramlochan, 2013). The men involved in the fatal shooting’s foreignness was accentuated, as they were described as “Jamaican born career criminals” and “urban terrorist” by media outlets and the police, both of whom downplayed the fact that these individuals had been residing in Canada since they were youngsters (Appleby, 2011 & Martis, 2016). In 1994, a journalist of *The Globe and Mail* went so far as to refer to Jamaican-Canadians as “barbarians inside the gate [that commit] alien slaughter” following the deaths of Baylis and Leimonis (Martis, 2016). Furthermore, from 1994 to 1997, 40% of all articles by the *Toronto Star* and the *Toronto Sun* were premised on misconducts committed by Jamaicans, notwithstanding the fact that this group made up less than 1% of the country’s overall population at the time (Martis, 2016 & Statistics Canada, 2007).

Criminality, which was already mapped onto members of the Jamaican-Canadian community in Canada in the 1990s, also became mapped onto prospective black immigrants from the aforementioned country. Jamaican heritage has historically been used as a “proxy for risk” in Canadian mass media (Bahdi, 2003, p.295). Various media outlets have coated criminality onto Jamaican-Canadian bodies, attributing crime in Canada to Jamaicanness. This truth is most evident in *The Globe and Mail* series “Crime: the Jamaica Connection” written by Timothy Appleby, in which the following was stated: “a small but volatile group of young Jamaican males has altered Toronto’s criminal landscape significantly in the past three years...the people who migrate are the riffraff. The quality ones stay home.” (Martis, 2016). Prior to (and even after) the 1994 murders, the media continued to exclusively locate gangs,

guns and drugs in predominately Jamaican communities in Toronto, further perpetuating the trope of the criminal Jamaican (Martis, 2016). This continues today, as the former police chief Bill Blair openly cited Jamaica as the primary source country of Canadian foreign-born criminals in 2007, albeit he did not provide statistical evidence to corroborate his claims, as Canada does not collect nor distribute race-based crime data (Appleby, 2007). Evidently, the media has, for decades, perpetuated racialized risk knowledges anchored on the trope of the Jamaican criminal. This has resulted in the inordinate removal of Jamaican immigrants from Canada for criminal acts under both Bill C-44 and subsection 36(1) of the Immigration and Refugee Protection Act (Bill C-44).

Two years after the implementation of Bill C-44, it was found that nearly half (40%) of those deported under the bill were of Jamaican origin (Davis-Ramlochan, 2013). This inordinate representation continues today, as Jamaica remains one of the top countries in which deportees have been issued a removal order to under subsection 36(1) of the Immigration and Refugee Protection Act (Chan, 2006). On appeal of their deportation, a study of 177 cases by Chan found that individuals that originate from non-Anglo-European countries have their deportation order upheld on appeal far more often than appellants from Anglo-European countries; 62% were upheld for cases concerning individuals belonging to the latter group, and 46% for those of the former group (2006). To add, in cases where the appellant was from a non-Anglo-European country, the Appeal Division—who determines if an individual may or may not stay—more commonly described the appellant as the following: unable to be a productive member of society, a non-conforming site of risk and/or ethically unfit to remain in Canada (Chan, 2006). In contrast, in cases in which the individual was from an Anglo-European country, the reasoning behind the justification for their deportation was anchored solely on issues of legality, not on their ability to assimilate, nor their likelihood of re-offending—as was more commonly the case for those from non-Anglo-European countries (Chan, 2006).

The Appeal Division exist within a larger social matrix that constructs blackness as criminal in Canada. The repetition of the trope of the black Jamaican criminal, which has been disseminated by Canadian media outlets, has allowed this fallacy to become engrained in the public imagination. The media has the power to fashion public opinion and

seeing as “as many as 75% to 95% of Americans and Canadians cite the mass media as their primary source of information about crime,” it is far from surprising that this racialized trope has damagingly shaped the discretionary power allotted to the Appeal Division (Callanan, 2005, P.55 & Chan, 2006). This construction has allowed racism to be operationalized in the deportation process, leading to the disproportionate removal of Jamaicans from Canada in comparison to their counterparts from Anglo-European countries.

Canada has utilized the Seasonal Agricultural Workers Program (SAWP) to exploit foreign Jamaican labour while simultaneously denying these same people the ability to permanently immigrate to the country and gain full citizenship. This program was implemented in 1966; Jamaica was and continues to be the primary source country for foreign labourers under the aforesaid program (Government of Canada, 2016 & CBC News, 2012). Under the Seasonal Agricultural Workers Program, Jamaican labourers can work in Canada for a maximum of four years before returning to their country of origin; upon the conclusion of the four years, the labourer in question can re-apply for a work permit and return once again, on the condition that there remains a labour shortage in the Canadian agricultural industry (Silverman & Hari, 2016). Employers that select potential employees aim to ensure that the individual being selected is male, impoverished, and has ties to their home county (i.e. a wife and child) to guarantee that the worker will not be enticed to stay in Canada following the expiration of their work permit (Marchitelli, 2016). This program has “institutionalized precarious migratory status in Canada,” for Jamaican seasonal agricultural workers are unable to legally obtain citizenship via the program despite their ongoing contribution to the Canadian economy; they are physically internal yet ontologically external to the country on account of their foreignness and therefore experience a diminished set of rights (Goldring, Berinstein & Bernhard, 2009, p.239).

The Seasonal Agricultural Workers Program exists within a larger colonial matrix that sanctions both the exploitation of black labour and the exclusion of blacks from full membership in the Canadian body politic. Between 1900 and 1932 in Canada, the demand for cheap labour, and the surplus of labourers abroad, led the Canadian government to turn to Caribbean countries, such as Jamaica, as a source for inexpensive labourers (Agnes, 1993/1994). At this time, Canada remained under the British imperial fold and desired to construct a nation that reflected a

white European hegemony (Agnes, 1993/1994). The desirable permanent resident was constructed in racialized terms, with Caribbean blacks existing outside of the contours of this construction (Agnes, 1993/1994). In the white imagination, Caribbean blacks were perceived as inferior “social problems”; in consequence, black labourers were not provided with pathways to attain full citizenship, were paid less than their white counterparts despite performing the most strenuous tasks, and were the first to be let go during economic downturns (Agnes, 1993/1994). This is the pedigree of the Seasonal Agricultural Workers program in Canada, which remains informed by the logics of the 1900s which sanctioned both the exploitation of Caribbean labourers and their exclusion from the body politic on account of the racially constructed desirable immigrant archetype.

Caribbean female domestic workers also experienced similar forms of exclusion. For instance, female Jamaican domestic workers, because of growing anti-black racism in Canada in the 1900s, were deported and barred from Canada under the domestic workers scheme despite their demand due to the colonial state’s perception of female Caribbean’s as both promiscuous and potential wards of the state (Agnes, 1993/1994). This resulted in Canada turning to other nations, such as the Philippines, to fulfil the demand for domestic workers; this transition can be seen in the latter half of the 20th century, as the amount of female Filipino domestic workers grew rapidly in Canada, far out numbering the amount of Caribbean domestic workers in the country (Tungohan et al, 2015). Coincidentally, foreign domestic workers—more commonly referred to by their contemporary colloquialisms, being foreign care workers and live-in caregivers—are, to date, the only temporary foreign workers in Canada that can attain access to permanent residency/full Canadian citizenship under the Temporary Foreign Workers Program (Goldring, Berinstein and Bernhard, 2009). Interestingly enough, the transition into allowing foreign domestic workers to attain permanent residency in Canada via the Temporary Foreign workers program in 1992 paralleled the colonial states’ racially informed shift away from allowing Jamaican female domestic workers from entering the country under the program (Carlos & Wilson, 2018).

The Canadian government perceives the desirable immigrant as one who can stimulate the economy. Because of this, the state has created programs, such as the investor/entrepreneur program, to extract affluent business people from abroad (Jones, 2004). The named program allows

potential immigrants to by-pass the point system, expediting their ability to attain citizenship in Canada (Jones, 2004). This program is classist, as it appeals solely to the richest immigrants. A racialized element also exists, as individuals from Asian countries make up most of the citizens streamlined through the investor/entrepreneur program in Canada: Taiwanese, Chinese and South Koreans account for half of those entering the country under the investor/entrepreneur program (Jones, 2004). Jamaicans, on the other hand, are disproportionately concentrated in programs such as the Seasonal Agricultural Workers Program, which provides no access to Canadian citizenship, sustaining the precarious migratory status of Jamaican agricultural workers (Goldring, Berstein and Bernhard, 2009). The Canadian government has justified its decision to disproportionately provide business immigrants with access to citizenship as a need to create a “selection criteria that reflects the realities of the new [knowledge] economy” (Jones, 2004, p. 1265). Be that as it may, roughly 18,000 seasonal agricultural workers are hired each year, stimulating the Canadian economy by responding to agricultural labour shortages (Jones, 2004 & Marchitelli, 2016). As the decades have passed, the number of seasonal agricultural workers has risen; this runs counter to the narrative that citizenship selection criteria should only favour those that’s profession is knowledge based, as manual labourers also contribute positively to the Canadian economy and are in continued demand (Marchitelli, 2016). As in the past, the lack of opportunity in Caribbean countries has allowed for the continuation of the exploitation of Jamaican migrant labourers by Canadian employers, trapping them in a cycle of work that migrants have called “worse than slavery” (Marchitelli, 2016).

In 2016, the unemployment rate in Jamaica—a former British colony—stood at 12.9%; this is almost double the 2016 Canadian unemployment rate of 6.9% (Jamaica Observer, 2018 & Statistics Canada, 2017). Because of the economic conditions in Jamaica, Jamaican migrant workers in Canada have become dependent on the Seasonal Agricultural Workers Program to provide their families back home with money for necessities such as food, water and shelter (Lupton, 2017). The Jamaican government has also become dependent on the program, as it provides the country with an opportunity to expand their economy via remittances, combat unemployment and help Jamaican-natives enhance their socio-economic status (Agnes, 1993/1994). This dependence, as it did in the 1900s, has allowed colonial Canada to

continue to exploit Jamaican labourers (Agnes, 1993/1994). Many Jamaican labourers, such as Sheldon Mckenzie, have been coming to Canada for 12 years under the program, enduring maltreatment, racism and exploitation (Marchitelli, 2016). Workers have noted that they have not been provided with access to proper health care while on the job, and some were even deported by their employers because of injuries they sustained at work (Marchitelli, 2016). However, the lack of economic opportunities in Jamaica has forced many migrant labourers to continue to endure such treatment, as the Seasonal Agricultural Workers Program is their only source of income. Ultimately, the racist and classist access to full citizenship in Canada serves as yet another clear example of how racism continues to be operationalized in Canadian immigration policies.

Anti-blackness is woven into the fabric of colonial Canada's immigration system and it is our policy makers that hold this intertwinement in place. This paper has illustrated this reality by exemplifying how race/racism continues to be operationalized in present day immigration policies and labour bills. This operationalization is most pronounced when looking at the way in which Bill C-11 has been used to disproportionately expel Jamaican immigrants from the country and the institutionalization of the precarious migratory status attributed to Jamaican migrants working under the Seasonal Agricultural Workers Program in Canada. The racialization of both policies has historic roots that are anchored on anti-black exclusionary logics, setting the precedent for the continued exclusion of numerous Jamaican immigrants from full membership in the Canadian body politic. Moving forward, it is imperative that we as Canadians make note of how our immigration policies work to exclude certain groups over others and how this said exclusion continues a colonially informed anti-black legacy of maintaining a white European hegemony in Canada. With this knowledge, we as a people can motion to petition our government to construct a more equitable immigration system that affords all people equal access to permanent residency/Canadian citizenship.

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HUMANITIES

Potency, Power and Patriarchy: Montaigne and the Body

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In early modern Europe, medical, theological and philosophical conceptions of the body had particularly profound implications. Renaissance scholars were aware of an array of medical theories about the body and created multidisciplinary accounts based on a variety of classical and medieval sources.¹ Such concepts of the body particularly promoted assumptions regarding gendered social hierarchies and conditions of embodiment. Medicine regarding procreation and the sexes therefore informed an intellectual construct defined by patriarchal attitudes.² Set within this male-dominated culture, Michel de Montaigne's *Essays* reflect larger medical and by extension social attitudes regarding the male and female bodies. In this sense, Montaigne's understanding of the body, gender and sexual reproduction informs his understanding of personal and familial legacy. By directly associating legacy to lineage, Montaigne isolates the reproduction of children as a fundamental means of furthering private interests. His emphasis on male powers of reproduction similarly marks virility as a manifestation of masculinity. Furthermore, the transmission of name, inheritance and property between fathers and sons illustrates the creation of legacy as an exclusively male activity. Ultimately, prescribing to the classically defined sexual and reproductive power of male bodies, Montaigne presents the creation of legacy as a fundamental expression of masculinity.

The Inferior Sex

The superiority of man over woman was systematically structured during antiquity and throughout the Middle Ages. By the time of the early Renaissance, medicine remained predominantly based on the major works of Galen, with additions from Aristotelian thought.³ The philosophical tendency to construct dualities in nature promoted the

¹ James Richard Farr, *Authority and Sexuality in Early Modern Burgundy (1550-1730)*, (Oxford: Oxford University Press, 1995), 7.

² *Ibid.*, 8.

³ Ian Maclean, *The Renaissance Notion of Women* (Cambridge: University of Cambridge Press, 1980), 29.

differentiation of the sexes.⁴ The duality of male and female was paralleled by dualities of active and passive; perfect and imperfect; and complete and incomplete. The male body in nature was characterized by active, complete and perfect qualities while the female body was viewed as passive and deprived, requiring a male in order to be made complete.⁵ Aristotle argued that nature, always desiring to create the most perfect creature, produced males as the most completely formed, the hottest, and the best equipped with powers of procreation. In the *History of Animals*, Aristotle further explains if there was a lack of generative heat in the womb during pregnancy, then creation would not be perfect and as a result a female was born.⁶

In such Galenic and Aristotelian terms, males and females issued from the same form and had corresponding sexual organs that mirrored each other, one external and the other internal.⁷ High amounts of heat *in utero* would push the genitalia of males outward and create an overall stronger and more robust person. Missing this heat, women's sexual organs remained internal, and the woman was left with colder and moister balance of humours.⁸ Women's supposed semi-formed status informed the conception of the female body, mind and character as being imperfect and ultimately inferior to males. For early modern women, the major consequence of the notion of female inferiority was their subjection to male power.⁹ This classical model of understanding the sexes thus created the infrastructure of Renaissance concepts of male perfection and authorized a deeply embedded culture of misogyny in almost all areas of society.¹⁰

The scholastic notion of the sexes was modified only slightly by the theologians and scholars of the early Renaissance. Church father, St. Thomas Aquinas sought to Christianise many of the works of Greek and Roman philosophers resulting in a combination of the classical and biblical traditions. As it related to gendered hierarchies and sexual reproduction, Christian teachings also propagated the understanding of

⁴ Ibid, 8.

⁵ Margaret Sommerville. *Sex and Subjection: Attitudes to Women in Early Modern Society* (New York: St. Martin's Press Inc., 1995), 10.

⁶ Sommerville, *Sex and Subjection*, 11.

⁷ Laura Gowing, *Common Bodies: Women Touch and Power in Seventeenth-Century England*, (New Haven: Yale University Press), 19.

⁸ Ibid, 20.

⁹ Ibid.

¹⁰ Maclean, *Notion of Women*, 29.

women as inferior creatures. In the story of Adam and Eve, the idea of female inferiority and imperfection is especially reinforced. Even before Eve's malediction, she is a secondary creation made not from the dust as Adam was but from Adam himself.¹¹ Yet because of her sin, Eve's position, in relation to Adam, further deteriorated. Her subjugation was confirmed and extended, defining the subservient role of wives to the authority of their husbands within marriage.¹² The significance of Eve being made from Adam was an inversion of human procreative patterns as males are always born from women. Although all men came from women, biblical teaching demonstrated that females were 'born' from the male in a much more profound sense.¹³ Thus the story of Adam and Eve reinforced conventional interpretations of female inferiority and subjection to men. The ability for men to express power, as perfect and sexual beings, over their wives speaks to the relationship between power, medical bodies and masculinity.

Montaigne and Legacy

Throughout his *Essays*, Montaigne presents the propagation of children as a means of creating both a private and public legacy. Lineage and legacy are deeply connected themes in his texts and represent Montaigne's misogynistic attitude towards human reproduction. For early modern thinkers, fatherhood and motherhood were both sexually and socially determined roles. The opinion that God created women with the primary aim of enabling men to reproduce was widely accepted in the sixteenth century.¹⁴ In contrast, fatherhood was a manifestation of male agency and contained aspects of social performances.¹⁵ Both secular and religious leaders emphasized the role of men as husbands, fathers and heads of household across western Europe.¹⁶ Within the guild system of the late Middle Ages, men could not advance to the status of masters unless they were married. Thus, the expression of full adulthood and masculinity required that a man become the head of a family.¹⁷

¹¹ Sommerville, *Sex and Subjection*, 25.

¹² Maclean, *Notion of Women*, 18.

¹³ Sommerville, *Sex and Subjection*, 28.

¹⁴ *Ibid*, 116.

¹⁵ Sommerville, *Sex and Subjection*, 116.

¹⁶ Karen E. Spierling, "Father, Son and Pious Christian," in *Masculinity of the Reformation Era* (Kirksville: Truman State University Press, 2008), 98.

¹⁷ *Ibid*.

Marriage then was understood as an institution through which to produce children and fulfill expected male roles. In the case of the *Essays*, particularly in “On Some Verses of Virgil,” Montaigne emphasizes the importance of marriage and also highlights the associated power dynamics between males and females. Speaking about sex and women, Montaigne states, “the authority of husbands over their wives” is “the very thing that is the fundamental act of marriage.”¹⁸ Promoting male authority and female subservience, the *Essays* uphold traditional narratives regarding the sexes.

