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CONTENT

3 | NEBULOUS

PREFACE

"The liberal arts are the arts of communication and thinking.
They are the arts indispensable to further learning,
for they are the arts of reading, writing, speaking, listening, figuring"
— Oliver DeMille

For most, there exists a clear divide between the world of natural sciences and the world of humanities and social sciences. Yet, it rapidly becomes obvious to anyone studying these disciplines that they are much closer in nature than they first appear. *Between Arts and Science* seeks to embody and showcase how widely diverse and how incredibly synergetic these different fields are. This interdisciplinary academic journal, produced yearly by Concordia University's Arts and Science Federation of Associations (ASFA), is the work of its students. This year's team, composed of ASFA representatives, the editorial board, a creative director and a marketing director, is a team strictly made up of undergraduates. We began our work on the journal in January with one task in mind: to perfectly encapsulate the many interests and immense talent of Concordia's students.

This year, the journal received an impressive number of essays from students in a myriad of departments. The creativity and diverseness of topics truly showcases Concordia's heterogeneity. 12 articles were selected to be published in the fourth edition of *Between Arts and Sciences*. We are more than proud and happy to be able to share with you these enlightening essays that sublimely capture the complexity of these disciplines. We hope that they will be able to teach you something you may not have known about before and that they will make you ponder, the way they have for us.

ASFA Journal Board 2019

In artibus et scientiis, tanquam in metalli fodinis, omnia novis operibus et ulterioribus progressibus circumstrepere debent

"But arts and sciences should be like mines, where the noise of new works and further advances is heard on every side."

— Sir Francis Bacon

1 | *INCHOATUS*

Debating the Effectiveness of Marine Protected Areas on Large Marine Predators

Alison Rowley

Keywords

Marine Protected Areas, shark conservation, Galapagos Marine Reserve, mobile species.

Abstract

Marine Protected Areas (MPAs) have long been established to help safeguard marine species from diverse threats. Many types exist, ranging from areas that allow fishing or tourism only at specific hours of the day, to areas that allow no anthropogenic disturbances at all to the ecosystem (known as no-take areas). But the effectiveness of these areas for highly mobile apex species, such as the tiger and hammerhead shark, remains a topic of debate. The Galapagos Marine Reserve (GMR) is home to both of these at-risk species and provides interesting insight as one of the world's largest MPAs. Because sharks continually move in and out of MPAs, many argue that establishing safe areas such as these will not affect their overall safety. Through the survey of relevant literature, I determined that the implementation of MPAs in places with a known high abundance of sharks can positively contribute to their conservation. In several MPAs around the world, sharks have been shown to spend a large part of their lives within protected waters. The issue regarding whether MPAs protect these species is actually in the enforcement of MPA rules – due to poorly enforced laws surrounding illegal fishing, shark populations in these areas are still at great risk. Rather than debating whether MPAs are effective, methods to increase security should be discussed.

Introduction

Marine Protected Areas (MPAs), defined by the World Wide Fund for Nature as areas "designated and effectively managed to protect marine ecosystems, processes, habitats, and species" ("The Case for MPAs", 2017) currently cover and protect only 4.8% of the Earth's oceans ("Global Ocean Refuges", 2018). These safe zones are established in light of the risks marine species face due to anthropogenic (human-caused) disturbances such as disease, overfishing, destruction of habitat, and exposure to invasive species. There are multiple types of MPA's – some allow fishing only at specific times of the day, some allow only tourism and conservation activities, some require specific licenses in order to fish there, and some are completely no-take (no human activities are allowed in the MPA at all) ("What are Marine Pro-

tected Areas (MPAs)?", 2010). The Darwin and Wolf Sanctuary in the Galapagos Islands is an example of a no-take area.