This understanding of gendered marital roles informs Montaigne’s view of marriage as an institution through which men might further personal and familial goals and thus create legacy: “we do not marry for ourselves, whatever we say; we marry just as much or more for our posterity, for our family. The practice and benefit of marriage concerns our race very far beyond us.”¹⁹ Montaigne clearly links the tradition of marriage with the production of children and references the importance of children for the future. Overall, Montaigne maintains a favorable view of sex describing it as “so natural, so necessary and so just.”²⁰ The idea of sex, and therefore sexual reproduction, as necessary reinforces the idea of children as being essential to the individual, to the family and to larger society. However, sexual reproduction within marriage did not aim to produce children indiscriminately, rather the foremost goal was the creation of sons.²¹ While daughters were often married off to other families and expected to assimilate to their new relations, sons inherited the family name, land and title and could most effectively promote familial interest.²² The reliance on male inheritance between fathers and sons represents the value of children and marriage in the pursuit of producing legacy. Male children offered the continuation of a family’s ancestry and served as a means of transmitting the family name and reputation to future generations. By satisfying social and familial expectations within marriage, men directly expressed their power and masculinity.

¹⁸ Michel de Montaigne, *The Complete Works*, trans Donald M. Frame (Toronto: Penguin Random House, 2003), 788.

¹⁹ *Ibid*, 783.

²⁰ *Ibid*, 781.

²¹ Spierling, “Father,” 99.

²² Sommerville, *Sex and Subjection*, 146.

Just as Montaigne emphasizes the role of men within marriage, so does he promote the importance of men in the human reproductive process throughout “Of the Resemblance of Children to Fathers.” Advocating that male bodies were best endowed with procreative power; Montaigne presents men as superior being in regard to sexual reproduction. According to classical traditions, heat was understood as a primary instrument in the reproductive process. Using their natural heat, male bodies ‘concocted’ blood into semen.²³ Being of colder dispositions, Aristotle had argued women were unable to create semen and therefore contributed no material to reproduction besides the fertile soil of the uterus.²⁴ However, Galen theorized women produced cooler, less active semen.²⁵ Neoaristotelians and Galenists of the Renaissance argued over the existence and efficacy of female semen, however the commonly accepted view was that of Galen; that women produced a cooler, less active and ultimately less useful semen than that of the male.²⁶ As such, the value of women and their reproductive ability was continually subordinate to male semen and by extension male procreative power.

Montaigne accepts this view of women’s lesser contribution to reproduction and focuses entirely on male seed when discussing the resemblance and relationship between fathers and children:

What prodigy is it that the drop of seed from which we are produced bears in itself the impression not only of the bodily form but of the thoughts and inclinations of our fathers! Where does that drop of fluid lodge this infinite number of forms? And how do they convey these resemblances with so headless and irregular a course that the great-grandson will correspond to his great-grandfather, the nephew to the uncle? ²⁷

Here Montaigne emphasizes the seemingly singular role of male semen. A single drop is so potent that it has the ability to pass on both the physical and mental characteristics of fathers to their children. As an expression of masculinity, virility was indeed a point of honour and a

²³ Maclean, *Notion of Women*, 31.

²⁴ Ibid.

²⁵ Ibid., 32.

²⁶ Maclean, *Notion of Women*, 33.

²⁷ Montaigne, *Complete Works*, 701.

measure of manhood.²⁸ Thus, the ability to produce children speaks not only to the creation of legacy, but also to the expression of male sexuality. Montaigne demonstrates this point by continually stressing the male function within sex and procreation to the exclusion of women. In particular, the role of the father is accentuated, and even praised, as the most formative and powerful element within the reproductive process. According to Montaigne it is from fathers that children inherit their “thoughts and inclinations” while references to traits inherited from mothers are completely absent. Likewise, Montaigne stresses familial relationships only between men: great-grandfathers and great grandsons, uncles and nephews, fathers and presumably their sons. Of the rare times women are mentioned, their role as a passive character is clear: “Aristotle says that in a certain nation where the women were in common they assigned the children to their fathers by resemblance.”²⁹ Montaigne highlights again the connection between fathers and sons based on shared qualities and ignores any resemblance between mothers and children and therefore any claim women might have over their children. This relationship between male family members is to the total omission of women, either as mothers, wives or daughters. Despite the important function of women within procreative processes, they are excluded from proper consideration. Instead the authorized misogyny of the Renaissance propagated the perfection of the male body and its powers of procreation. Such theories demonstrate Montaigne’s understanding of human sexuality and reproduction. Valuing virility and potency, Montaigne fashions sexual reproduction as an assertion of manliness through the physical male body.

Indeed, throughout the *Essays* the act of creating legacy is constructed not only as an expression of masculinity but also as an exclusively male sphere of influence. The ability for men to wield power domestically and in greater society was an imperative tool in the furthering of their reputation and ancestry through children. The father-son relationship was particularly venerated by Montaigne who writes, “I have never seen a father who failed to claim his son, however mangy or hunched back he was.”³⁰ Montaigne’s description of fathers claiming sons, despite infirmity, speaks very strongly to themes of possession,

²⁸ Spierling, “Father,” 99.

²⁹ Montaigne, *Complete Works*, 701.

³⁰ *Ibid*, 129.

lineage and legacy. As a father ‘claims’ his son, he then takes possession of him. In this sense, the son becomes an extension of the father, carrying on his name, family and ultimately legacy. In Montaigne’s own relationship with his father, Pierre Eyquem made every attempt to build the Montaigne legacy through his son. The desire for social ascension had encouraged Pierre to raise Montaigne as the heir of a noble family, giving him an upbringing that would match his future responsibilities.³¹ As a result, Pierre devised an educational strategy that would teach his son all the best humanist disciplines, of which Montaigne writes about in “On the Education of Children”:

My late father, having made all the inquiries a man can make, among men of learning and understanding, about a superlative system of education became aware of the drawbacks that were prevalent [...] At all events, the expedient my father hit upon was this, that while I was nursing and before the first loosening of my tongue, he put me in the care of a German, who has since become a famous doctor in France, wholly ignorant of our language and very well versed in Latin.³²

Montaigne goes on to explain that it was an “inviolable rule” of his father that Montaigne be spoken to “in no other language than Latin.”³³ Montaigne’s education at home shows an active attempt at shaping the young Montaigne on the part of his father. This father-son bond is then a part of an ideal educational relationship. Beginning in his own home, Montaigne presents the education of sons as a primary step in teaching them how to carry on the family name and legacy. Education itself can be understood as a process not just of teaching the mind and body independently but of shaping a whole person: “It is not a soul that is being trained, not a body, but a man; these parts must not be separated.”³⁴ This is especially influential within the multi-generational Eyquem context of social climbing.

The idealized relationship between Montaigne and his father is countered by the reality of Montaigne’s relationship with his only daughter, Leonor de Montaigne. Like most other female figures in

³¹ Philippe Desan, *Montaigne: A Life*, trans. Steven Rendall and Lisa Neal. (Oxford: Princeton University Press, 2014), 28.

³² Montaigne, *Complete Works*, 156.

³³ *Ibid*, 156.

³⁴ *Ibid*, 148.

Montaigne's private life, his daughter appears rarely in the *Essays*. When she does, Montaigne shows a level of disinterest and inactivity in her pursuits:

My daughter (she is the only child I have) is at the age at which the laws allow the most ardent of them to marry. She is of a backward constitution, slight and soft, and has been brought up by her mother accordingly, in a retired and private manner: so that she is now only just beginning to grow out of the naïveté of childhood. She was reading a French book in my presence. The word *fouteau* occurred, the name of a familiar tree. The woman she has to train her stopped her short somewhat roughly and made her skip over that perilous passage. I let her go ahead in that manner as not to disturb their rules, for I do not involve myself at all in directing her: the government of women has a mysterious way of proceeding; we must leave it to them.³⁵

Montaigne takes a surprisingly passive role in his daughter's education. He explicitly states that he takes on no responsibility in her education because she is a young girl and is thus to be governed by different rules and values. This in itself is hardly a revolutionary view. Most Renaissance thinkers, Montaigne included, believed in different educational goals for women.³⁶ However, Montaigne's passivity in regard to the education of Leonor shows a distinct disparity in his value of sons versus daughters. Viewing women as existing in a separate domain, Montaigne has failed to 'claim' ownership of Leonor. Although Montaigne certainly recognizes the kinship between himself and his daughter, he does not conceive of her as an individual capable of furthering his legacy. His failure to educate her as his father educated him reinforces the conception of both education as a means of shaping children and sons as a means of creating legacy.

Indeed, in the last years of his life, Montaigne began to feel an increasing amount of concern regarding the transmitting of his legacy due to his only daughter.³⁷ Montaigne openly anticipated his own death and had taken the opportunity to put his affairs in order following the

³⁵ Montaigne, *Complete Works*, 790.

³⁶ Sommerville, *Sex and Subjection*, 123.

³⁷ Desan, *Montaigne*, 560.

marriage of Leonor.³⁸ Montaigne resigned himself to the fact that his daughter would inherit all his property and named her as his sole heir.³⁹ Yet beyond the transmission of his property, Montaigne desperately wanted to preserve his familial legacy. He included in Leonor's marriage contract a stipulation that if either she or her new husband, Francois de la Tour, refused to bear the name or the coat of arms of Montaigne, all property would go instead to Leonor's closest male relative.⁴⁰ Furthermore, Montaigne retained the right to reverse this clause and substitute anyone he preferred to bear the name and coat of arms of his house.⁴¹ Montaigne's concern with the survival of his name, coat of arms and seigneurie is reflective of larger anxieties regarding his own personal legacy. Having failed to produce a male heir, Montaigne was left with uncertainty regarding the continuation of his name and lineage. Montaigne's attempt to ensure his legacy despite his daughter's sex also speaks to the ability for men to self-fashion legacy. As a wealthy and noble man of the time, Montaigne was able to act with a high degree of agency and attempted to arrange the continuation of his name and legacy through legal means.

Montaigne's ability to self-fashion his legacy through his sex and status was similarly reflected by the project of the *Essays* themselves. From the very outset of the text, in the preface to the reader, Montaigne maintains his purpose in writing has been to live on after his death.⁴² He writes that the *Essays* are dedicated to his close friends and relatives "so that when they have lost me (as soon they must), they may recover here some features of my habits and temperament and by this means keep the knowledge they have had of me more complete and alive."⁴³ This notion of living through the text is repeated as Montaigne attempts to connect his living self with his *Essays*. He emphasizes the materiality of himself within the text, writing "I am myself the matter of my book," and seeks to characterize the *Essays* both as a product of and extension of his own body. This consubstantial element of the text with the author reinforced Montaigne's conception of legacy as being deeply tied to the understanding of reproduction and the body. It draws parallels between

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Ibid.

⁴¹ Ibid, 562.

⁴² Desan, *Montaigne*, 570.

⁴³ Montaigne, *Complete Works*, 2.

the legacy building power of the male body and that of the textual body. Rather than creating legacy through the propagation of children, Montaigne attempts to create legacy through the *Essays* in print. Indeed, the *Essays* have often been characterized as the brain child of Montaigne's mind, another element that reiterates the closeness of textual production and reproduction.

Supporting classical and medieval theories of the body and the reproductive process, the *Essays* propagate an understanding of ancestry and inheritance in direct relation to male power, reproductive or otherwise. Within his pervasive social and cultural attitude, Montaigne constructs legacy as a self-fashioned object and as an expression of masculinity. The association between inheritance and lineage promoted Montaigne's conception of sexual reproduction and the creation of children as the foremost tool in creating legacy. Such notions demonstrate the complex relationship between power and sexuality and inform Montaigne's understanding of these themes. Indeed, throughout history the body has been treated as a physical object upon which culture inscribes its interests and values, reflecting larger social attitudes and power relations.⁴⁴ The conceptions of male and female bodies inherited by the Renaissance exposed many of the anxieties and convictions that both helped to maintain, and threatened, early modern hierarchies.

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⁴⁴ Farr, *Authority and Sexuality*, 6.

Under the Fig-Leaf Knot: Two Women in Ezra Pound

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Ezra Pound's "Portrait d'une femme" from 1912 and "The Garden" from 1913 both concern women who lack a solid centre, and with it the vitality he considers inseparable from creative originality. However, beneath a depiction of human apathy -- what he would call the passive receiving of impressions -- Pound hides an act of artistic conception. "The Garden," in particular, dramatizes the poet's remaking of a living subject as art.

The form of "The Garden" continues over terrain Pound had broken into with "The Return." Its verse limps along with its subject, lines slumping on unstressed final syllables, as in "anæmia," "rabble," "excessive," "breeding." As the dying lady has been worn down almost to nothing, her page is mostly blank. In a lyric is as thin and delicate as she, empty spaces carry weight: "She would like some one to speak to her" (10), with a space between "some" and "one," recalls the mock-polite diction of "Portrait d'une femme." It is not any *someone* for whom the lady pines, but *some one*, a person of high enough class that he would say "one" to refer to himself instead of "I," a rhetorical masking of the personal within the general that the speaker will take up, himself.

Pound had written in "Psychology and Troubadours" of two varieties of human consciousness:

As to [man's] consciousness, the consciousness of some seems to rest, or to have its center more properly, in what Greek psychologists call the *phantastikon*. Their minds are, that is, circumvolved about them like soap-bubbles reflecting sundry patches of the macrocosmos. And with certain others their consciousness is "germinal." Their thoughts are in them as the thought of the tree is in the seed, or in the grass, or the grain, or the blossom. And these minds are the more poetic... (200)

The subject of "Portrait d'une femme" is of the former kind, her mind a whirl of detritus and fragments, not a solid centre or a germinal point, hence "Your mind and you are our Sargasso Sea" (1). And the sickly aristocrat of "The Garden" is the antithesis of Pound's organic

metaphors for creativity, hence "In her is the end of breeding" (8). The "Vortex" essay of 1914 would elaborate:

You may think of man as that toward which perception moves.

You may think of him as the TOY of circumstance, as the plastic substance RECEIVING impressions. OR you may think of him as DIRECTING a certain fluid force against circumstance, as CONCEIVING instead of merely observing and reflecting.

At the surface, both poems depict passive characters, trapped in a state of plastic infertility. Thus, the speaker would seem also to receive and record his impressions of barrenness passively, but his work conceals an artistic subterfuge beyond the bounds of mere replication.

Pound's epigraph to "The Garden," from a poem in Albert Samain's *Au jardin de l'infante*, calls attention to the title word's French origin. *Jardin* is rooted in the Latin *gardinus*, which refers simply to an enclosure ("Garden," *OED*). Plants that are gardened are domesticated by separation from the wild, and careful breeding. Though the wild may creep back into the garden as weeds, which in this case are the poor children -- seedlings -- who are "filthy, sturdy, unkillable" (6). Pound's ironic turn of Matthew 5:5, "They shall inherit the earth" (7), emphasises the final word: it is not simply the planet that this rabble will take over, but its *earth*: the soil, the fertile ground. To be filthy is to be marked with dirt. Flowers, on the other hand, are bred for display as objects, living finery. Such is the fate of this lady, denied the strength that builds through genetic mixing, as she will not associate with the lower classes. Though the poor may be unclean, they are tougher and more numerous (5-6). Isolation causes her "emotional anæmia" (4) and "exquisite" boredom (9), a thinness of character as well as blood. "Exquisite" is as much of pain as it is of beauty ("Exquisite," *OED*). When Pound writes, "In her is the end of breeding" (8), "end" refers not only to the termination of a practice but to its goal: a creature delicate, pure-blooded, and attractive, but also weak, isolated, and dying. Her survival depends on borders; if the wall were removed, the silk would blow away.

"A skein of loose silk blown against a wall" (1) recalls another line from "Psychology and Troubadours," in which Pound calls man "a few buckets of water, tied up in a complicated sort of fig-leaf" (200). For Pound, the fig-leaf is not to hide man's nakedness; it is, in fact, all that holds man together. Like an enclosure, it restricts as it preserves. So, why a Christian symbol of sexual shame? "The electric current gives light

where it meets resistance. I suggest that the living conditions of Provence gave the necessary restraint [to the Troubadour poets], produced the tension sufficient for the results..." (204-205). Poetry occurs in conditions of stress -- when one is blown against a wall. The scene of "The Garden" is a juncture of opposing energies: to the one side of the high-born woman is the rabble that will overthrow her, and to the other is the artist who threatens to violate her distinction from him. Even the *railing* to which she clings, as though to steady herself (2), carries its own undercurrent of strife. When Pound concludes, "She would like some one to speak to her, / And is almost afraid that I / will commit that indiscretion" (10-12), "discretion" is partially prudence, but also separateness, as in "discrete." Yet "commit" carries multiple meanings, too ("Commit," *OED*), and his syntax is uncertain. It is possible that the desire to be spoken to is an indiscretion of her own, which she fears he will commit to writing. This is exactly what he does.

There is, of course, the problem of the speaker's assumptions. The polite, noncommittal phrases like "some one," "would like," "exquisite and excessive," and "almost afraid," are imitations of aristocratic speech, but the lady in the poem does not say a word. We read only what the poet imagines her thoughts to be, and they are likely projections. To call her boredom "excessive" suggests something of exaggeration or performance in it, even a desire to be noticed, which is his own inference. Yet the oblique costuming of his own feelings as hers is itself an act of class mixing: worse than mingling with her socially, he outright merges their identities, until it is unclear whose mind is whose. He speaks not to her, but through her, as a persona, and commits this indiscretion to the page. The *robe de parade* is emptied of its *infante*, and the poet's soul is placed inside (Samain 1).

At the close of "Portrait d'une femme" -- "No! there is nothing! In the whole and all, / Nothing that's quite your own. / Yet this is you" (Pound 28-30) -- "this" is the poem itself, which Pound marks clearly as his own creation, not hers. Similarly, the title of "The Garden" refers to the poem: a tight enclosure for which the speaker has plucked this fading woman, and preserved her for display. It recalls the conceit of his Troubadour homage "Na Audiart," wherein the speaker's merging of various ladies for the most desirable traits of each resembles a botanist's selective breeding. The poet's triumph in "The Garden" is the more sinister for its subtlety. He appears merely to describe the object of his desire before him, when in fact he has remade her, and blended her with

himself. For a subject who is separate, untouchable, and guarded behind a wall, to violate the distinction of her very thoughts is necessarily an act of penetration. We note that "garden" has been used to refer to female genitalia since at least the seventeenth century ("Garden," *OED*); the speaker's infiltration of that space becomes poetic conception by force. He has drawn something of originality from the infertile, whether it would speak to him or not.