The type of regulations implemented in an MPA depends on the goals present during its creation. They can be established for ecological objectives, such as preserving marine habitats or ensuring the survival of marine species, or for human objectives, such as educational and research purposes. MPAs are effective at protecting non-mobile species such as corals – this has been proven again and again (Lester & Halpern, 2008; Vandeperre, et al., 2010; Kerwath, Winker, Gotz, & Atwood, 2013). In recent studies, biomass of fishes has been shown to increase (Chirico, McClanahan, & Eklof, 2017) and the prevalence of coral disease has been shown to decrease ("Marine Protected Areas Can Benefit Large Sharks", 2016) within MPAs. However, how well they protect mobile species is still being examined. For highly mobile organisms that often move in and out of MPAs, is it of better use to establish different management techniques or conservation laws, rather than creating an MPA in regions they frequent?

Tiger sharks (*Galeocerdo cuvier*) and hammerhead sharks (*Sphyrnidae*) are examples of highly mobile species. These cartilaginous fish frequent the waters of the Galapagos Marine Reserve (GMR), the MPA that encompasses all the Galapagos Islands. They have been found in large quantities in the Darwin and Wolf Island area, which has the "highest known biomass of sharks in the world" (Acuña-Marrero, et al., 2017). It is well-proven that sharks are currently facing extinction – several studies show that human activities has reduced the biomass of sharks and other marine predators by "over 90%" (Salinas-de-Léon, et al., 2016), that "one in four species of cartilaginous fishes" faces extinction (Salinas-de-Léon, et al., 2016), and that shark populations are currently decreasing in size (Baum & Myers, 2004; White, Myers, Flemming, & Baum, 2015; Carr, et al., 2013). Additionally, sharks typically have a life history that makes them more vulnerable to human threats – they take several years to reach maturity, have low fecundity, long pregnancies, and few offsprings during each breeding event. Therefore, once a shark population has been decimated, it is very difficult to return it to a healthy state.

Tiger sharks are rated as Near Threatened by the International Union for Conservation of Nature (Simpfendorfer, 2009). Hammerhead sharks, which in the Galapagos include scalloped hammerheads (*Sphyrna lewini*) and great hammerheads (*Sphyrna mokarran*), are both rated as Endangered (Baum, et al., 2009). Conservation methods, such as raising awareness and education, currently exist to protect many types of sharks, but the establishment of MPAs for this purpose is still debated. The question remains, as sharks swim several hundred miles each

year, will preserving one specific area help protect them?

While more than one conservation strategy should be employed, the implementation of MPAs can be a very valuable one when it comes to the protection of sharks.

Methods

The most common methods utilized to study the relationship between MPAs and sharks are satellite tagging and acoustic tagging. Acoustic tags appear to be more common, perhaps because swimming patterns exhibited by sharks (including very fast swimming, deep dives, irregular surfacing, and sharp turns) can cause issues with satellite tags. For this reason, satellite tags may provide inconsistent data or may fall off more easily than acoustic tags (which tend to be placed within the shark rather than on the fins, as satellite tags are) (Acuña-Marrero, et al., 2017). Using acoustic receivers to track how often sharks are in MPAs may then be easier than attempting to know where they are at all times with the satellite tags. Across all studies, ethical concerns were taken into consideration, and the sharks involved were humanely treated. Other methods include taking videos of the sharks and vessel tracking technology (White, et al., 2017). The studies had varying sample sizes and durations. They also dealt with different kinds of sharks in different areas.

Results

In 2017, researchers looked at how effective the 54,000 square kilometers US Palmyra Atoll National Wildlife Refuge (an MPA in the central Pacific Ocean) was at protecting Grey Reef sharks (*Carcharhinus amblyrhynchos*), a Near Threatened species (White, et al., 2017). This species was of interest to researchers as its population has declined even in other MPAs. This may be due to the high mortality risks faced by sharks just outside the borders – while they are protected within the MPA, leaving it can expose them to immediate and lethal risks. Using "conventional tags, satellite tags, and an emerging vessel tracking technology", researchers found that 2/3 of the 262 tagged sharks stayed within the boundary of this large MPA for the entire duration of the study (197 days) (White, et al., 2017). Additionally, they tracked fishing efforts in this area (which does not allow any fishing) and found no evidence of illegal activity.

This study shows that MPAs can provide substantial protection for grey reef sharks – on average, these sharks are protected 66.7% of their lives. Of the sharks that did leave the MPA, only 2% were caught by fishermen during the study (White, et al., 2017). While this does not provide complete protection, establishing an MPA can "effectively benefit reef sharks and other

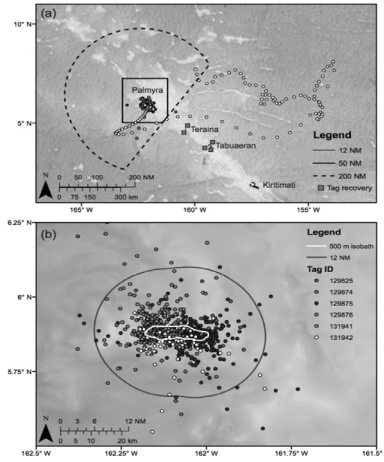

Fig. 1. (a) satellite tag estimates of the daily position for 6 grey reef sharks
(b) a closer view at the shark positions within the Palmyra Atoll (White, et al., 2017)

Table 1. Summary of acoustic and satellite tag deployments on tiger sharks at the three tagging locations within the Galapagos Marine Reserve in 2014–15.

Shark ID	Tagging date	TL (cm)	Sex	Satellite		Acoustic			
				Days transmitting	% residency time*	Days monitored**	Days transmitting	No. detections	RI*** (per tagging site)
Bachas-Salinas									
TS1	30-Jan-2014	274	F	116	90.48	307	152	761	0.50
TS2	30-Jan-2014	251	F	210	74.83	79	19	150	0.24
TS3	30-Jan-2014	248	F	127	99.02	-	-	-	-
TS4	30-Jan-2014	383	F	333	82.78	262	111	438	0.42
TS5	11-Jun-2015	225	F	-	-	104	71	482	0.68
TS6	11-Jun-2015	240	F	67	98.48	104	47	185	0.45
Average TL ± SE = 270.17 ± 23.49									
Cerro Ballena									
TS7	23-Jul-2014	140	F	-	-	180	41	140	0.23
TS8	23-Jul-2014	224	M	25	87.50	303	68	510	0.22
TS9	24-Jul-2014	234	F	26	100.00	271	16	82	0.06
TS10	24-Jul-2014	171	F	21	100.00	286	45	399	0.16
TS11	24-Jul-2014	260	F	115	100.00	-	-	-	-
TS12	7-Oct-2014	180	M	-	-	113	23	376	0.20
TS13	7-Oct-2014	180	M	-	-	195	93	1183	0.48
TS14	21-Feb-2015	206	F	58	78.12	74	10	23	0.14
TS15	21-Feb-2015	202	M	84	98.30	177	16	99	0.09
Average TL ± SE = 199.67 ± 12.14									
Isabela-South									
TS16	22-Feb-2015	378	F	128	100.00	-	-	-	-
TS17	22-Feb-2015	282	F	14	100.00	58	1	1	-
TS18	22-Feb-2015	324	M	45	100.00	118	2	2	-
TS19	23-Feb-2015	286	M	66	95.61	-	-	-	-
TS20	23-Feb-2015	242	M	37	100.00	68	1	1	-
Average TL ± SE = 302.40 ± 22.93									

*% residency time refers to the percent of time spent in resident behaviour within the GMPI, as determined by the SSSM model.
**Days monitored refers to the number of days that the shark could be detected by the acoustic receivers (note that acoustic receivers were deployed after the sharks were tagged).
***RI = residency index per site (i.e., total number of days a shark was detected divided by the number of days that the shark was monitored by the receivers).

Table 1: data collected from acoustic and satellite tags for 20 tiger sharks at Bachas-Salinas, Cerro Ballena, and Isabela-South, three tagging locations in the Galapagos Marine Reserve (Acuña-Marrero, et al., 2017)

mobile species if properly enforced" (White, et al., 2017). Figure 1 shows the estimates of the daily positions for 6 satellite-tagged grey reef sharks in the Palmyra Atoll, with their associated ID numbers.