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- "Portrait d'une femme." Nadel, 45-46. The subject of the poem boasts a constant accumulation of fine but useless things, and her pages are thick with lines of fairly regular iambic pentameter.
- "Psychology and Troubadours." Nadel, 195-208.
- "The Garden." Nadel, 69.
- "The Return." Nadel, 52. Published in 1912, the poem prefigures "The Garden" in exploring the possibilities of *vers libre* to depict weakness in a gaunt, limping subject. Pound is not above referencing his own versification for a joke: he invokes the "slow feet" of his characters in a spondaic foot.
- "Vortex." *Poetry Foundation*. Chicago: Poetry Foundation, 15 February 2010. Web. Accessed 19 September 2018. Though published when Pound was moving beyond *Imagisme*, the piece carries forward his concern with fertility as central to artistic originality. He goes on to write, "All the past that is vital, all the past that is capable of living into the future, is pregnant in the vortex, NOW," and that "VORTICISM is art before it has spread itself into a state of flaccidity..."
- Samain, Albert. "Mon âme est une infante." *Au jardin de l'infante: Augmenté de plusieurs poèmes*. 73rd ed. Paris: Mercure de France, 1918. 7-10. Print. The full line is "Mon âme est une infante en robe de parade," but Pound keeps only "En robe de parade," the clothing.
- "Yard, n." *OED Online*. Web. Accessed 19 September 2018.

To Be Free and Impolite: Resisting the Rule of Sensory Etiquette in Slave Narratives

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Before serving as the first president of the United States, George Washington began to cultivate his appreciation of good manners. As a schoolboy, no older than sixteen, Washington ardently copied down 110 “Rules of Civility & Decent Behaviour” by hand¹ that would continue to structure class – and race relations – long after his time in office. Proscribing the ways one was to look, speak, and touch in the company of others, there is a clear sensory dimension to Washington’s early American etiquette. This paper aims to tap into the senses to understand how etiquette functioned to “exert control over relationships between persons and groups”² throughout the Antebellum era and into the Reconstruction period in the Southern United States. During this timeframe, masters used ideas of civility to keep their slaves in bondage. In order to resist their condition and survive bondage, slaves worked creatively and strategically against the confines of sensory etiquette. Acts of resistance ranged in subtlety. Slaves practiced dissimulation, appearing to comply with the rules of sensory etiquette in some spaces and openly defy them in others. The first section of this paper addresses the internal strife and material consequences that resistance to sensory etiquette entailed for slaves. Section two considers the way that slaves publicly gave the appearance of complying with sensory etiquette as they accompanied their masters to church, but privately practiced resistance and religion away from watchful eyes and attentive ears. Section three focuses on the sartorial hierarchy. Slaves resisted white southerners’ expectations of how a slave should look by adding colour and vibrancy to the ways that they dressed. Finally, section four examines overt acts of resistance to sensory etiquette. In the early years after the Civil War, freed slaves became increasingly emboldened to question and defy the

¹ George Washington, *George Washington's Rules of Civility & Decent Behaviour in Company & Conversation: 110 Don'ts 1942*, ed. John Allen Murray (Marlborough, Wiltshire: Adam Matthew Digital, 1942), 5-6.

² Bertram Wilbur. Doyle, *The Etiquette of Race Relations in the South: A Study in Social Control* (N.Y: Schocken, 1971), 5.

rules of civility that sought to keep them oppressed. Many chose to drop aural and haptic customs previously punishable, in some cases, by whipping. For example, using Master and Mistress to address one's owners and white people more generally,³ and pulling off one's hat as a white person approached.⁴ Thus, many of the 110 practices that served as a sign of civility for well-to-do men like George Washington, simultaneously signified the mark of oppression for generations of black slaves.

Section I: Punishing Crimes of Incivility

At stake for slaves who dared transgress sensory etiquette in the way that they looked, spoke, and physically engaged with white masters were two kinds of consequences, which could be equally damning. In his book *The Etiquette of Race Relations in the South*, Bertram Wilbur Doyle describes the powerful internal consequences that would follow when one failed to adhere to the laws of etiquette. He writes,

Etiquette enables persons to act freely within the limits which the formal rules of personal relations impose and has, perhaps, no higher sanction than the feeling of superiority one feels when one succeeds, or than the sense of inferiority when one fails.⁵

Indeed, the narratives of prominent abolitionists like Frederick Douglass, famous for opposing slavery with the stroke of his pen, reflect the difficulties of abandoning sensory etiquette altogether in freedom. Doyle makes this point with respect to Douglass' use of titles like "Master" and "Mistress" in his *Narrative of the Life of Frederick Douglass, an American Slave*.⁶ Ordinary survivors of slavery – whose stories are preserved in initiatives like the Federal Writers' Project, reflective of the experiences of former slaves across 17 states mainly in the American South – seem to retain the use of these terms as well.⁷

³ Bertram Doyle, *The Etiquette of Race Relations in the South: A Study in Social Control* (N.Y: Schocken, 1971), 2.

⁴ Frederick Douglass, *Narrative of the Life of Frederick Douglass, an American Slave, Written by Himself* (Dublin: Webb and Chapman, 1845), 79.

⁵ Bertram Doyle, *The Etiquette of Race Relations in the South*, 5.

⁶ *Ibid.*, 6.

⁷ Spencer Crew, Lonnie Bunch, and Clement Price, *Slave Culture. 3 Vols. A Documentary Collection of the Slave Narratives from the Federal Writers Project* (Westport: Greenwood Press, 2014), ix.

Breaking sensory etiquette could cause internal strife as Doyle suggests, but it could also have obvious material consequences for a slave. As Frederick Douglass recounts, such offenses could be punishable by whipping:

Does he speak loudly when spoken to by his master? Then he is getting high-minded, and should be taken down a buttonhole lower. Does he forget to pull off his hat at the approach of a white person? Then he is wanting in reverence, and should be whipped for it. Does he ever venture to vindicate his conduct, when censured for it? Then he is guilty of impudence — one of the greatest crimes of which a slave can be guilty.⁸

The sheer range of sensory deviations that one could be punished for motivated slaves to work in creative and strategic ways to resist this oppressive etiquette.

Section II: Resistance, Religion, and the Appearance of Obedience

Across the Southern United States, slaves often accompanied slaveholders to church. At church, slaves gave some of their most convincing performances of complying with sensory etiquette. Although slaves could be quite visible, especially in churches where they outnumbered white patrons,⁹ etiquette dictated that they not draw too much attention to themselves. Recounting his experience attending a Methodist church with his master as a child, Jacob Branch, a survivor from Texas warns, “Us better sit quiet too, or do us ketch it when dey git us home.”¹⁰ Anna Scott, a survivor from Florida, also drives this point home, when she recalls how “the slaves were forbidden to sing, talk, or make any other sound [...] under the penalty of severe beatings.”¹¹ Both the seating arrangements and the auditory design of churches enabled slaves to go largely unseen and unheard. At least in Anglican churches, the closer one sat to the pulpit, the more one heard of the sermon and

⁸ Frederick Douglass, *Narrative of the Life of Frederick*, 79.

⁹ Bertram Doyle, *The Etiquette of Race Relations in the South*, 3.

¹⁰ Spencer Crew et al, *Slave Culture*, 9.

¹¹ *Ibid.*, 25.

was able to be heard in return.¹² Unsurprisingly, former slaves recount being “set in the gallery”¹³ or “in de back of de church.”¹⁴

In addition to being seated separately from white churchgoers, black slaves also enjoyed separate sermons. When a white preacher gave his sermon, it was usually received without issue. By contrast, the sermons given by coloured preachers were carefully monitored. As Leah Garret, a survivor from Georgia explains, the slaveholders “always had somebody to follow de slaves to church when de colored preacher was preachin’ to hear what wuz said and done. Dey wuz ‘fraid us would try to say something ‘gainst ‘em.”¹⁵ The typical sermon preached to slaves stressed the need to obey one’s master and mistress to gain the love of the Lord – and avoid the sting of the whip. According to Henry Wright from Georgia, “none of the slaves believed in the sermons but they pretended to do so.”¹⁶ Minnie Davis, yet another survivor from Georgia, recounts that as the preacher gave his sermon out loud, her mother would be “praying to herself: ‘Oh, Lord please send the Yankees on and let them set us free.”¹⁷ Thus, inward resistance frequently accompanied outward compliance to sensory etiquette. However, navigating the pretence of compliance was tricky business.

Although the sensory etiquette observed in churches did not require the complete silence or invisibility of slaves, the extent to which a slave could be seen and heard expressing themselves in prayer or song was unclear and varied according to the whims of individual slaveholders. The testimony of Celestia Avery and Leah Garret, survivors from Georgia, highlight the variability in slaveholders’ attitudes towards these common church practices. On the acceptability of song and the contested nature of prayer, Ms. Avery explains:

The only self-expression [that slaves] could indulge in without conflict with the master was that of singing. Anyone heard praying was given a good whipping, for most masters thought their prayers

¹² Richard Cullen. Rath, *How Early America Sounded* (New York: Cornell University Press, 2005), 104.

¹³ Spencer Crew et al, *Slave Culture*, 5.

¹⁴ *Ibid.*, 6.

¹⁵ *Ibid.*, 17.

¹⁶ Spencer Crew et al, *Slave Culture*, 41.

¹⁷ *Ibid.*, 15.

no good since freedom was the uppermost thought in everyone's head.¹⁸

However, Ms. Garret's testimony further restricts the nature of self-expression that was acceptable for slaves to demonstrate. She notes that particular songs with overt messages of freedom such as "'We Shall Be Free' and 'Of For a Thousand Tongues to Sing,'" were among those forbidden for slaves to sing.¹⁹

In secret, away from the watchful eyes and attentive ears of masters, slaves pursued total self-expression in both prayer and song. Slaves employed a variety of strategies to help conceal their behaviour. Their meetings were usually held at night, away from the main plantation house, perhaps in the forest or near a riverbank, where one of the attendees was tasked with keeping watch. The defining feature of these meetings, consistent in the testimony of former slaves from state to state, is the use of pots to muffle the sounds of song and prayer. Thus, what appears to be compliance to sensory etiquette – being careful not to disrupt the quietude of the Southern plantation – is better understood in terms of resistance.

Section III: Upsetting the Sartorial Hierarchy

Out of 110 "Rules of Civility & Decent Behaviour," at least two rules were central to maintaining the sartorial hierarchy that distinguished the appearance of black slaves from free white persons. This task being increasingly important as slaves became visibly whiter. Washington's 51st rule instructs, "Wear not your Cloths, foul, unript or Dusty but See they be Brush'd once every day at least and take heed that you approach not to any Uncleaness."²⁰ By and large, the hard labour performed by slaves made it impossible for them to comply with this rule on most occasions. Incidentally, white people were seemingly dismayed when slaves *were able* to adhere to this rule, unless it was on their own terms. As Aunt Phoebe Jane Burrell, a survivor from Texas recounts, "Sometimes Missus Carter would dress me up in a starched dress and take me along with her to church or funeral or social."²¹ As per Washington's 52nd rule, he instructs:

¹⁸ Ibid., 5.

¹⁹ Ibid., 17.

²⁰ George Washington, *Rules of Civility & Decent Behaviour in Company & Conversation*, 22.

²¹ Spencer Crew et al, *Slave Culture*, 11.

In your Apparel be Modest and endeavour to accommodate Nature,
rather than to procure Admiration keep to the Fashion of your
equals Such as are Civil and orderly with respect to Times and
Places.²²

Essentially, sensory etiquette dictated that a slave never dress better than a white person. Indeed, slaveholders took several measures to see that this was so. In their seminal book *Stylin*, Shane White and Graham White explain that “the clothing of the genteel” or slaveholding class, resemble the complete opposite of what is described in Washington’s 51st rule, that is, it “had to be close- rather than ill-fitting, clean and brushed rather than soiled and, above all, smooth in texture rather than coarse.”²³ On the character of the clothes “doled out to slaves,” the pair observes that these garments tended to be “drab, uniform and limited to relatively few items.”²⁴ The journal of Frances Butler Leigh, mistress on two Georgia plantations, provides some more insight into the colour and texture of the cloth provided to slaves. She writes,

The allowance of clothes made yearly to each slave [...] is a certain number of yards of flannel, and as much more of what they call plains – an extremely stout, thick, heavy woollen cloth, of a dark grey or blue colour, which resembles the species of carpet we call drugget. This, and two pairs of shoes, is the regular ration of clothing; but these plains would be intolerable to any but Negroes, even in winter, in this climate, and are intolerable to them in the summer.”²⁵

Note how Ms. Butler describes the cloth as “intolerable to any but Negroes.” In doing so, she engages with the kind of “haptic racial stereotypes” described by Mark M. Smith that portrayed black skin as “thick and insensitive.”²⁶ Harriet Jacobs, author of *Incidents in the Life of a Slave Girl*, describes the “linsey-woolsey dress given [to her] every winter by Mrs. Flint” as “one of the badges of slavery.”²⁷ Sharing this sentiment, Rube Witt, a survivor from Texas remarks, “You ought to seed them

²² George Washington, *Rules of Civility & Decent Behaviour in Company & Conversation*, 22.

²³ Shane White and Graham J. White, *Stylin: African-American Expressive Culture from Its Beginnings to the Zoot Suit* (Ithaca: Cornell University Press, 1999), 8.

²⁴ *Ibid.*, 9.

²⁵ Fanny Kemble, *Journal of a residence on a Georgian plantation in 1838-1839* (1863), 61.

²⁶ Mark M. Smith, *How Race Is Made: Slavery, Segregation, and the Senses* (Univ of North Carolina Pr, 2007), 18.

²⁷ Harriet Jacobs, *Incidents in the Life of a Slave Girl* (Open Road Media, 2015), 13.

pulling off them ‘croaker-sack’ (home-spun) clothes when Master say we was free” in his recollection of the end of the Civil War.²⁸

Slaves worked creatively to discard, repurpose, and replace these sartorial “badges of slavery”²⁹ with an “African American aesthetic.”³⁰ Slave women in particular were the ones who performed the “spinning, weaving, dyeing, and sewing” necessary to infuse their family’s clothing with vibrancy and style, after a long day’s work.³¹ In an effort to express themselves and upset the sartorial hierarchy, slaves also incorporated elite items into their wardrobe that they purchased, stole, or had handed down to them from masters and mistresses as rewards.³² Rather than indicate an adoption of white values, these actions signified that slaves were “subverting white authority.”³³

Apart from serving as venues for slaves to practice inward resistance to sensory etiquette, churches were also key sites for slaves to upset the sartorial hierarchy. White and White describe how slaves’ Sunday outfits provoked “feelings of bemusement or contempt” in white observers.³⁴ Indeed, Ms. Butler describes the mixture of colourful “frills, flounces, ribbands, combs [...] handkerchiefs [...] beads, bugles, flaring sashes, and [the] little fanciful aprons” worn by slaves to church as being “ludicrous” and “grotesque.”³⁵ Thus, Sunday dress allowed slaves to be seen and heard in a way that could not illicit punishment on its own unlike other means of sensory resistance, such as singing and praying for freedom.

Section IV: Waging War on Sensory Etiquette

Although these acts are less well documented, slaves did resist sensory etiquette in obvious, unmistakable ways. Three of Washington’s rules, deliberately transgressed by slaves, are worth examining here. Rule 26 instructs one as to the proper haptic practices to perform in the company of others:

²⁸ Spencer Crew et al, *Slave Culture*, 1022.

²⁹ Harriet Jacobs, *Incidents in the Life of a Slave Girl*, 13.

³⁰ Shane White and Graham J. White, *Stylin*, 25.

³¹ *Ibid.*

³² *Ibid.*, 14.

³³ *Ibid.*, 16.

³⁴ *Ibid.*, 28.

³⁵ Fanny Kemble, *Journal of a residence on a Georgian*, 68-69.

In Pulling off your Hat to Persons of Distinction, as Noblemen, Justices, Churchmen &c make a Reverence, bowing more or less according to the Custom of the Better Bred, and Quality of the Person.

With respect to the etiquette of race relations, the “quality of the person” was largely determined by one’s colour. Black slaves pulled off their hats and bowed to whites – slaveholders or otherwise – irrespective of whether they were “persons of distinction, as noblemen, justices, and churchmen.”³⁶ Relatedly, Washington’s 39th rule instructs as to the aural aspects of sensory etiquette. He warns, “In writing or speaking, give to every person his due title according to his degree & the custom of the place.”³⁷ From the journal of the ever-disgruntled Ms. Frances Butler Leigh, it seems that blacks dared transgress these last two sensory rules only after gaining some semblance of freedom at the end of the Civil War. She recalls,

Their whole manner changed; they took to calling their former owners by their last name without any title before it [...] dropped the pleasant term of ‘Mistress,’ took to calling me ‘Miss Fanny,’ [...] and tried speaking to me with their hats on, or not touching them to me when they passed me on the banks.

Such rudeness was intolerable to former slaveholders, who were accustomed to an etiquette premised on inequality and hierarchy.

Bolder yet were those slaves who violated sensory etiquette in the presence of slaveholders and foremen under formal bondage. According to the testimony of Caroline Ates, a survivor from Georgia, “[her] maw [...] could cuss and she warn’t ‘fraid. Was Hodges tried to whop her with a cowhide and she’d knock him down and bloody him up.”³⁸ Such a rare act of resistance plainly violated Washington’s 49th rule, “Use no Reproachfull Language against any one neither Curse nor Revile.”³⁹ More shockingly, it violated strict rules for who was to be touched. For the customary recipient of a whipping to do the beating would be unimaginable and reviled by slaveholders accustomed to due respect from obedient slaves. Self-defence was as good a motivation as any for slaves to transgress the laws of etiquette. Nevertheless, it was a motivation that many southern whites could not forgive.

³⁶ George Washington, *Rules of Civility & Decent Behaviour in Company & Conversation*, 15.

³⁷ *Ibid.*, 19.

³⁸ Spencer Crew et al, *Slave Culture*, 531.

³⁹ George Washington, *Rules of Civility & Decent Behaviour in Company & Conversation*, 21.

Conclusion

Slaves resisted the rule of sensory etiquette unapologetically, braving both the internal and material consequences that would follow. They worked creatively and strategically using their knowledge of particular spaces, namely churches in this essay, to undermine a sensory etiquette in ways both seemingly imperceptible and blatantly obvious to slaveholders. Without drawing attention to themselves in public churches, slaves carved out their own secret spaces to recite the forbidden prayers and sing the forbidden songs for God's eyes and ears only. When slaves did venture to draw attention to themselves in public, they did so using colourful and eclectic Sunday dress. The Sunday finery of slaves was likely to draw bemused stares from white onlookers but unlikely to beckon the whip from slaveholders. In this way, slaves were able to carefully upset the sartorial hierarchy and avoid punishment in the process. Both during and in the immediate aftermath of slavery, blacks engaged in overt resistance to sensory etiquette. They addressed whites without title, refused to tip their hats, cursed, and touched bodies they were not supposed to. Through each of these acts, whether seemingly civil or obviously impolite, slaves rejected the sensory etiquette they inherited from America's first president. Perhaps forfeiting civility in the process, generations of slaves gained freedom as they discarded the shackles of *decent behaviour*.

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As Fluid as the River: Huck's America and the Flux of Nature's Definition

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Set along the Mississippi River during the antebellum era, Mark Twain's *The Adventures of Huckleberry Finn* paints idyllic scenery that appears to stand in stark contrast to the malevolence of humanity. To Jim and Huck, the river represents a means of escape, a sanctuary that unshackles one from social expectations and limitations. As the story progresses, however, it becomes increasingly clear that society's influence invades even nature as an ideal, and that nature is no true sanctuary from humanity. The definition of nature has long been contested and debated, and Twain's deliberate usage of the word in specific scenarios epitomizes the versatility of the word "nature" under the distortive power of human language. Mark Twain's "nature" is multifaceted – it represents the seemingly untouched forests and rivers of America but is also associated with predispositions to human behaviour (e.g. human nature). In order to examine the definition and role of nature in America, it is important to understand how the relationship between humanity and nature is both conflicting and intimately intertwined. Twain illuminates this contradictory and enigmatic relationship by using local dialects, descriptive pastoral imagery, juxtaposition, and irony to portray nature in an ostensibly unvarnished state. Nature is idealized as freedom from civilization, slavery, and hardship; despite this, the repeated human encroachment on nature, as well as attempts to use nature to justify often problematic human behaviour, question the values of rectitude and expected normalcy attributed to nature in the American context. As much as nature appears to distance Huck from societal beliefs, Twain uses irony to show that much of nature, both as a physical entity and an ideal, is an integral part of human society.

The tone of *The Adventures of Huckleberry Finn* is very different from that of its predecessor, *The Adventures of Tom Sawyer*. This dramatic shift toward an impoverished protagonist and socioeconomic incongruity is indicative of Twain's growing disillusionment with humanity, and his juxtaposition of mankind with nature investigates the

flaws of American society. Nature plays a critical role in this work of social criticism because it stands in contrast to mankind. Through Huck, Twain vividly describes the town of Bricksville, Arkansas as one that is poverty-stricken and in decline: “All the streets and lanes was just mud; they warn’t nothing else but mud—mud as black as tar and nigh about a foot deep in some places...” (Twain 152). The pronounced lack of greenery in Bricksville, as well as Twain’s use of simile to invoke tar (a by-product of human activity), work to show mankind’s active suppression of the natural force of growth. Conversely, Twain often depicts nature in a more pastoral, alluring light: “Not a sound anywhere – perfectly still – just like the whole world was asleep, only sometimes the bullfrogs a-cluttering, maybe” (129). Twain’s descriptive accounts of human settlements and the natural environment diverge in tone, thus presenting nature as the antithesis of society.

The book’s demarcation of an opposing relationship between humans and nature helps equate nature to freedom – from slavery, from society, from hardship. Alongside Twain’s descriptive imagery, local colour is employed to further capture the image of an unvarnished American South. The usage of the Missouri Negro dialect (used by Jim, Pap, and Huck) and “Pike County” dialect (used by the Shepherdsons in particular) (Southard and Muller 630) not only accentuates class divisions but instils realism into the story. As Huck distances himself from society, it appears that the “sivilization” imposed upon him by Miss Watson and Widow Douglas fades away. Huck tends to think and operate alongside the expectations set by his environment. Without the rigid confines of St. Petersburg, Huck’s language thus begins to change: “I had stopped cussing, because the widow didn’t like it; but now I took to it again because pap hadn’t no objections” (Twain 34). Huck’s fake death and move to the river further symbolizes his transformation into someone more harmonious with nature. When confronted by the woman on Jackson’s Island about his identity, Huck “shook like a leaf” (70); this description juxtaposes humans (represented by Huck, a boy recently in the process of being “sivilized”) against nature (a leaf that alludes to lush forestry), and also insinuates Huck’s transformation into what may be interpreted as a new self. During his indoctrination at St. Petersburg, Huck has trouble comprehending the nature around him and says, “the wind was trying to whisper something to me and I couldn’t make out what it was” (11). Society creates a barrier to communication between the individual and their surrounding nature, but the barrier needs not be

permanent; after spending time on the Mississippi River, Huck gains insight into the wind's words and says, "if a breeze fans along and quivers the leaves it makes you feel mournful, because you feel like it's spirits whispering – spirits that's been dead ever so many years – and you always think they're talking about you. As a general thing it makes a body wish *he* was dead, too, and done with it all" (232). The two passages show parallel situations with drastically different outcomes, alluding to change in Huck's perception. It is important to note that although the de-socialization process provides Huck with a better understanding of nature, Huck acknowledges that the only way for one to fully understand nature is to first meet death. In other words, society is simply inescapable for the individual and irreconcilable with the wilderness.

Despite the many passages that seem to portray the Mississippi River as a refuge from human influence, other passages make it clear that it is not the case. Twain incorporates into the story the southward flow of the Mississippi River to show that Jim and Huck are not escaping from the Antebellum South, but are rather ironically sinking deeper in. Pastoral experiences that provide an illusion of freedom are routinely interrupted by trouble on the river, whether it be murderous thieves, the degenerate King and Duke, or the giant steamboat that crashes into the raft and physically separates Jim and Huck: "She [the steamboat] was a big one...looking like a black cloud with rows of glow-worms around it...with a long row of wide-open furnace doors shining like red-hot teeth...as Jim went overboard on one side and I on the other, she come smashing straight through the raft" (106). Jim and Huck, who were beginning to develop mutual understanding aboard the raft, would have their rapport temporarily severed by the steamboat, a detailed and monstrous representation of the industrializing America. American industry is shown here as a malignant force that threatens the repose of the vulnerable natural environment.

Nature's ability to undo societal indoctrination is also questionable. Huck's view of slavery does not seem to change after spending time on the river with Jim and building his trust. Huck's choice to not report Jim's whereabouts to Miss Watson is accompanied by the self-destructive utterance, "All right, then, I'll *go* to hell" (228). While this shows Huck's commitment to ensuring Jim's safety, a close reading reveals the implication that Huck's view on the morality of slavery remains unchanged. Despite his acceptance of the idea that black slaves are more than capable of love for their family, Huck continues to carry

societal values internally by believing that a transgression against the institution of slavery will destine him for hell. Furthermore, while Huck's desire to "light out for the Territory ahead of the rest" at the end of the story is often interpreted by scholars to signify Huck's new attempt to escape society (Schmidt 55), the reality is that Huck's trip to the West would, ironically, be yet another example of the encroachment upon Native land by white colonial culture. Twain shows that nature has in fact been unsuccessful at transforming Huck's beliefs, and his "rebirth" into a new self may merely be an idealistic illusion. The passages therefore provide further evidence that neither nature nor the individual can permanently escape from societal forces.

And yet, America romanticizes nature. Twain depicts America's tendency to idealize nature and use it to shape their reality in both benign and problematic ways. When Huck is living under the care of Widow Douglas in St. Petersburg, he says "I felt so lonesome I most wished I was dead" (Twain 11). This "lonesomeness" does not escape Huck after he runs away, as he uses the very same word again on Jackson Island, "by-and-by it got sort of lonesome, and so I went and set on the bank and listened to the currents washing along...there ain't no better way to put in time when you are lonesome; you can't say so, you soon get over it" (49). Huck's desire to seek out nature shows his perception of nature as a companion, and Twain brings attention to this through the repeated usage of "lonesome". In this case, Huck's idealization of nature helps him ameliorate the feeling of isolation. The human perception of what nature is, however, can also be adopted for more nefarious purposes. Twain creates many dialogues invoking nature to reveal that the idea of "natural" is often equated to rightness and normality, and that what is perceived as "natural" is simply what is expected and meant to be. Huck rhetorically asks Jim, "ain't it natural and right for a cat and a cow to talk different from *us*?" (91) during a conversation about the existence of different languages. This absurd dialogue serves a deliberate purpose - it shows that an individual's interpretation of "nature" can be used to justify the social boundaries we create. Huck is later surprised to find out that Jim cares for his family, to which Huck says, "It don't seem natural, but I reckon it's so" (167). Huck does not stop to consider his definition of "natural" and how it came about; instead, he seems to genuinely believe that the idea of a black man with empathy and family values is absurd. Buck Grangerford uses nature to justify the historic feud between the Grangerfords and Shepherdsons, saying that a man shooting

the plaintiff upon losing a lawsuit is something “he would naturally do, of course” (120). Twain’s characters do not possess self-awareness regarding their assumptions of nature, nor are they aware of their attempts to bastardize nature in creating boundaries that suit their realities.

Twain uses Huck specially to emphasize the fluidity of the idea of “nature” in American society. Huck is hesitant to return Jim to Miss Watson because he believes, as a matter-of-fact, that “everybody naturally despises an ungrateful nigger” (226). Through such an assumption, Twain invites contemplation by readers: why should a slave feel obligated to show their owner gratitude, when they are treated as mere commodity? Why should it be “natural” to despise an individual for exercising their freedom and independence, when America is founded on the “self-evident” truth that “all men are created equal”? Huck’s perception of nature seems especially inconsistent because Huck rejects the notion that fogs are natural. Readers are clearly aware that fogs are a phenomenon that occurs even without human interference; “Nothing don’t look natural nor sound natural in a fog” (94), Huck says, without consideration that the phenomenon should be considered much more natural than the problematic human behaviours he deems natural. The fog had separated Jim from Huck, relegating Huck to isolation again - because the Antebellum South and the steamboat both work to disrupt communication between black and white, Huck makes the deliberate choice to include fog in the category of “non-natural”. The natural environment can paradoxically act as both a force of cohesion (by facilitating communication between Huck and Jim) and a force of division (through the fog), but Huck divides up “nature” in order to fit only certain parts into his narrow definition. Through Huck, a character without much self-awareness, Twain shows that the definition of “nature” is a social construct that society, and even an individual, cannot form a consensus upon.

Consequently, nature’s prominent role in *The Adventures of Huckleberry Finn* is two-fold. For one, nature is presented by Twain as a direct contrast of society. Nature acts as a vice for freedom and a rebelling force that attempts to erase social preconceptions. Huck’s journey, however, shows that this force may not exactly be successful. The serenity of Huck and Jim’s life aboard the raft is constantly interrupted and jeopardized by human forces, and Huck’s attempt to distance himself from society does not seem to have much of an impact

on his moral compass. The second role of nature in the story is arguably more significant: nature is important in the American context because the ideal of nature and how it is manipulated can act as American society's mirror onto itself. Imposed onto the words "nature" and "natural" are individual desires to make sense of the surrounding world. The beauty of the word "nature" is that, upheld as a virtue of normalcy, it allows justification of our actions and beliefs, for better or worse. Nature cannot be separated from human culture because human encroachment onto nature is not only physical but linguistic as well. Huck, though he is unaware of it, has a convoluted view of what is "natural" – he deems it natural for a purportedly democratic society to chastise a slave for ungratefulness toward his master, while ironically viewing fogs as unnatural because it is a force of isolation much like Missouri and the steamboat. When Twain's characters hold an opinion that they feel can be threatened, they can find no better supporting evidence than "nature", a model of how things were before human arrival and how things will be after humans are gone. "Nature" is venerated by America because it is perceived to be untouched, and Twain's ultimate irony in *The Adventures of Huckleberry Finn* is that the ideal and definition of nature are heavily distorted by human language. Mark Twain challenges the assumptions about what is natural and what is not, and reveals our perception of nature to be a dynamic social construct, constantly modified to suit our needs.

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Notions of Divine Kingship in the Ancient Near East: An Analysis of Deification in the Reigns of Naram-Sin and Shulgi

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Common knowledge has often mislabelled Ancient Mesopotamia as a society which practiced divine kingship. In reality, the practice of royal deification was by no means universal in the ancient Near Eastern context. Modern scholarship appears to limit the practice to two particular instances in the chronology: the reign of Naram-Sin of Akkad, and during the Ur III period, beginning with the reign of Shulgi (Brisch 2013). The fact that these two rulers are credited with attempts to deify themselves in the eyes of their subjects suggests that this was not merely a religious idea, but one of a political nature. Both Naram-Sin and Shulgi faced significant political challenges during their reigns, from both rebellions and issues concerning succession (Michalowski 2008). These political challenges had a profound impact on the nature of the reigns of these two kings and warrant a deeper analysis. It is impossible to untangle these specific political contexts from each king's respective deification, and the political aspects of these decisions may serve as an appropriate explanation for such a radical change in the nature of power in the Ancient Near East. Therefore, the political dimensions of this act can be extrapolated through the methods of how both Naram-Sin and Shulgi "deified" themselves, as well as the one-off nature of these processes. The deification of these two kings was inherently a political action brought forward to consolidate power following times of political unrest, rather than an entrenchment of Royal Divinity into the religious systems of the Ancient Near East.

Naram-Sin: The Great Rebellion, Victory Stele, and Bassekti Inscription

The reign of Naram-Sin, grandson of Sargon of Akkad, was marked by an event that has now come to be known as "the Great Rebellion" (Tinney 1995). This was actually more likely a series of rebellions against the reign of the Akkadians and involved a number of political players, peoples, and a series of conflicts (Brisch 2013; Tinney

1995). While this certainly appears to have been a defining moment in the downfall of the Akkadian Empire (Brisch 2013), Naram-Sin survived these rebellions and went on to produce documents and statues to establish his superiority over the land (Porter 2013; Tinney 1995). It is from this evidence that the deification of Naram-Sin is derived. Two pieces are of importance to this issue: The Victory Stele and the Bassekti Inscription. While both have been used as evidence of deification, the context of their construction is also of importance when considering their meaning. The Victory Stele was constructed following the defeat of the Lullabi rebellion, and the Bassekti statue following the defeat of the Southern Coalition (Porter 2013). Their locations are important as well: it appears that both of these pieces were placed on the edge of Akkad's sphere of influence, with the Bassekti statue in the far north and the Victory Stele at Sippar (Porter 2013). These contexts immediately indicate that they have a purpose of maintaining and marking control: they tell stories of how Naram-Sin has maintained his influence and are placed at key locations which are far away from the centre of his power. Therefore, the analysis of these objects and their inscriptions should focus on that context.

The Victory Stele of Naram-Sin (Figure 1) is notable for its use of the Dingir, or the divine notifier. While this has been taken as a sign of his divinity in the past, modern scholarship has re-examined this issue (Brisch 2013). The Stele itself depicts Naram-Sin as a larger-than-life figure, presented in a larger and more detailed image than other figures on the stele. He is located “in-between” his subjects and the symbol of the Dingir. Some say his presentation is indicative of his divine status (Brisch 2013), but it is not overtly clear that this is true. On the stele, the dingir (which is also the symbol for heavens and sky, not just god) is still situated above Naram-Sin. While he is presented as a much more important figure than anyone else on the image, it should also be remembered that this is a monument to his actions, and it would make sense that the king (the most important figure at the time) would be presented as the largest and most important individual. The stele can be seen as indicative of Naram-Sin having a place between the human and the divine worlds (which is a familiar motif in Mesopotamian ideology) but is not sufficient evidence of his deification.

The Bassekti inscription is the second piece of evidence usually used to point to Naram-Sin's deification. The inscription on the piece makes reference to Naram-Sin's divinity by stating that:

Naram-Sin, the mighty, king of Agade, when the four quarters together revolted against him, through the love which the goddess Ishtar showed him, he was victorious in nine battles in one year, and the kings whom they had raised he captured. In view of the fact that he protected the foundations of his city from danger, his city requested from Ishtar in Eanna, Enlil in Nippur, Dagan in Tuttul, Ninhursag in Kesh, Ea in Eridu, Sin in Ur, Shamas in Sippar, Nergal in Kutha, that Naram-Sin be god of their city, and they built within Agade a temple to him (Porter 2013).

What is important about this passage is not the deification of Naram-Sin, but the situation in which his deification occurred. It makes explicit reference to his “protection of the city from danger” and outlines how his subjects asked the gods for permission to deify Naram-Sin. This inscription implies that this royal deification is either justified by or a direct result of Naram-Sin’s abilities to protect his subjects during rebellion. This is important, because during Naram-Sin’s reign, the Akkadian empire was already well into its decline (Brisch 2013). In addition, the inscription invokes the power of other, established gods as a means of deifying Naram-Sin. This would portray Naram-Sin in the same light as the Victory Stele and present the idea that while Naram-Sin is above the people, he is still below the heavens. Since the city of Akkad has never been found, any such temple to Naram-Sin has never been found. Therefore, the nature of this temple cannot be analyzed. It is possible that this temple was similar to the ones of other gods, but it is equally possible that the temple was merely a monument to Naram-Sin’s secular control and reign over the city. Due to the vague nature of this inscription and its placement along the edges of Akkadian’s sphere of influence, it can be deduced that this piece is meant to display Naram-Sin’s successes in a positive light, perhaps as a method of maintaining Akkad’s political control over the region.