In reference to the MPA, researchers stated that "the establishment of properly enforced MPAs that protect suitable habitats and predictable food resources for both juvenile and adult marine apex predators [...] might play a key role in [their] conservation" (Acuña-Marrero, et al., 2017). Alongside the grey reef shark study, this paper indicates that highly mobile species such as sharks can still be well protected by making sure the area they spend time in is safe. These sharks spent an average of 7% of the year potentially facing anthropogenic disturbances such as overfishing. 93% of the time, however, they were protected.

A third study looked at 37 juvenile pigeye (*Caracharinus amboinensis*) and 20 adult spottail (*Carcharhinus sorrah*) sharks in two tropical coastal MPA regions in the Great Barrier Reef Marine Park, Australia. From January 2009 to October 2010, researchers used several types of acoustic receivers to establish where these two species were spending their time. They found that pigeyes and spottails were spending 22% and 32% of their time, respectively, within the MPA. The range for time spent inside was very large, with 10% of female spottails spending between 60 – 70% of their time in the MPA. Some individuals were detected within the MPA for over 600 days. The researchers suggested this was likely due to individual behaviours – younger vs. older sharks, as well as males vs. females, may use the area differently, as reflected by

the wide range. They also found that the sharks were consistently crossing "MPA boundaries at the same locations" (Knip, Heupel, & Simpfendorfer, 2012), and the time spent inside the MPA depended on the season, as more pigeyes were in the MPA during the summer and more spottails were in the MPA during the winter. Additionally, both species showed usage of almost all the MPA – pigeyes used up to 93% of the area, and spottails used up to 83% of the area.

Researchers concluded MPAs can be effective when it comes to sharks, even if they are not created with the express purpose of protecting these species. By protecting their food sources (reefs) and the "diverse habitats" they live in, their populations can be saved. This study showed that "individual MPAs may generate benefits for multiple shark species" (Knip, et al., 2012).

Finally, a fourth study led by the University of Miami Rosenstiel School of Marine & Atmospheric Science in 2016 looked at if and how a previously-established MPA was protecting any territory used by several sharks. This study identified the core home ranges of 86 bull, great hammerhead, and tiger sharks in the Northern Atlantic Ocean. The researchers established that 0%, 17.9%, and 34.7% of the core home ranges of bull, great hammerhead, and tiger sharks respectively in this area are currently protected (Graham, et al., 2016). This leaves the sharks (especially the bull sharks) at risk for a large majority of their lives, meaning that they can easily be killed by human exploitation activities such as fishing, pollution, or disease. While both Florida and the Bahamas (the territories closest to where this study took place) have recently enacted laws protecting these sharks, they are still facing significant threats, threats that could be further eradicated by the establishment of MPAs.

Speaking to Science Daily for their article "Marine Protected Areas Can Benefit Large Sharks [...]" (2016), Neil Hammerschlag, a co-author and a professor at the University of Miami, stated "significant conservation benefits can be achieved if [highly mobile species] are protected in areas where they spend the majority of their time". This echoes the two studies mentioned above – while it is unfortunately unrealistic to protect sharks for their entire lives, it is very possible to substantially reduce the time they spend being exposed to life-ending risks.

While MPAs have shown to be effective at protecting all types of organisms, the usefulness of MPAs when it comes to sharks is still doubted by some. Many argue their high mobility reduces how helpful MPAs will be for them – after all, if they are not in the area, how will they be protected? A study by a team from the University of Victoria in Costa Rica found that eight of 12

elasmobranch (a group including sharks, skates, and rays) species present in the Cocos Island National Park have "declined significantly over the past two decades" (White, et al., 2015). The scalloped hammerhead shark alone was found to have its relative abundance decreased by 45% in the area. Cocos Island National Park is one of the oldest MPAs in the world – according to other studies, the biomass of marine species in the area should have increased drastically. Researchers do not attribute this uncharacteristic population decrease to the movement of sharks in and out of the MPA. Instead, they state that "declines of marine megafauna will continue [...] unless there is adequate enforcement effort to control fishing" (White, et al., 2015). As a no-take area, fishing is illegal in the Cocos Island National Park, and yet it continues to happen. The debate regarding MPAs does not have to do so much with whether they are effective at protecting marine life but has to do with how respected they are. If their rules are correctly enforced and managed, there is no reason MPAs could not protect any species, including mobile ones such as sharks.