In both of these cases (the Victory Stele and Bassekti Inscription), it appears that the deification of Naram-Sin has manifested as a political response to a tense situation in which Akkadian control was beginning to erode. Both of these pieces, located far from the centre of the Akkadian empire, seem to suggest that deification was used as a political tool in order to maintain control over parts of the Empire which had previously shunned Akkadian rule. The city of Akkad has never been found, and thus, any further analysis of Naram-Sin’s deification (such as

looking at the temple dedicated to him) is limited. However, using the evidence presented currently, it is clear that the deification of Naram-Sin was vested in political motives and, because no evidence persists after his reign, this deification was short-lived and had no lasting religious effects on the people of the Near East.

The Third Dynasty of Ur: Nexus of Royal Godhood

The other generally accepted instance of royal deification in the ancient Near Eastern context was during the reign of Shulgi in the Ur III period. It has been put forward that this practice remained in place for some of Shulgi's successors (Brisch 2013), but the practice fell out of use after 80 years, and the end of the Third Dynasty of Ur (Brisch 2013). It is true that the evidence of deification during the Ur III period is much more concrete than Naram-Sin's. However, a large amount of the evidence is similar to the inscription seen on the Bassekti statue, which points to similar conclusions about the nature of Shulgi's deification.

The context of the reign of Shulgi is remarkably similar to Naram-Sin's. Shulgi inherited the throne after his predecessor, Ur-Nammu, was killed in battle (Michalowski 2008). According to Michalowski, this represents a major political catastrophe, as it was a symbol of the gods' rejection of Ur-Nammu's rule (2008). In order to consolidate his rule during this period of crisis, Shulgi began several conflicts and pushed forward administrative reform (Klein 1981; Michalowski 2008). He put temple estates under direct state supervision, created production and redistribution centres, and standardized bureaucratic practices (Michalowski 2008). Temples were erected in his name at places such Umma and the capital city of Ur, where he was supposedly worshipped by his cult (Michalowski 2008). However, it is clear that the deification was largely intertwined with the political and economic reforms of his reign, which were a result of the crisis of his inheritance. Therefore, it is true that like Naram-Sin, his deification was a result of political and economic processes and not a substantial change in religious practice.

Interestingly, scholars have tended to attribute Shulgi's attempts to liken himself to the mythical Gilgamesh as further evidence that Shulgi's deification was a process rooted in ancient Mesopotamian custom. However, Gilgamesh was not a divine king (Porter 2013). Shulgi's attempts to liken himself to Gilgamesh (Michalowski 2008) were probably rooted in the same reasons as his eventual deification: an

attempt to solidify himself politically in a trying time. Comparing oneself to Gilgamesh would have a stabilizing affect due to affirming a connection with the earliest kings of the region but is not akin to deification.

When looking at the Royal Hymns of Shulgi (Klein 1981), it becomes even more clear that the deifications of Naram-Sin and Shulgi are strikingly similar. These hymns are a collection of poems which outline interactions between the gods, Shulgi, and his subjects, and tell the story of his rule and eventual ascent. One passage outlines Shulgi's campaigns against the Gutians, who had sacked Sumer:

The hero avenged his city. Whatever had been destroyed in Sumer, he destroyed in the foreign land. He made the god of his city withdraw from it. [...] In its cultivated fields of lusted barley he caused weeds to grow. He destroyed its wide and large trees (with) the axe. He tore-down date palms with his hand. [...] He invokes the name of Enlil. He invokes the name of Ninlil. (Klein 1981).

This passage invokes more images of destruction than the Bassekti statue, but it does end in a strikingly similar way. Both passages feature the gods being called upon in order to view the actions of the king. Therefore, as with Naram-Sin's deification, Shulgi still requires the approval of the existing gods in order to be deified. His deification is a result of his actions, which are movements to consolidate his reign and suppress his enemies. Like Naram-Sin, Shulgi's deification is a direct result of his political decisions in a state of crisis, decisions which further cemented his political power in the region.

Conclusion

The reigns of both Naram-Sin and Shulgi were characterized by political chaos, upheaval, and attempts to consolidate power. In both cases, the rulers turned to ideas of deification in order to further strengthen their political holds in reaction to crisis. In both pieces of textual evidence which discuss the deification of these kings, special attention is paid to discussions of their actions taken to stabilize the realm. Both of these kings used their successful stabilizations in order to seize more political power, and in the case of Shulgi, perform sweeping changes to the state which would embed his dynasty firmly in power for a century (Michalowski 2008). When considering the royal deification of kings in the Ancient Near East, it is important to remember that this was

not a widespread phenomenon. This means that in the rare instances of the occurrence of deification, certain political, social, and economic factors must have been at play, as deification represents a widespread shift in political structuring. In the cases of both Naram-Sin and Shulgi, neither were successful at instituting the practice in the long term, but both cases reveal the specific political factors that were at play in the Ancient Near East.

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SCIENCES

El Nino and Climate Change: Potentially Disastrous Consequences for Human Health in South America

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Abstract: El Nino is the most significant climatic cycle that influences extreme weather events, including heavy rainfalls and droughts that, in turn, have a direct impact on human health. Scholars have suggested that climate change particularly raises in sea surface temperatures (SST) might result in more intense and frequent El Nino events. The purpose of this paper is to analyze the relationship between extreme weather events originated by El Nino and climate change within the South American context. The study synthesizes the available literature by using data from the strongest recorded El Nino events of the last 60 years. The study suggests that climate change particularly increases in SST might be reinforcing the intensity and frequency of El Nino events. This has resulted in a significant variation in the levels of precipitation in South America, which have been associated with an increased risk of vector-borne diseases outbreaks including malaria and dengue fever. Furthermore, the study shows that heavy rainfalls resulting from El Nino have led to significant increases in the incidence of diarrheal diseases, especially in low-income households. In addition, floods and landslides which threatens hundreds of lives and infrastructure have also been on the rise due to heavy rainfalls. Moreover, a relationship was found between El Nino and lower than normal levels of precipitation in the Amazon, leading to droughts and fires. As El Nino events increase in frequency and intensity, the above-mentioned weather-related disasters will become more common in the region.

Keywords: El Nino, climate change, South America, human health, extreme weather events.

El Nino translates into “boy child”. The term was first used two centuries ago by fishermen in Ecuador and Peru referring to the unusual warming of waters that impacted their catch during the Christmas season (World Meteorological Society, 2014, p. 2). It constitutes the warm phase of the naturally occurring phenomenon El Nino/Southern Oscillation (ENSO). El Nino produces an occasional warming in the sea surface temperatures (SST) in the Eastern and Central Equatorial Pacific (Ashok & Yamagata, 2009, p. 481). ENSO comprises both temperature fluctuations across the Eastern and Central Equatorial Pacific and anomalous atmospheric changes known as Southern Oscillation (World Meteorological Society, 2014, p. 2). The term Southern Oscillation is referred to an east to west movement of air masses over the tropical Indo-Pacific region. During El Nino, SST in the Eastern and Central Equatorial Pacific warms, and trade winds that usually blow east to west debilitate and, in some instances, start blowing in the reverse direction. This allows warmer waters on the Western Pacific to depart towards South American coasts influencing climate patterns across the globe (World Meteorological Society, 2014, p. 3). This phenomenon has been taking place for at least 10,000 years and occurs every 2-8 years (Kovats, 2000, p. 1128). It usually starts around May-July, reaches its highest point during the last months of the year and disappears within the first half of the following year. However, in some instances can last for up to 18 months (World Meteorological Society, 2014, p. 2). ENSO is the most significant climatic cycle that influences extreme weather events, including heavy rainfalls and droughts that, in turn, have a direct impact on human health (Kovats et al., 2003, p. 1482). The emerging of these extreme weather events depends on El Nino’s varying intensity and frequency (Kovats, 2000, p. 1128). Yet, evidence suggests that climate change may reinforce its intensity and frequency, resulting in an increase of extreme weather events (Butler, 2014, p. 173).

Scholars have suggested that climate change, particularly raises in SST, might result in more intense and frequent El Nino events (Butler, 2014, p. 173). Climate change refers to the long-lasting changes in the expected climates for a given region. It differs from climate variability, which alludes to the natural variation in climate on all temporal and spatial scales. An example of climate variability is ENSO. However, climate change is superimposing on climate variability and may lead to changes in the climate global patterns (Kovats, 2000, p. 1133). One of the most significant factors affecting climate change is global warming.

Global warming refers to the impact that human activity has on the climate, mainly due to the burning of fossil fuels which emits greenhouse gases to the atmosphere (Houghton, 2005, p. 1343). Global warming results in an increase on the SST. Evidence suggests that increases on the tropical Pacific SST correlate with the development of El Nino events (Ashok & Yamagata, 2009, p. 481). For instance, in 2015, the tropical Pacific SST were 2.9 °C warmer than the average temperatures of previous years. That same year the strongest El Nino event of the past four decades occurred (Kogan & Guo, 2017, p. 161). In addition, Kevin Trenberth and Timothy Hoar (1997, p. 3057) argue that the increment on the frequency and intensity of El Nino events since the 1970s cannot be attributed to climate variability alone. They noticed an unprecedented increase in the tropical Pacific SST during the mid-1990s that correlated with the devastating 1997-1998 El Nino event (Trenberth & Hoar, 1997, p. 3057). In fact, El Nino is considered the most significant phenomenon related to climate change because of its impact on climate globally that leads to changes in temperature and precipitation levels (Pathmeswaran, 2017). It is important, however, to mention that the relationship between climate change and El Nino is cyclic. Oceans constitute natural carbon sinks; that is, they have the ability to store CO₂ for an indefinite period. In cold waters, CO₂ dissolves easily. During an El Nino event, SST increase resulting in less carbon being dissolved in oceans and consequently, there is an increment of CO₂ in the atmosphere. In turn, CO₂ stored in the atmosphere causes global warming and this consequently results in climate change (Pathmeswaran, 2017). As a result, there is an increasing concern on how climate change and the constant increase in SST may impact El Nino events in the next decades. If El Nino events become both more common and intense, more extreme weather events will occur with devastating consequences to human health (Kovats, 2000, p. 1132).

One of the regions most affected by extreme weather events related to El Nino is South America. El Nino became a subject of major concern in this region after the 1997-1998 event that resulted in severe floods in Peru and Ecuador, and major droughts in the Brazilian Amazon (Pathmeswaran, 2017). During El Nino, there is significant variation in the levels of precipitation in the Eastern and North-Western regions of South America, leading to the spread of vector-borne diseases, an increase on the incidence of diarrheal diseases, floods, and fires (Zhou, 2014, p. 9051). As El Nino events increase in frequency and intensity,

the above-mentioned weather-related disasters will become more common in this region. Therefore, an increase in the frequency and intensity of natural disasters coupled with the inadequate public health infrastructure of the region will result in an enormous loss of lives and property (Pathmeswaran, 2017).

Variations in the normal precipitation levels caused by EL Nino events are associated with an increased risk of vector-borne diseases outbreaks, malaria and to a lesser extent dengue fever being the most prominent cases (Butler, 2014, p. 177). Most insect vectors reproduce at a higher rate in humid tropical regions where, in many cases, disease control and healthcare infrastructure are inadequate (Kovats, 2000, p. 1127). Consequently, the tropical weather of certain South American countries has contributed to the outbreak of several infectious disease epidemics, especially during El Nino events. For example, following the 1982-1983 El Nino event, there was a severe malaria outbreak in Ecuador, Peru, and Bolivia. This outbreak was linked to a drastic increase in heavy rainfalls. In the particular case of Ecuador and northern Peru, population displacement originated by floods exacerbated the outbreak (Kovats, 2000, p. 1130). Droughts originated by EL Nino events have also contributed to the spread of malaria particularly in Venezuela and Colombia (Gagnon, Smoyer & Bush, 2002, p. 81). During El Nino phenomenon, those countries tend to suffer from below average levels of rainfall causing periodic droughts (Kovats, 2000, p. 1129). Those droughts decrease the population of mosquito predators that coupled with warm tropical temperatures facilitates malaria epidemics (Gagnon et al., 2002, p. 87). For instance, after the 1982-1983 El Nino event, the number of malaria cases in Venezuela increased by about 37% in comparison to the previous years. Whereas in the case of Colombia, that same year there was an increase of 35.1% in the number of malaria cases (Kovats, 2000, p. 1130). Moreover, a study revealed that in Colombia most El Nino events that took place between 1959 and 1998 were correlated with malaria epidemics episodes and a drastic decrease in rainfall levels (Gagnon et al., 2002, p.84). In addition, Colin Butler (2014, p. 173) argues that El Nino events have increased the rates of occurrence of Dengue in Bolivia. For instance, during the 1987 and 1998 EL Nino events, outbreaks of Dengue fever occurred throughout the country (Butler, 2014, p. 175).

Heavy rainfalls and the increase in mean temperatures resulting from El Nino events have led to a significant increment on the incidence

of diarrheal diseases, especially for low-income households. Kovats (2000, p. 1132) argues that heavy rainfalls and floods contribute to the contamination of water supplies with sewage or mud. Typhoid, shigellosis, and cholera are the most common causes of diarrheal diseases associated with contaminated waters (Kovats, 2000, p. 1132). Evidence suggests that the number of diarrhea cases increases as temperatures raises because bacteria and viruses can reproduce best at warmer conditions (Moreno, 2016, p. 161). As a result, during El Nino, the levels of precipitation and temperature increases along the Western coastline of South America leading to significant increases in the number of diarrheal cases. For instance, in Lima during the 1997-1998 El Nino event, the temperature increased by almost 5°C and consequently, the number of diarrheal cases increased by about 200%. It is important to mention that the increase in the number of daily diarrheal admissions occurred during the rainy season (Moreno, 2016, p. 158). In addition, a study performed to children of a marginalized urban community in Lima between 1995 and 1998 showed that raises in the mean temperatures during El Nino was correlated with an increased risk of acquiring diarrhea-related diseases by 96% (Bennett et al., 2011, p. 67). The study also revealed a direct correlation between El Nino and household sanitation in terms of the risk of suffering diarrheal episodes. Children living in households with a sewage connection had a 40% less chance of experiencing diarrheal episodes in comparison to children living in households with no sewage connection (Bennett et al., 2011, p. 65). This proves that the effects of extreme weather events caused by El Nino are most likely to affect low-income families.

Increasing precipitation levels caused by El Nino affecting the South American Western region usually lead to floods and landslides. Those events have resulted in the loss of hundreds of lives and infrastructure in various South American countries such as Peru, Ecuador, and Bolivia (Kovats et al., 2003, p. 1483). For example, during the 1997-1998 El Nino event, in Peru alone, 9.6% of all healthcare facilities around the nation were damaged (Kovats, 2000, p. 1128). The number of people affected by flooding and landslides in South America is considerable high because a significant portion of its population lives in high-risk zones such as coastal areas and mountainsides. Most of the people living in those areas belong to the lower income classes. In addition, South American countries such as Bolivia are not properly equipped to deal with extreme weather events, leading to higher numbers

of victims every time El Nino occurs (Kovats, 2000, p. 1128). For instance, in 2002, a heavy rainfall overwhelmed the La Paz's drainage system and caused floods, resulting in 70 deaths. Then in 2011, due to uncontrolled sanitary discharges, a severe rainfall caused a landslide that destroyed 9 neighborhoods in La Paz (Butler, 2014, p. 173).

During El Nino events, Amazon experiences lower than normal levels of precipitation leading to periodic droughts and facilitating the development of fires (Kovats, 2000, p. 1129). This is because El Nino phenomenon is the principal contributor to climate extremes in the Amazon region (Jiménez et al., 2016, p. 1). During the 1997-1998 El Nino event, in the state of Roraima alone, about 6 million hectares of forests were destroyed by fires (Moran et al., 2006, p. 144). Studies indicated that the affected area was 20 times larger in comparison to the affected area by the 1995 fires that did not relate to El Nino (Fonseca et al., 2017, p. 2516). Yet, the damage occasioned by fires in the Amazon during the last 2015-2016 El Nino episode was worse than any other (Jiménez et al., 2016, p. 1). During this El Nino event, Amazon temperatures reached an unprecedented peak followed by a severe drought (Jiménez et al., 2016, p. 3). In the state of Roraima, an area of approximately 239,000 km² covered with forests experienced lower precipitation levels. Not surprisingly, by January 2016, the number of active fires was seven times more than the average number of fires per month that the region had experienced since 1998 (Fonseca et al., 2017, p. 2516). Most fires took place in areas next to villages or where recent deforestation occurred (Fonseca et al., 2017, p. 2522). The abundant loss of forests reduces the Amazon's capacity to store carbon worsening global warming and facilitating the development of future El Nino events.

The emergence and severity of extreme weather events in South America are strongly associated with El Nino. Evidence suggests that climate change and increases in SST might be reinforcing the intensity and frequency of El Nino (Kovats, 2000, p. 1128). During El Nino events, there is a drastic change in the precipitation levels in South America, resulting in vector-borne diseases epidemics, higher rates of diarrheal episodes, flooding, and fires. Even though it is difficult to predict the effects of climate change on upcoming El Nino phenomena, there is an increasing concern that they may become stronger and more recurrent (Kovats et al., 2003, p. 1481). Thus, the question relies on what actions should be by taken by governments, private organizations,

international organizations and the people in general to lessen the impacts of El Niño-related extreme weather events. First, we must learn from the impacts of previous El Niño events by recording, assessing and sharing information so that we can develop strategies aimed at reducing the effects of upcoming El Niño events (United Nations General Assembly, 2002, p.5). In addition, money should be destined to build vulnerable communities' resilience to natural disasters (United Nations, 2016). Another action that must be taken is to develop risk management strategies that include early warning systems, mitigation programmes, and emergency response plans. (United Nations General Assembly, 2002, p.7). As evidence suggest that the increasing intensity of El Niño may be a direct consequence of climate change, the best way to address this issue is to reduce greenhouse gasses that contribute to the rising in SST. El Niño serves as a reminder that we are running out of time in this effort.

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The Future of HIV Prevention Research in the Face of TasP and U=U

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Treatment as Prevention otherwise known as TasP is a HIV prevention method, where antiretroviral therapy (ART) is taken by an individual to reduce the chance of HIV transmission. It is a common method of prevention promoted by many public health organizations as well as the World Health Organization, as a cost-effective approach to reducing overall disease burden and new HIV infection (Avert, 2017). Treatment as prevention can be used in many different situations, such as preventing the transmission of HIV from a positive mother to the child. Other forms include using pre-exposure prophylaxis, post-exposure prophylaxis, and microbicides. TasP has been shown to be highly effective; results from the HPTN 052 study found that there was 96% reduction in transmission associated with early ART initiation in couples. Early ART initiation (i.e treatment as prevention) has the potential to be the best intervention in preventing HIV transmission to date (Mpondo, 2016). Adherence to the ARVs has been shown to play a key role in reaching the goal of reduced transmission of HIV (Mpondo, 2016). The U=U campaign which stands for Undetectable=Untransmittable, which promotes continuous ART treatment in an attempt to reduce overall transmission. Both TasP and U=U stem from the same idea that when viral loads are undetectable, the virus can not be transmitted which then prevents others from contracting the virus. This model can work well, but it is only effective when people get tested for HIV and when people are continuously on medication which is only possible when individuals have access to these resources (Mpondo, 2016). There are many concerns surrounding TasP such as the cost-effectiveness and feasibility of this method, particularly for low-to-middle income countries, where the resources tend to be more limited but the disease burden is higher (Balthazar, 2017). For TasP to work, it needs to work for all people who are infected with HIV. And so, the focus of future HIV prevention research should be on reducing the structural barriers surrounding TasP such as stigma, lack of access, and consider social contexts to improve TasP.

The effectiveness of TasP relies on the early diagnosis in HIV positive individuals, who often experience multiple barriers to accessing services (Young & Mcdaid, 2013). One of the barriers to accessing services is stigma. HIV tends to be framed around sex and drug behaviors, which maintains the global stigma associated with being HIV positive (Rotheram-Borus, Swendeman, & Chovnick, 2009). The future of HIV prevention research needs to focus on reducing stigma as one of the main barriers which prevent individuals from getting tested for HIV. Routinely getting tested for HIV is important so that people are aware of their status. Regular testing is known to be beneficial because it then gives people the knowledge about their status so that they can take the appropriate measures to protect themselves and others (Center for Disease Control and Prevention, 2017). Unfortunately, in many communities, having HIV is seen as shameful, and can result in rejection from the community (Katz et al., 2013). Stigmatized individuals can often times internalize the stigma which can lead to emotional distress, demoralization, and prevent them from wanting to receive treatment (Katz et al., 2013). There are examples of campaigns/ programs that have worked to de-stigmatize HIV by educating the public. Thailand implemented a targeted anti-AIDS campaign called the 100% Condoms Campaign, which included 30 seconds of AIDS education per every hour of television broadcast, AIDS day events, presentations at schools by people who were HIV+ etc. This public awareness campaign educated the population and helped to de-stigmatize HIV/ AIDs in Thailand. From 1991-2001, the infection rate of HIV also decreased from 143,000 per year to 14,000 per year (Chariyalertsak, Srithanaviboonchai, & Nittaya Phanuphak, 2013). Similar public awareness campaign models have been replicated in Myanmar, Philippines, and Cambodia due to it's success. HIV testing was promoted and normalized which resulted in increased demand among the general public as well as key affected populations. Because Thailand spent so much money on treatment, especially the ART program, results showed that the ART (i.e treatment as prevention) was the most important and cost effective HIV prevention method that the country invested in (Chariyalertsak, Srithanaviboonchai, & Nittaya Phanuphak, 2013). This is just one example of how proper education on HIV/ AIDs can work to de-stigmatize the disease. Promoting the U=U campaign can also work to reduce the stigma surrounding HIV. Often the stigma surrounding HIV stems from the idea that an individual is highly infectious, however by

promoting the U=U campaign, it may help to reduce this misconception, and result in increased rates of early diagnosis for HIV testing (The Well Project, 2017). Adherence to the ARVs has been shown to play a key role in the effectiveness of treatment as prevention (Mpondo, 2016) but again, stigma has been shown to be a large reason why individuals may not adhere to the ART regime. A study by Katz et. al (2013) found that HIV related stigma compromised the participants' abilities to stay on ART. The study found that that interventions at multiple levels including interpersonal, intrapersonal, and structural were required to reduce stigma and improve the effectiveness of adherence to ART.

There around 20 million HIV positive individuals in the world are not receiving antiretroviral therapy (UNAIDS, 2016). To have an effective response to the HIV/AIDS epidemic, and for TasP to be successful, resources are needed to test, diagnose, and begin treatment for more than half of the people living with HIV globally and to provide services to ensure medication adherence (Mayer & Krakower, 2016). But because of a lack of access, future HIV prevention research should also focus on this structural barrier for TasP to be most effective. Structural constraints such as access to health services and financial constraints need to be considered when assessing and responding to adherence challenges (Guest et al., 2010). Because the HIV infection does not show symptoms right away, it is very important for individuals to get regularly tested, especially for vulnerable groups so that when they are aware of their status they can take precautionary measures to protect themselves and others (AVERT, 2017). But many groups face barriers to accessing HIV testing and treatment. Often times, hospitals/ clinics are situated near city centers which can make accessing treatment for HIV difficult for groups that live in remote communities (ex. Shanty-towns) or are situated far away from city centers (Bassett et al., 2016). Sometimes, due to the distance to the health care provider, individuals go off treatment which results in their viral loads no longer being suppressed and an increased chance for them to transmit HIV (Chutel, 2017). A study by Grimsrud, Lesosky, Kalombo, Bekker, & Myer (2015) examined the effectiveness of community adherence clubs to support people living with HIV found that that community-based approaches can improve adherence to HIV treatment. The clubs were led by community health workers and nurses. The groups met every two months for group counselling, symptom screening, and distribution of pre-packed ART. Group members were allowed to send a patient-nominated treatment

supporter or 'buddy' to collect their ART at alternating group visits. The study found that 94% of those taking part in the study adhered to treatment after a year. In addition, the adherence clubs were associated with a 67% reduction in the risk of people being lost to follow up (AVERT, 2017). This shows that providing appropriate access to treatment can result in increased rates of adherence which means that TasP has an increased likelihood of being successful (Mpondo, 2016). Aside from physical barriers that results in restricted access to treatment, many groups of key affected populations such as people who inject drug, migrant workers, and sex workers also experience economic barriers to accessing HIV treatment- such as cost of treatment. Generic ART medication has resulted in lower costs for the treatment world-wide but for many groups, it is still inaccessible (Wilson & Fraser, 2014). In South Africa due to the AIDs epidemic, ART treatment is fully funded by the government, however migrant workers living in South Africa face economic barriers as they are unable to access free ART treatment (Amon & Todrys, 2009). For TasP to be effective, the issue of uneven access to testing and medication needs to be addressed in future HIV prevention research.

Stigma and lack of access are two of the main structural barriers in HIV prevention, but it is also important to consider how individuals' choices and actions constrained and/or enabled in their social context (Young & McDaid, 2013). For future HIV prevention research particularly TasP to be effective, the broader social context needs to be considered, which requires understanding and responding to the social context in which ART is used (Kippax and Stephenson, 2012). Social contexts in which the HIV occurs can provide an understanding for the prevalence and incidence of HIV and lead to more focused interventions nad reduce the current social-context specific barriers in TasP. For example, South African report lower rates of sexually risky behavior compared to American adolescents. And yet, South Africa still experiences higher rates of HIV/ AIDs infections per year even though ART medication is free in South Africa (Pettifor et al., 2011). The conclusion this study came to was that there were factors above and beyond sexual behavior that play a key role in the transmission of this infection. The social context of South Africa- mainly how apartheid has affected the health of the black-majority population can provide a better background to help explain these differences. It is important to consider social contexts such as apartheid, discrimination, and poverty when

looking at structural barriers to HIV treatment. For treatment as prevention to be effective the specific social contexts of the issue need to be addressed so that the appropriate changes to the program can be implemented. In South Africa mining accounts for 8% of the GDP and is one of the countries main exports (Statistics South Africa, 2016). Due to apartheid laws that separated men from their wives for extended periods of time sex-trade industry increased in mining shantytowns (Campbell, 1997) and approximately one quarter of miners in South Africa have HIV (Deloitte, 2005). Because of the social context in South Africa, it is important to put an emphasis on reducing the HIV rates among miners and sex workers, something that does not necessarily need the same emphasis in other contexts. This is an example of how depending on the social contexts certain interventions may or may not be appropriate. Future HIV prevention research should focus on reducing structural barriers in individual social contexts.

One counterargument to the idea that future HIV prevention research should focus on eliminating the structural gaps in TasP is that the future HIV prevention research should solely be focused on finding an effective vaccine to protect the bodies immune system before it comes into contact with HIV or focus on an anti-HIV vaccine to eradicate the disease and prevent further infection. This idea that vaccines are the only way forward to prevent the spread of HIV ignores the body of evidence that supports the effectiveness of treatment as prevention and U=U (Mpondo, 2016). This is not to say that future research into vaccines shouldn't be done, but instead that biomedical, behavioral, and structural interventions are all required to end the AIDS epidemic. And while the development of a HIV vaccine would be ground-breaking, TasP has been shown to potentially be the most cost-effective method of HIV prevention (Avert, 2017). Another counterargument that is often made opposing TasP is that it may also be correlated with increases in sexual risk-taking and sexually transmissible infections, and so future HIV prevention research should not focus on this prevention method due to risk compensation behavior. However, studies have shown that high-risk sexual behavior was significantly reduced once individuals were on ART medication for TasP (Blumenthal & Haubrich, 2014). The future of HIV prevention research in the face of TasP and U=U should be focused on reducing the structural barriers such as stigma, lack of access, and specific social contexts for the success of TasP and to achieve the goal of reducing the overall transmission of HIV.

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Revisiting the Cholinergic Hypothesis: The Effects of Scopolamine and Piracetam on Open-Field Mice

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Abstract: Understanding the role of the cholinergic system in memory is important to the prevention, diagnosis, and treatment of dementias, including Alzheimer's disease (AD). This study aims to contrast the effects of cholinergic antagonist scopolamine and cholinergic agonist piracetam on habituation memory in the open field (OF) test. Mice ($n = 12$) received intraperitoneal (IP) injections of scopolamine, piracetam, or saline. They were then placed in unfamiliar open boxes across two sessions and their movement recorded. Comparisons of distance travelled during each session as well as changes in distance travelled between sessions revealed no significant differences in motor activity between treatment and control groups. The scopolamine-treated mice, however, demonstrated greater time spent in the margins during the first session and a significant decrease in margin time between sessions, suggesting initial elevated anxiety as a possible confound. These results highlight the importance of continued study of these drugs, with control of the motor effects and investigation into the potential anxiogenic effects of scopolamine serving as notable future directions for this line of research.

Keywords: scopolamine, piracetam, cholinergic hypothesis, memory, habituation, open field

The relationship between the cholinergic system and memory has long been of interest in models of cognitive decline, including Alzheimer's disease (AD). Early studies with aging and AD populations noted a link between cognitive deficits and dysfunction of the cholinergic system (Schliebs & Arendt, 2006). At the same time, pharmacological experiments found that stimulating the cholinergic system with agonist drugs enhanced memory, while inhibiting the cholinergic system with antagonist drugs impaired memory (Deutsch, 1971; Drachman & Leavitt, 1974). These converging pieces of evidence

formed the basis for the cholinergic hypothesis, which postulates that the cholinergic system plays a key role in memory function (Bartus, Dean, Beer, & Lippa, 1982). Since its conception, the cholinergic hypothesis has undergone significant refinement. Later lesion studies, for example, demonstrated that learning and memory remained relatively intact after ablation of cholinergic neurons in the basal forebrain (Parent & Baxter, 2004). Additionally, cholinergic agonists and antagonists were found to produce opposite effects on memory when administered at different stages in learning (Rogers & Kesner, 2004). To account for these findings, the emerging “biphasic” model specifies that activation of the cholinergic system facilitates memory encoding but not storage or retrieval (Micheau & Marighetto, 2011). That the cholinergic hypothesis continues to be refined demonstrates there remain gaps in our understanding, signalling the need for new memory studies targeting the cholinergic system.

Pharmacological experiments are particularly suited to these purposes. Scopolamine, for example, is a cholinergic antagonist whose use in memory studies can be traced back to the formation of the cholinergic hypothesis (Deutsch, 1971; Drachman & Leavitt, 1974). Its amnesic, or memory-impairing, effects have been reported across a number of paradigms, including the Morris water maze, the T-maze, fear conditioning, and object recognition (Klinkenberg & Blokland, 2010). Notably, scopolamine’s effects align with the proposed biphasic model, demonstrating disruption of memory encoding but not retrieval in fear conditioning and object recognition paradigms (Rogers & Kesner, 2004; Winters, Saksida, & Bussey, 2006). Piracetam, on the other hand, is a cholinergic agonist whose nootropic, or memory-enhancing, effects have been found to counteract the memory impairment produced by scopolamine in inhibitory avoidance and object recognition paradigms (Marisco et al., 2013). This interaction between the drugs suggests they may target similar areas of the cholinergic system involved in memory, making novel studies applying scopolamine and piracetam particularly promising to this line of research.

This study aims to compare the effects of scopolamine and piracetam on open-field habituation in mice. Habituation refers to the diminished response to a repeatedly-presented stimulus. The open field (OF) test measures habituation as the decreased motor activity demonstrated by animals during their second exposure to a novel environment: recalling their first exposure, they are less inclined to

explore the now-familiar surroundings (Cerbone & Sadile, 1994). Beyond its utility in measuring memory, the OF test is well-suited for investigating the drugs of interest as a paradigm not employed by the Marisco et al. (2013) study that observed piracetam rescue of scopolamine-induced memory deficits. This study also departs from Marisco et al. (2013) in that mice received intraperitoneal (IP) injections of only one of scopolamine or piracetam, in order to confirm the nootropic effects of the latter separate from its interaction with the former. This precaution was taken as nootropic drugs often prove ineffective when administered independently in clinical trials, despite counteracting the effects of amnesic drugs in preclinical trials (Sarter, 2006). Injections took place before exposure to the novel environment, such that the drugs should target memory encoding. Thus, it is expected that the mice receiving scopolamine will show reduced habituation, characterized by increased motor activity, while the mice receiving piracetam will show increased habituation, characterized by reduced motor activity.

Methods

Subjects

CD-1 mice ($n = 12$), female and aged 2 months, were obtained from Charles River Laboratories (St. Constant, QC, Canada). Mice were housed in pairs in vivariums, with food and water provided ad libitum. Vivariums followed a 12:12 light-dark cycle, with mice undergoing testing during light hours. All procedures were conducted in accordance with the Canadian Council on Animal Care and approved by the University of Toronto Pedagogical Merit Review Board and the University of Toronto Animal Care Committee.

Equipment

Open boxes (42 cm x 42 x 42 cm) by Coulbourn Instruments were used for testing. Vinegar solution was used to remove feces and odours from the plastic floors and glass panel walls between sessions. Motor activity was recorded using the Tru Scan 2012 computer tracking system by Coulbourn Instruments.

Injection Procedure

Mice were weighed and randomized into groups to receive IP injections of scopolamine ($n = 4$), piracetam ($n = 4$), or saline ($n = 4$). Drug volume was 10 ml/kg for all groups, while drug dosage was 1.0

mg/kg for scopolamine and 400 mg/kg for piracetam. Mice were placed back in their cages for 15 minutes post-injection. Scopolamine hydrogen bromide, piracetam, and 0.9% NaCl (sterile saline) solution were supplied by Sigma-Aldrich (St. Louis, MO).

Testing Procedure

The OF test was used to probe for differences in memory due to drug treatment. Mice were placed in the boxes for the first time 15 minutes after drug injection. Movement was recorded for 8 minutes before they were returned to their cages and the boxes cleaned. After an hour delay, mice were placed in the boxes for a second time. Movement was again recorded for 8 minutes before they were returned to their cages and the boxes cleaned.

Statistical Analysis

Between-subjects *t*-tests, corrected for multiple comparisons using the Bonferroni method, were conducted to test for significant differences in motor activity, measured as distance travelled in cm, between the treatment and control groups. Two tests compared total movement during the first and second sessions of testing, respectively. A third test compared changes in movement between the first and second sessions, measured as a ratio of distance travelled during minute 1 of the second session and minute 8 of the first session. Values > 1 indicated increased motor activity and reduced habituation while values < 1 indicated reduced motor activity and increased habituation. As an additional exploratory analysis, equivalent tests were conducted for time spent in the margins of the boxes, measured in seconds.

Results

In the first session, the scopolamine group showed the greatest motor activity ($M = 3778, SD = 2258$) followed by the piracetam ($M = 3308, SD = 1335$) and saline ($M = 2001, SD = 492$) groups (Figures 1 and 2). There was no significant difference in total movement between the scopolamine and saline groups, $t(6) = 2.04, p > .025$, or the piracetam and saline groups, $t(6) = 2.34, p > .025$.

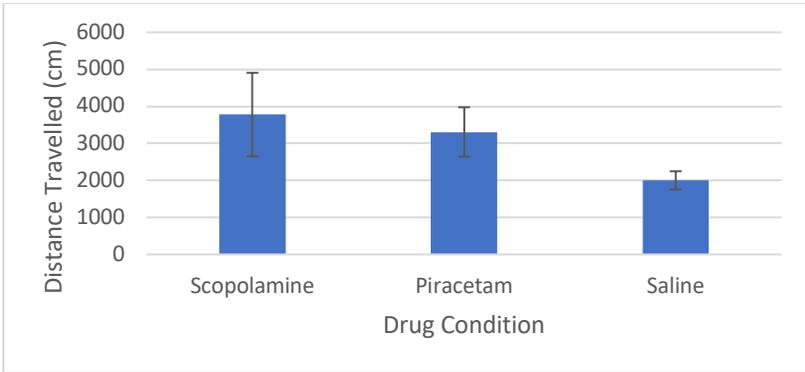


Figure 1. Comparison of total motor activity in treatment and control mice during initial exposure to the novel environment.