Discussion

After the evaluation of several studies over many years, I believe that the establishment of MPAs is a very promising step towards preserving shark species. From the four studies described above alone, MPAs in the Galapagos Islands, Florida, the Bahamas, Australia, and California, currently offer protection for tiger, great hammerhead, pigeye, spottail, and grey reef sharks. With well-placed MPAs, tiger sharks are spending 93% of their time protected in the GMR (Acuña-Marrero, et al., 2017), while grey reef sharks are spending 67% of their time protected in the Palmyra Atoll (White, et al., 2017). Pigeyes and spottail sharks are spending 22% and 32% of their time, respectively, protected in the Great Barrier Reef (Knip, et al., 2012). With MPAs that are not so well located to protect sharks, such as in Florida and the northern Bahamas, bull and tiger sharks are only being protected 0% and 17.9% of their lives, respectively. However, great hammerheads in this region are being protected 34.7% of the time (Graham, et al., 2016). By making their core home ranges safe, we can drastically increase the chances these sharks have at survival.

The fact that these MPAs (and more) have been implemented is a promising first step, but their laws must now be enforced. On July 19th, 2011, the Ecuadorian Navy seized an illegal fishing vessel in the GMR (Carr, et al., 2013). Researchers examined the boat and found over 370 dead sharks aboard, including 5 hammerhead and 2 tiger sharks. In their paper titled, "Illegal shark fishing in the Galapagos Marine Reserve", researchers examined both this

Table 1
Illegal shark fishing seizures in the Galápagos Marine Reserve from 2001 to 2004. Data were collected by the Galápagos National Park and the WildAid Organization.

Date	Vessel (Nationality)	Seizure location within GMR	Fishing gear	Catch information
3/2001	B/P Dilson (Ecuador)	Isabela Island	Longline	Shark bodies (350), shark fins (600)
3/2001	B/P María Canela II (Costa Rica)	Wolf Island	Longline	Shark bodies (60), shark fins (1038)
7/2001	B/P Indio (Costa Rica)	Darwin Island	Longline	Shark bodies (1300), shark fins (819)
7/2001	B/P Calima (Colombia)	Wolf Island	Longline	Shark body (1 thresher)
7/2001	B/P Cruz Ariceli (Ecuador)	Isabela Island	Longline	Shark bodies (10)
1/2002	F/M Pajaro Azul II (Ecuador)	Santiago Island	Net	Shark fins (52 Galápagos)
7/2002	B/P Sergio Gustavo (Ecuador)	Isabela Island	Longline	Shark bodies (28 blue, 1 Galápagos)
11/2002	B/P Adionay IX (Ecuador)	Fernandina Island	Longline	Shark bodies (12 blue)
1/2003	B/P Don Daniel (Costa Rica)	Pinta Island	Longline	Shark bodies (3 thresher)
1/2003	F/M Cristel, Hermano Gregorio, Soledad (unknown)	Pinzon Island	Net	Shark bodies (27 Galápagos, 1 silky, 1 blacktip), shark fins (124)
2/2003	Abandoned longline	Wolf Island	Longline	Shark bodies (8 blue, 1 Galápagos)
3/2003	Abandoned net	Wolf Island	Net	Shark bodies (30)
3/2003	B/P Marcelo Caina (unknown)	Isabela Island	Net	Shark fins (4147; reconstructed to comprise 942 sharks of silky, blacktip, Galápagos, blue, hammerhead)
3/2003	B/P Adionary V (Ecuador)	Unknown	Longline	Shark bodies (3 silky)
3/2003	Campsite	Santa Cruz Island	Net	Shark fins (46)
9/2003	F/M Canaima XI (unknown)	Isabela Island	Unknown	Shark fins (815; reconstructed to comprise 202 sharks of blacktip, Galápagos, hammerhead, silky, other)
10/2003	M/N Virgen de Monserrate (unknown)	San Cristobal Island	Unknown	Shark fins (211)
4/2004	Multiple pangas (unknown)	Floreana Island	Longline	Shark bodies (22 Galápagos)
7/2004	B/P Primero Matricula (unknown)	Wolf Island	Longline	Shark fins (9; 6 thresher, 3 blue)