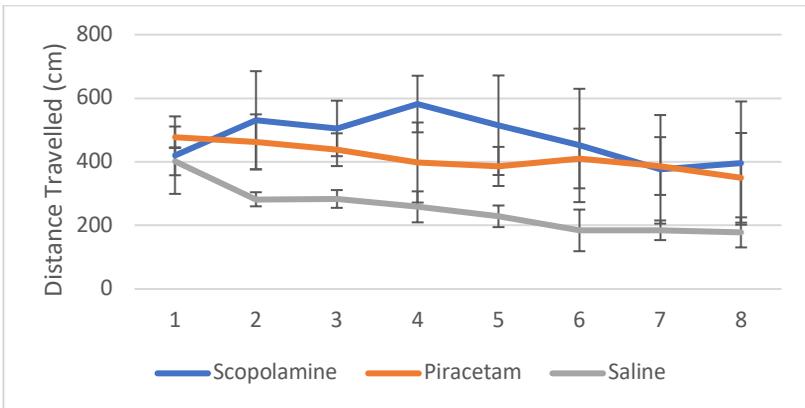


Figure 2. Comparison of motor activity in treatment and control mice for each minute during initial exposure to the novel environment.

In the second session, the scopolamine group again showed the greatest motor activity ($M = 3394$, $SD = 1837$), followed by the piracetam ($M = 2680$, $SD = 955$) and saline ($M = 1939$, $SD = 622$) groups (Figures 3 and 4). There was no significant difference in total movement between the scopolamine and saline groups, $t(6) = 2.00$, $p > .025$, or the piracetam and saline groups, $t(6) = 1.81$, $p > .025$.

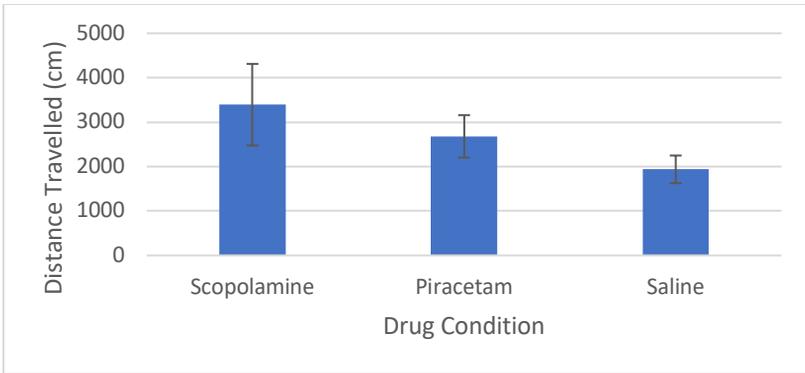


Figure 3. Comparison of total motor activity in treatment and control mice during second exposure to the novel environment.

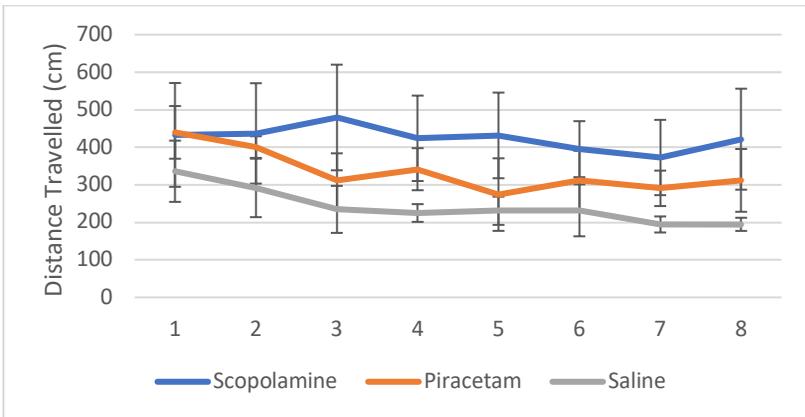


Figure 4. Comparison of motor activity in treatment and control mice for each minute during second exposure to the novel environment.

Between the first and second sessions, the scopolamine group showed the greatest increase in motor activity ($M = 9.94$, $SD = 18.2$), followed by the piracetam ($M = 2.96$, $SD = 3.97$) and saline ($M = 2.34$, $SD = 1.34$) groups (Figure 5). There was no significant difference in change in movement between the scopolamine and saline groups, $t(6) = 1.37$, $p > .025$, or the piracetam and saline groups, $t(6) = 0.93$, $p > .025$.

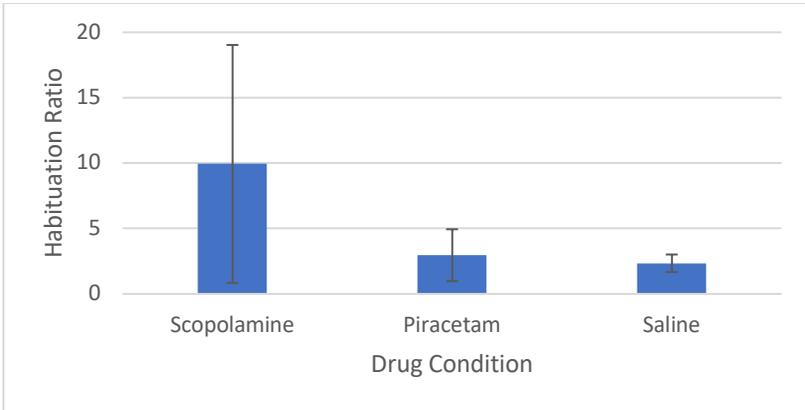


Figure 5. Comparison of habituation or change in motor activity between exposure sessions in treatment and control mice.

Margin time in the first session was greatest in the scopolamine group ($M = 439$, $SD = 25.3$), followed by the piracetam ($M = 409$, $SD = 18.4$) and saline ($M = 395$, $SD = 8.96$) groups (Figure 6). The scopolamine group spent more time in the margins than the saline group, $t(6) = 3.32$, $p = .016$, while there was no significant difference in margin time between the piracetam and saline groups, $t(6) = 1.36$, $p > .025$.

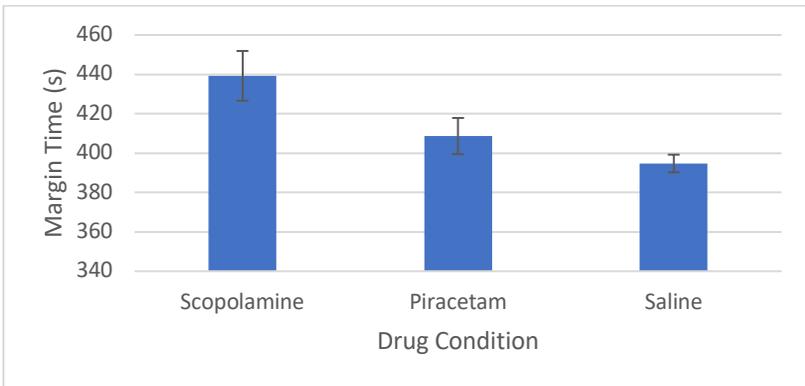


Figure 6. Comparison of time spent in the margins in treatment and control mice during initial exposure to the novel environment.

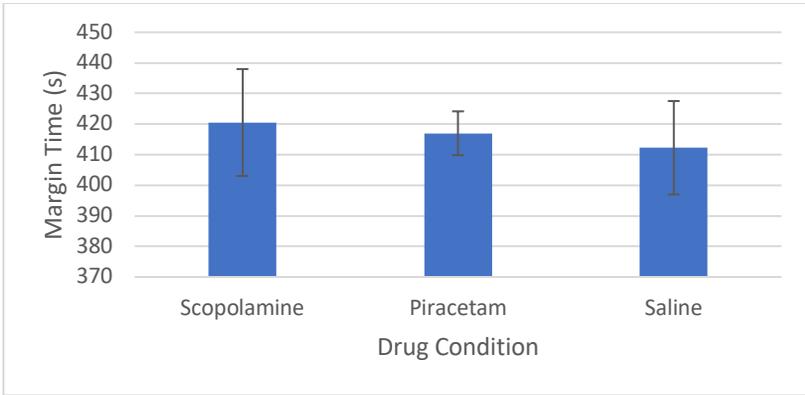


Figure 7. Comparison of time spent in the margins in treatment and control mice during second exposure to the novel environment.

Margin time in the second session was greatest in the scopolamine group ($M = 421$, $SD = 35.0$), followed by the saline ($M = 412$, $SD = 30.6$) and piracetam ($M = 417$, $SD = 14.3$) groups (Figure 7). There was no significant difference in margin time between the scopolamine and saline groups, $t(6) = 0.36$, $p > .025$, or the piracetam and saline groups, $t(6) = 0.28$, $p > .025$.

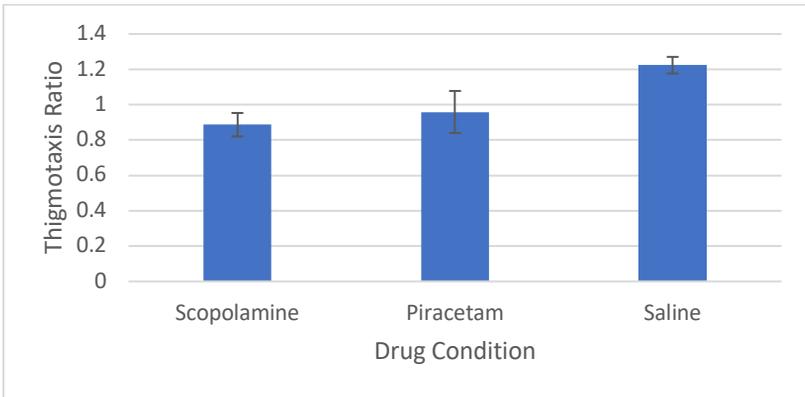


Figure 8. Comparison of change in margin time between sessions in treatment and control mice.

Between sessions, margin time increased in the saline group ($M = 1.22$, $SD = 0.094$) and decreased in the scopolamine ($M = 0.89$, $SD = 0.13$) and piracetam ($M = 0.96$, $SD = 0.24$) groups (Figure 8). Change in margin time was significantly different between the scopolamine and saline groups, $t(6) = 4.15$, $p = .006$, while there was no significant difference in change in margin time between the piracetam and saline groups, $t(6) = 2.07$, $p > .025$.

All t -tests were corrected for multiple comparisons using the Bonferroni method. These results indicate that neither scopolamine nor piracetam demonstrated a significant effect on open-field habituation. Additionally, scopolamine-treated mice may have experienced elevated anxiety during the initial exposure session.

Discussion

There were no significant differences in motor activity during the first or second sessions or between the sessions for the treatment and control groups. These results were unexpected given the previous literature documenting the amnesic and nootropic effects of scopolamine and piracetam, respectively (Klinkenberg & Blokland, 2010; Winblad, 2005). They also contradict our original hypothesis that the scopolamine-treated mice would show decreased habituation and the piracetam-treated mice increased habituation. Interpretation of these results in isolation suggests more rigorous study and characterization of these drugs may be required before research proceeds to later stages.

It is important to note, however, that significant differences in margin time were observed in the scopolamine group: during the first session, the scopolamine group spent more time in the margins than the saline group and, between sessions, the scopolamine group showed a decrease in margin time while the saline group showed an increase. Thigmotaxis, or tendency to stay near the margins of an open space, is considered a sign of anxiety (Simon, Dupuis, & Costentin, 1994). Thus, it is plausible that initial elevated anxiety in the scopolamine group decreased motor activity in a manner unrelated to habituation. The effects of scopolamine on anxiety are not well-characterized, but one study has found that scopolamine decreases thigmotaxis at low doses and increases thigmotaxis at high doses (Sanberg et al., 1987). Alternatively, chronic stress has demonstrated ability to slow open-field habituation (Dubovicky & Jezova, 2006). If this relationship transfers to short-term stress, the lower-than-expected motor activity in the scopolamine group

may be explained by an antagonistic interaction between anxiety and habituation. Studies have also reported both increased and decreased locomotion with administration of scopolamine (Mueller & Peel, 1990; Poorheidari, Pratt, & Nima, 2002). Despite the inconsistent valence, the fact that scopolamine is known to have motor effects suggests the reduced motor activity in the scopolamine group could be a result of these effects rather than an instance of habituation.

Examination of piracetam reveals similar presence of confounds. For example, piracetam does not selectively interact with the cholinergic system. The glutamatergic system is another notable target, with piracetam acting as a weak agonist of α -amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA) receptors and increasing the density of both AMPA and N-methyl-D-aspartate (NMDA) receptors (Ahmed & Oswald, 2010; Cohen & Müller, 1993). AMPA and NMDA receptor activation is linked to long-term potentiation (LTP), one of the most widely studied forms of memory in which repeat stimulation over time increases synaptic strength (Rao & Finkbeiner, 2007). That LTP occurs over the long term is significant, as the OF test may have been too short to allow LTP to take place. If the nootropic effects of piracetam are more related to the glutamatergic system than the cholinergic system, the short duration of the OF test may explain the lack of memory enhancement displayed by the piracetam-treated mice. Additionally, agitation and irritability are some of the side effects associated with piracetam (Winnicka, Tomasiak, & Bielawska, 2005). Given the potential for these states to translate to increased motor activity, the greater-than-expected movement in the piracetam-treated mice may reflect increased emotionality rather than lack of habituation. The nootropic effects of piracetam are also more pronounced in older animals (Winnicka, Tomasiak, & Bielawska, 2005), suggesting the young age of the mice used in this study as another possible confound.

These considerations, coupled with small sample size, limit the generalizability of the results of this study. Thus, future research could look to replicate this study using a larger sample size or modify it to address some of the concerns outlined previously. For example, a different paradigm such as the Morris water maze could be employed to separate scopolamine's motor effects from its effects on memory. Though the Morris water maze also requires locomotion in the form of swimming, any motor inhibition potentially induced by scopolamine may be attenuated by the more pressing desire to leave the water.

Additionally, there are few studies examining the possible anxiogenic, or anxiety-producing, effects of scopolamine. Future studies could thus investigate these effects using a paradigm that more directly measures anxiety, such as fear conditioning. The OF test could also be modified to contain longer or a greater number of exposure sessions. These changes may facilitate AMPA and NMDA receptor-mediated LTP, potentially recovering the nootropic effects of piracetam. However, since the cholinergic system is the focus of this study, future research may consider replacing piracetam with another agonist drug that shows greater specificity for cholinergic receptors. Regardless of direction, it is clear that further studies are needed to elucidate the role of the cholinergic system in memory and facilitate translation to clinical treatment of dementias.

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The Neuroscience of Creative Expression: Creativity as a Uniquely Human Behaviour

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One of the key uniquely human behaviors that set *Homo sapiens* apart from other species is our ability to generate novel ideas that are useful and adaptive for survival. Creativity is defined as the ability to generate new solutions to problems that are original and unexpected but are useful for the task at hand (Sternberg and Lubart, 1999). Past studies indicate that creativity cannot be isolated to a single specific brain structure but involves multiple brain regions activated or deactivated simultaneously (Beatty et al., 2014; Wiggins et al., 2014). In short, what makes creative expression unique to humans is that it is a result of our capacity for divergent and convergent thinking, highly-developed memory and retrieval processes, and our superior problem-solving capacities (Gabora and Kaufman, 2010).

Creative behavior consists of two fundamental parts: idea generation and idea evaluation (Mayseless et al., 2014). Idea generation can be thought of as a form of internally-directed attention that generates new ideas based on semantic retrieval (Benedek et al., 2014). Idea generation utilizes divergent thinking, the ability to generate multiple solutions to a sole problem (Guilford, 1967). On the contrary, idea evaluation is the process by which we inhibit idea generation in order to narrow down ideas to those that are the most useful (Benedek et al., 2014). Idea evaluation goes hand in hand with convergent thinking, resulting in the choice of the best idea among those available (Wiggins and Bhattacharya, 2014). The need to study creative behavior in humans by cognitive and behavioral psychologists arose in the early 1900s (Wiggins and Bhattacharya, 2014). It is important to study creative behavior in humans because it is the result of cognitive mechanisms that lead to adaptive prediction, which allows humans to navigate the world effectively, by being able to predict the immediate future based on experience, instead of simply reacting to events after they occur (Huron, 2006).

There is a collection of specific neural structures and networks involved in the inhibition and generation of ideas. Past and present

literature explores creative behavior via correlational, connectivity, stimulation, and lesion studies. In addition to measures of creativity such as the Divergent Thinking Test (DTT) and the Remote Associates Test (RAT), clinical cases will also be explored. The following studies have compounded evidence as to what physiological regions of the brain are responsible for creative behavior in humans.

To begin with, research by Beaty and Silvia (2012) states that divergent thinking or idea generation is initially dominated by the retrieval of common and old ideas, whereas novel ideas are generated more often at later stages in the generation process. This finding is further supported by a functional magnetic resonance imaging (fMRI) correlational study that analyzed the brain structures necessary in the production of novel ideas (Benedek et al., 2014).

Participants were evaluated on a typical divergent thinking test where they were shown an object such as a rope and asked to name as many uses for it as possible in order to capture idea generation naturally. The study examined whether a generated idea was spontaneously novel or retrieved from long-term memory. Results showed high divergent thinking scores strongly correlated to increased activity in the left prefrontal cortex, inferior frontal gyrus (IFG), the right medial temporal lobe, and the deactivation of the right temporoparietal junction. They discovered that the IFG functions in the generation of original ideas, as well as the retrieval of semantic knowledge (Benedek et al., 2014). More specifically, activations in the hippocampal regions of the superior temporal gyrus were also reported. These areas are involved in semantic and episodic memory recollection (Benedek et al., 2014), suggesting that successful idea generation requires retrieval of semantic and episodic knowledge and the reordering of them with novel concepts to result in new ideas. Additionally, a previous correlational study by Badre and Wagner (2007) possessed similar results, demonstrating that the left inferior frontal gyrus and superior frontal gyrus (SFG) possessed a role in idea generation and divergent thinking. Jung and colleagues (2010) utilized sMRI to link divergent thinking and creative achievement with cortical thickness. Divergent thinking scores were measured via the creative achievement questionnaire (CAQ). The results showed that increased cortical thickness of the right posterior cingulate correlated with high divergent thinking scores, whereas decreased cortical thickness in the left frontal lobe, inferior parietal gyrus and fusiform gyri correlated to increases in creativity. Overall, it was found that

decreases in cortical thickness in specific areas of the frontal and posterior cortices is associated with higher divergent thinking scores.