Table 2: compiled list of all illegal shark fishing seizures in the Galapagos Marine Reserve from 2001 to 2004 (Carr, et al., 2013)

evidence and records of previous seizures. After compiling data from 2001 to 2007, they found that Ecuadorian authorities had seized 29 illegal shark catches within the boundaries of the GMR, with "catch size ranging from two dead sharks to 41,800 shark fins" (Carr, et al., 2013). That is an enormous decrease of shark biomass in the Galapagos and greatly affects the local ecosystems. Having an MPA is useless if there are no policies towards ensuring its rules are followed.

Many shark species are facing extinction, and thus increasing management and conservation for their survival is vital. MPAs can do a great job of protecting sharks – if the MPA is respected, that is. Some may argue that "MPAs only protect the ocean from legal, regulated fishing" (Hilborn, 2018), but theevidence listed in Table 2 directly contradicts this notion – only artisanal fishing is legal in the GMR, and yet tragedies like this occurred several times through the years of 2001 – 2007. Enforcing MPAs would undoubtedly protect sharks from more than legal fishing. As the researchers stated in their conclusion, "until there is a coupling of [MPA] designation with sufficient enforcement, exploitation (as documented here) is likely to continue" (Carr, et al., 2013). Establishing MPAs can and will save many sharks' lives, potentially resulting in the preservation of entire species. But it is not enough to simply decide an area will be an MPA – in order for it to be effective, it must be strictly managed. The survival of many sharks, as carefully demonstrated in this paper, may depend on it.

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The Case for More Substantive Indigenous Representation in Canada's Parliament

Maxime Debeauvais

Introduction

Out of 338 Members of Parliaments (MPs), 10 indigenous people were elected during the Canadian federal election of 2015. This historical turnout has yet let to believe in a progress of indigenous people's underrepresentation in Parliament. However, their historic underrepresentation in the Parliament weakens their capacity to use legislative means to express their concerns. Therefore, the lack of formal mechanism to voice their interests create a dramatic situation where they become conditioned to use charged political demonstrations or blockades to be heard. This reinforce a dual relationship relation with the state and their indirect alienation from public office and Canadian society (Hunter, 2003). Consequently, indigenous people are less likely to have a high level of confidence in institutions. For instance, the proportion of indigenous people who said that they had confidence in the Justice system was 15 percentage points lower than for non-indigenous people (Cotter, 2015). The federal government has been constantly focused on reforming the Indian Act, which covers the system of reserves, and registering Indian concerns rather than addressing their electoral participation. To address their underrepresentation, it is imperative to focus on their substantive representation in order to better integrate their views in economic or political spheres of Canadian society. By doing so, we aim to increase their electoral participation and representation as well as regaining their trust and confidence in the benefits of participating in the democratic process.

The underrepresentation of Indigenous people in the House of Commons is relevant because it signifies a high level "political alienation" (Hunter, 2003) which threatens the legitimacy of Canadian democratic system. The loss of confidence for the Canadian state is translated

into lower level of voter turnout from indigenous communities in both the federal and provincial level, and their inability to translate their political involvement into election of indigenous MPs. Political representation structures government's activity where gatekeepers have the power to put forward interests leading to policy implementation. For instance, after strong opposition from indigenous groups over the approval of the Enbridge Inc's Northern Gateway oil pipeline, the federal government has decided to back down the proposal as they claimed consultations among indigenous people were not properly done (Reuters, 2016). This example shows that the lack of representation hinders concerns over issues that touches indigenous communities and reinforce the inadequacy of policy makers to implement policies that respond to indigenous collective interests and aspirations. Political institutions should reflect the diversity and desires of their constituents in order for them to abide by the law. If indigenous communities do not see their interests represented due to structural barriers, a democratic deficit can arise and lead to a greater skepticism in the government apparatus and institutions. Although Canadian politics is influenced by party discipline, MPs nonetheless enjoy a sense of autonomy during question period in Parliament which leaves incentives to speak out of indigenous themes.

In this paper, I intend to demonstrate that having an electoral reform would be a tremendous improvement for the representation of Indigenous people in Parliament. Focusing on substantive representation of First Nations will allow us to effectively address institutional barriers to their representation. Through the literature review, we will show cases of policies dedicated to the improvement of representation of indigenous communities in politics. Aboriginal Electoral Districts in the Parliament would be a viable solution in Canada as well as an electoral reform. Those reforms posit challenges to their implementation, however, public support for an electoral reform as well as for an increased level of representation for Indigenous people could help overcome these challenges.

Literature Review

While Canadian literature tends to focus on the descriptive representation of First Nations in electoral participation and representation, many scholars have focused on substantive concerns on electoral reforms. The case of New Zealand is interesting in that matter since the substantive representation of the Māori, representing 10% of the country's population, has been a prime concern for the government trying to resolve the apparent gap. After passing an initial motion in 1867 to provide the Māori 4 guaranteed seats in the House of representatives, the government had an electoral system reform in 1993. The Royal Commission established that a Proportional System would benefit indigenous minorities by producing more effective representation. From a First Past the Post System (FPTP) to a mixed-member proportional system (MMP), New-Zealand's electoral reform had a powerful impact on Māori's representation. The Māori strongly benefited from that system where their initial 4 seats were increased to 7 due to the proportional representation and reserved seats (Schmidt, 2003, p. 9). The number of Māori's designated seats increased to proportionally represent their population. In those designated ridings, only the Māori would have the possibility to elect their 'representatives' but they also had the possibility of casting their vote on the general ballot. Many scholars have argued that the case of New Zealand's model of reserved seats was a viable model to enhance indigenous participation in politics (Fleras, 1991, p. 98).

Cases of affirmative action to increase the representation of minorities or people from specific groups, have wide outreach and have the objective of balancing with past 'injustices' done to a certain group. Since the independence of India from the British Empire, affirmative actions were widely implemented for lower castes. The Mandal Commission report was later established as a means to reserve jobs for lower castes members in universities and in the public sector, but also suggested the nationalization of universities and banks throughout the

country. The commission was a way of reducing the unequal system of castes in India (Dharma, 1992, p. 298). More than 52% of Indians were concerned by those "special concessions" in governmental and university positions. The report came to answer an unequal relationship and access to higher positions in India where those 52% of the population had only access to 5% of higher-level positions in the government, in universities and in businesses. As a result of the implementation of the commission, many criticized the fact that universities and other sectors would not be filled according to merit but because of reserved positions based on socio economic status. This situation posits a challenge in the establishment of reserved places as the legitimacy of individuals holding new positions might be contested by those looking to keep a grasp on decisional power.

However, other scholars have addressed the problem of indigenous people's underrepresentation in politics from a different perspective. Ovide Mercredi and Mary Ellen Turpel tried to demonstrate that First Nations have a fundamentally different way of conceptualizing politics and social involvement. The will to sustain their traditional language and culture is a driving force in their political life. However, fighting for their concerns would come through a different approach of politics informed by their traditional values and by the teaching of elders (Hunter, 2003). Their 'way' of looking at politics would be different from the mainstream protocol to put forward issues as they would dedicate more time on community issues rather than national issues and see conflict resolution as part of the community's duty. This alternative theory could explain a certain disinterest for national political roles that results in lower electoral turnout.