Connectivity studies demonstrate the contribution of white matter to creative human behaviors. A connectivity study by Takeuchi and colleagues (2010) examined the connection between white matter tracts of the brain measured via diffusion tensor imaging (DTI) and a modified version of the DTI known as the S-A creativity test. DTI tracks the flow of water through white matter of the brain to determine white matter wiring patterns (Jung et al., 2010). The results revealed that increased white matter connectivity in the frontal lobe, corpus callosum and the right temporal-parietal junction correlated to higher scores on the S-A creativity test.

These findings indicate that efficient communication across the corpus callosum via white matter tracts and the frontal lobe of the brain plays a role in creativity. This is because breaking down old conventions, narrowing down ideas, and developing new patterns of thinking require communication with the frontal lobe responsible for abilities such as working memory, attention, and idea generation (Takeuchi et al., 2010).

As previously mentioned, creativity is seen through the perspective of a twofold model: where creativity not only involves idea generation but also idea evaluation, a process that works to inhibit idea generation (Mayseless et al., 2014). Neuroimaging, lesion, and stimulation studies have examined the areas of the brain involved in idea evaluation. To begin with, Mayseless and colleagues (2014) considered the role of the left temporoparietal regions in idea inhibition and evaluation. Results from their fMRI study demonstrated that decreased left temporal and parietal activation for healthy participants predicted higher levels of creativity. In other words, the left temporoparietal region of the brain contributes to neural networks accountable for idea evaluation, such that these regions inhibit and narrow idea generation (Mayseless et al., 2014).

These findings are further supported by results from a neuroimaging study that utilized regional cerebral blood flow (rCBF) to compare verbal fluency and scores on divergent thinking tasks. Subjects with higher scores in creativity showed an increase in bilateral frontal cortex activation compared to participants with lower scores in creativity.

Subsequently, findings from lesion studies provide significant evidence that it is indeed the left temporoparietal regions of the brain responsible for idea evaluation. To start, lesion and clinical studies for brain diseases associated with lateral left hemisphere damage lead to increases in artistically creative behavior (Miller et al., 2000). For example, patients with left temporal degeneration due to dementia lead to the development of new artistic abilities, especially when the lesion extended to the left inferior insula and other temporal regions (Miller et al., 2000). In line with these results, Shamay-Tsoory and colleagues (2011) demonstrated that lesions of the left parietal lobe and left inferior frontal gyrus increased creative fluency on divergent thinking measures. That is to say, lesions of the left temporoparietal and inferior frontal regions result in higher levels of creative expression. This is due to the fact that processes for creative idea inhibition generally associate with the left side of the brain, and damage to these structures releases their inhibition, allowing creative idea generation to flourish without regulation (Miller et al., 2000).

Evidence from clinical studies have also lead to the same conclusions for brain structures involved in idea evaluation. A long-term clinical study conducted by Mayseles and colleagues (2014) examined the emergence of artistic abilities in a 46-year-old man with severe left temporal and parietal lobe damage due to a stroke during October of 1996. The researchers utilized MRI and neurophysiological evaluations (NP) at the time of the stroke, 3 months later, followed by 10 years after the stroke. They reported a surge in creativity and the urge of the patient to draw a few days after the stroke occurred. By March of 1997, his primitive line drawings evolved into intricate colorful pieces with highly accurate portrayals of objects drawn. As the stroke damage receded within 3 months, the patient's urge to draw decreased to the point where the patient no longer possessed the artistic abilities or desire he had when the lesion was present. As shown by previous studies, increased artistic ability is due to decreased activity of the left temporoparietal regions responsible for idea inhibition (Mayseles et al., 2014). The disappearance of creative tendencies once the hemorrhage receded is further proof of the role that the left temporoparietal region plays in creative evaluation (Zaidel, 2010).

Studies have identified a key neural network involved in idea evaluation, known as the default mode network (DMN). The DMN is comprised of the medial prefrontal cortex (mPFC), the posterior

cingulate cortex (PCC) the precuneus, and the bilateral inferior parietal lobes (IPL) (Fox et al., 2005; Gusnard & Raichle, 2001). A study by Beaty and colleagues (2014) examining the role of the default network utilized fMRI on two distinct groups of participants measured as high and low in creativity. FMRI scans during three alternate use task evaluations showed stronger connection between the left IFG and the DMN in highly creative participants, suggesting creative individuals have higher connectivity to the DMN (Beaty et al., 2014).

Additionally, they used seed-to-voxel analysis to examine connectivity between the left IFG and other brain voxels, which are three-dimensional brain pixels on an MRI scan. Their results were in line with the fMRI scans, showing increased connectivity between the left IFG and the inferior parietal cortex, which is a part of the DMN. Their findings demonstrate that the DMN correlates to IFG activity, and therefore plays a role in creative behaviors (Beaty et al., 2014).

Conclusively, stimulation studies also provide evidence on which brain regions are involved in creativity. A clinical report examined an increase in artistic expression on a female Parkinson's patient after left deep brain stimulation (DBS) (Drago et al., 2009). Results indicated during "off" periods when she was not receiving DBS, her score on the Abbreviated Torrance Test (of creativity) for Adults (ATTA) was higher than during "on" periods. Left ventral sub thalamic nucleus DBS reduced creative ability and artistic appreciation, suggesting this structure is associated with creative behaviors (Drago et al., 2009). Lastly, research by Chi and Snyder (2011) proposed that electrical stimulation of the right anterior temporal lobe could improve performance on the remote associate test (RAT). The RAT is a test that looks at how creativity can associate two seemingly unrelated concepts in a novel way (Mednick, 1962). Results indeed showcased an improvement in performance on the RAT, supporting evidence for the involvement of the right anterior temporal lobe in idea generation (Chi and Snyder, 2011).

Neuroscience research has shed light on a handful of real-world implications of creativity in the form of musical and artistic therapies and musical improvisation among other uses (Wiggins and Bhattacharya, 2014). Additionally, creative thinking is a combination of several human cognitive processes that have contributed to evolutionary and sexual selection as real world implications of the past, but in modern societies also has implications for therapeutic

interventions in psychotic illness and artistic expression (Wiggins and Bhattacharya, 2014).

There are several psychological illnesses that possess increased creativity and lead to de novo artistic abilities, as such it is useful to study them to gain a further understanding of how creativity works and the mechanisms and brain areas associated with increased creativity as a result (Flaherty, 2011). Such illnesses include bipolar disorder, depression, psychosis, attention-deficit hyperactivity disorder, Parkinson's disease, autism, and frontotemporal dementia (Flaherty, 2011). A correlational study on musical improvisation by Limb and Braun (2008) observed deactivation of the prefrontal cortex leading to the finding that improvisation requires suppression of conscious processes and the stimulation of subconscious processes. Furthermore, musical improvisation has shown utility as a complementary therapy for treating mental disorders (de l'Etoile, 2002; Gold et al., 2004). For instance, patients engaging in musical improvisation saw a reduction in aggressive behavior, and musical improvisation lead to improvements in symptoms of dementia (Montello & coons, 1999; Raglio et al., 2008). To conclude, the real-world implications of creativity in the form of improvisation among other implications mentioned is not only a viable therapy to supplement the treatment of illnesses, but also a practical method to boost physical and psychological health of all individuals (Levitin, 2013).

Unfortunately, the majority of neuroscientific findings concerning creative behavior are neuroimaging studies which provide correlational but not causal evidence (Chi and Snyder, 2011). Lesion studies are causal, but these experiments involve the examination of creativity in altered or diseased human brains (Miller et al., 2000). Another form of causal methodology is stimulation studies, but the volume of this form of research so far is deficient (Cerruti and Schlaug, 2009; Chi and Snyder, 2011). In relation to this, inhibitory networks of the DMN have been identified via stimulation studies, however there is scarce research on the role of disinhibitory networks (Jung, 2013). Therefore, a future research question could address the role of disinhibitory networks of the DMN in creativity, analyzed via electrical stimulation studies in healthy patients. Possible stimulation methods that could be utilized are deep brain stimulation, repetitive transcranial stimulation, and electroencephalogram testing. Alternatively, it is known that the DMN plays a role in mind-wandering, hence it would

be interesting to study the patterns of DMN activation in patients during rest or in a state of mind-wandering (Beatty et al., 2014).

This could be accomplished by asking participants about their thought content at rest or during a task that requires minimal effort, via an fMRI scan. Nonetheless, creativity is a complex human behavior that will continue to remain an interest of researchers for years to come. (Jung, 2013). Therefore, a future research question could address the role of disinhibitory networks of the DMN in creativity, analyzed via electrical stimulation studies in healthy patients. Possible stimulation methods that could be utilized are deep brain stimulation, repetitive transcranial stimulation, and electroencephalogram testing. Alternatively, it is known that the DMN plays a role in mind-wandering, hence it would be interesting to study the patterns of DMN activation in patients during rest or in a state of mind-wandering (Beatty et al., 2014). This could be accomplished by asking participants about their thought content at rest or during a task that requires minimal effort, via an fMRI scan. Nonetheless, creativity is a complex human behavior that will continue to remain an interest of researchers for years to come.

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Gender Discrepancy in Seating Choice of Commuters on GO Trains: An Observational Study

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Abstract: Differences in stress responses have been reported previously between men and women, where women tend to use the *tend-and-befriend* response when experiencing stress (Nickels, Kubicki, & Maestriperi, 2017). To observe gender differences in stress responses while commuting, the seating locations of men and women were observed on the GO Train. Numbers of each gender in the Quiet Zone and the lower level on a rush hour train were obtained. It was found that women were more likely to sit on the lower level versus the Quiet Zone as opposed to men. As the Quiet Zone is designated for minimal noise and interaction, one can infer that the lower level is where the *tend-and-befriend* response was more likely to be observed. As women are more likely to use the *tend-and-befriend* response, they are more susceptible to engage in social interaction when experiencing stress and thus sit in the lower level. The implications of this study can be used to further investigate stress management between the genders as well as the improvement of public transport.

Keywords: commuter stress, *tend-and-befriend*, gender differences, public transport, stress relief

With public transport becoming readily available in communities around the globe, it is inevitable that chronic commuting may have deleterious short-term and long-term effects on one's health. Indeed, a study by Singer, Lundberg, and Frankenhaeuser (1978) initially found that commuting via train induced both psychological and physiological indicators concurrent with those observed in stress responses (e.g. elevated blood pressure). A further study by Evans and Wener (2006) observed the effect of commute duration on physiological and mental proficiency by examining salivary cortisol levels and performance in a task post-commute. In both variables, those who had longer commute times showed markedly decreased performance and increased cortisol

levels. The findings of these studies highlight the significance of commuter stress on personal health, and given the prevalence of commuting in our population, it is valuable to investigate the mechanisms and methods to relieve commuter stress.

It is important, however, to discuss distinct responses by which women and men process and cope with stressful situations. Taylor et al. (2000) defined the *tend-and-befriend* response as the inclination to nurture and protect ('tend') oneself and establish social connections ('befriend') when experiencing stress, while arguing that this response is more prevalent in females as opposed to the more commonly known *fight-or-flight* response. This divergence in stress responses between the two genders was further studied by Nickels, Kubicki, and Maestriperri (2017) in which the performance in social tasks of participants was monitored after being subjected to the *Trier Social Stress*. The results reinforced the distinction in stress responses between males and females, with male behaviour coinciding with the *fight-or-flight* response and female behaviour resembling the *tend-and-befriend* response. Moreover, further disparity between male and female stress management was studied by Boately, Evans, and Wener (2005). In this study, it was highlighted that women with children at home responded most positively to commuting improvements as opposed to men with children at home, further suggesting a difference in stress perception between the sexes. Therefore, when investigating approaches to resolving commuter stress, it is imperative to consider and account for the aforementioned gender differences in stress responses.

In alignment with these studies, my study intended to observe the *tend-and-befriend* stress response in commuters using the GO Train. In 2017, it was estimated that 268,000 people travelled daily using GO Trains (Metrolinx, 2017), with the majority of users being commuters, hence providing an apt location to observe the effects of commuter stress. The GO Train is sectioned into two levels: a general lower level and an upper level, designated the *Quiet Zone*, in which minimal cell phone usage and conversation is to be held during rush hour trains. These trains include all trains departing and arriving at Union Station in Toronto, Ontario before 9:30am and from 3pm to 7pm. I aimed to observe the number of men and women seated in each level that are travelling on the GO Train during afternoon rush hours, where the majority of passengers are returning from work or school. Based on the presented studies, I hypothesized that women are more likely to sit on

the lower level of the GO Train as opposed to the Quiet Zone in order to utilize the *tend-and-befriend* response.

Methods

Participants

The participants observed in this study consisted of adult male and female users of the GO Train. I strictly distinguished between males and females on outward appearance and did not include any children as they would most likely follow their caretaker's decision. My observations were performed on those perceived as teenagers or older. I observed 30 seats in the Quiet Zone and 30 in the lower level, excluding any intermediate level seats, seats located near the exits, and anyone standing. I did not distinguish between those arriving with others or in a group. A total group of 106 people were observed.

Procedure

I conducted this study in the same train carriage on the westbound 5:25 pm Thursday train on the Milton line over a period of three weeks. I recorded the number of males and females seated in the Quiet Zone (QZ) and lower level respectively using the iPhone application *Counter* into four categories; QZ male, QZ female, lower level male, and lower level female. The observations were obtained five minutes after departure from Union Station and before the train's first arrival at Kipling Station, giving a collecting time frame of approximately 15 minutes. This ensured maximal probability of all the designated seats being occupied as well as a reduction in passenger relocation. I inferred the gender of the passenger strictly based on outward appearance. For the purposes of this study, it was operationalized that the passengers were experiencing commuter stress and subsequently the choice of seating corresponded with choice of stress relief (i.e. sitting in the lower level indicated use of the *tend-and-befriend* response).

Results

	Male	Female
Quiet Zone	42	22
Lower Level	17	25

Table 1. *Seating Locations by Gender of GO Train Users*

It was hypothesized that women were more inclined to sit on the lower level of the GO Train as opposed to the Quiet Zone. A chi-squared test of independence and Cramer's V test were performed to examine the relationship between gender and seating location on the GO Train. The relationship between these variables was significant, $\chi^2(1, N = 106) = 6.49, p = .011$, with moderate association, $V = .25$. As indicated in Table 1, there were more female passengers seated in the lower level, thus supporting my hypothesis.

Discussion

Taking into consideration the results of this study and subsequent data analysis, it can be inferred that gender plays a plausible role in seating choice of commuters on GO Trains, with women preferring to sit in the lower level of the train as opposed to men. This preference may be indicative of the utilization of the *tend-and-befriend* mechanism in response to stress by females, as described in previous studies (Nickels, Kubicki, & Maestripieri, 2017; Taylor et al., 2000). However, it is important to account for key differences between these studies and my own. Most importantly, the stress response of the participants in the aforementioned studies was observed through various social decision-making tasks in which social engagement was mandatory by virtue of responses to the tasks. In contrast, due to the nature of this observational study, depending on the location of their seat, the participants were able to decide if they wanted to engage in (or increase their chances of) social interaction, which may include a conversation with another passenger or simply talking on the phone. This distinguishes my study from those previously done as it focuses more on the voluntary decisions people make in order to relieve stress.

On the contrary, while the results obtained support my hypothesis, it is imperative to highlight potential confounds that exist within the design of this experiment. First and foremost, my observations did not discriminate between individuals versus groups of passengers. This distinction may have a substantial effect on the outcomes that I observed, as it is clear that those passengers arriving with a partner or group would be more likely to sit in the lower level, regardless of gender. Notably, eight out of the 47 observed females and three of the 59 observed males consisted of groups of two or more individuals. As expected, all 11 of these individuals were seated in the lower level. Therefore, in future studies this factor should be taken into

consideration by either incorporating or eliminating these subjects from the observations. It is also important to note the difference in the amount of male versus female passengers on the trains. Table 1 indicates that more men were present on the train irrespective of their location. This disparity may arise due to a lack of safety and fear associated with public transportation by women. Indeed, Loukaitou-Sideris (2014) reported that women have distinct transportation needs as opposed to men, with a greater emphasis on reducing perceived fear of personal harm on public transportation. It was also noted that events of sexual assault were vastly underreported, leading to the false impression that public transport is safer than it may be. Hence, it is possible that women may travel on earlier trains or avoid rush hour trains to increase their perceived personal safety. Therefore, observing GO Trains of different times other than rush hour trains may provide alternate findings.

Moreover, additional confounds can arise as a result of the train itself on which the observations were collected. The limitations of the Quiet Zone itself may prompt passengers to sit in the lower level irrespective of gender. For example, a passenger may not sit in the Quiet Zone in case they may have to receive or make a call. This would greatly factor into their seating decision, thus interfering with the hypothesized outcome. Furthermore, as per Table 1 it can be noted that even with excluded seats the Quiet Zone contained more seats than the lower level. As this was a rush hour train, people may have sat on the upper level simply due to lack of seat availability. In addition, while I was able to obtain a sufficient sample size ($n = 106$), considering that each train has a seating capacity of 1,944 passengers (Metrolinx, 2017), it may be beneficial to increase the sample size by observing multiple carriages which may improve the statistical outcomes of this study. Lastly, while this study focused on rush hour GO Train passengers, studies on non-rush hour train times may also be performed and compared to the results of this study.

To conclude, the results of this study, albeit moderately significant, still indicate the utilization of distinct methods by commuters of different genders to relieve stress. These results add to the ongoing exploration into reducing commuter stress and further support the *tend-and-befriend* response in females, as first proposed by Taylor et al. (2000). While the presence of the Quiet Zone indicates a positive direction into commuter comfort in the Greater Toronto Area, these improvements are not equally translated into other transit systems around the globe. As

mentioned before, the use of public transport by women is accompanied by vast amounts of personal fear, both perceived and observed. It is therefore crucial that the results of this study and those alongside are used to improve commuting safety and public transit use for both women and men globally.

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