Through my university experience, I learned that Concordia University has taken many symbolic steps toward the inclusion of indigenous people in its programs and their empowerment. Concordia has mandated the Indigenous Directions Leadership Group to explore and recommend priorities in which the university could "improve its responsiveness to the Truth

and Reconciliation Principle (TRP)" (Teoli, 2018). The TRP was a commission established by the government and Indigenous groups with the objective of documenting history and the impact of the Indian residential school, a boarding school system with the purpose of assimilating First Nations with Canadian society as a whole. Boarding schools were first established in 1876 with the passage of the Indian Act on aboriginal communities. Former victims of this boarding school system now have the chance to share their experience to effectively help officials elaborate solutions and ways of actively acknowledging what has been called a "cultural genocide" (Woolford, 2009, p. 2). In this regard, Concordia has created a group composed of academics and indigenous activists who will create a governance framework which will support an increase of indigenous people's representation in Concordia's decision-making process. Moreover, Concordia systematical acknowledgment of the university's location on "unceded indigenous lands" with respect to the community's history and present situation has been well seen by Indigenous communities in Quebec (Wahéhshon Whitebean, 2017). Those steps were mostly symbolic, and the results might be unclear as to whether it will positively impact indigenous substantive representation in decision making process or in their empowerment. Although Concordia has taken steps forward, indigenous people remain a minority among the teachers and in the administration of the university. The main challenge for universities will be to bridge the gap between symbolic and substantive decision.

Policy Prescription

Implementing Aboriginal Electoral Districts (AED) would be an effective way of improving indigenous people's representation in Canada's political scene. The Royal Commission on Electoral Reform and Party Financing, well known as the Lortie Commission, has in the past recommended their implementation. Those seats would not be guaranteed as the New Zealand model would do, but they would rather depend upon First Nation's sufficient population

number to register on separate ballots. Although the Constitution does not allow inter-federal electoral districts, it recommended nonetheless for AEDs to be created within provincial boundaries. As Augie Fleras argues, the attainment and the successful experience of AEDs would eventually lead to higher considerations from the Supreme Court of Canada to redefine constitutional restrictions for AEDs to include the federal sphere (Schmidt, 2003, p. 5). The number of AEDs created should be proportional to the number of aboriginal people in Canada who would be registered to vote. AEDs would geographically overlap with different levels of riding in order to better reflect the territorial representation of indigenous people. Those boundaries would be designated after proper consultation with indigenous groups and would not make the existing number of MPs in Parliament to exceed. By letting First Nations vote in either federal or AEDs districts, we ensure that they do not feel oppressed nor cantoned in specific systems, but it would rather let them decide which system fits them best (Schmidt, 2003, p. 3). The question that remains is the determinant of aboriginal's status and eligibility to vote in AEDs. Eligibility would be based on self-identification as aboriginal as well as community acceptance of the claim of one's aboriginal status. According to a recent survey, 46% of Canadians support more indigenous representation in parliament while 30% do not oppose it but prefer to judge how it would be done (May, 2016). The increasing popular acceptance of supplemental measures for indigenous populations demonstrate that the political gains from applying such measures would outweigh potential backlash. Many Aboriginal leaders have expressed their support for AEDs measures as it would facilitate indigenous self-governance. The idea of power-sharing would empower indigenous communities and tie them to the Canadian federation (Schouls, 1996, p. 739).

The First Past the Post system is often associated with biases against groups or minorities that are not geographically concentrated in a specific area (Knight, 2001, p. 1070).

As opposed to this system, having an electoral reform to implement a Proportional Representation (PR) could effectively boost the election of minority candidates. Kenneth Benoit and Kenneth Shepsle both argued that the PR system produces the "most robust empirical regularity" (Knight, 2001, p. 1070) on the relationship between proportional districts and success of electoral minorities' candidates in gaining seats. The logic of the current system pushes parties to select candidates based on common features that the individual shares with the majority of people in the riding. However, given the geographical disparity of Aboriginal people in Canada and their number (4% of Canadian population), few of them are selected by parties which reduces their chances of representation in Parliament. During last year's parliamentary session, MPs representing ridings with a higher rate of ethnic minorities mentioned on average 348 times minorities related issues during their speeches which represents 19,9% of their total parliamentary declarations. MPs from ridings with less visible minority constituencies only made on average 56 mentions on these issues which represents 6,5% of their total announcements. This comparison demonstrates that visible minority MPs are most likely to bring light to ethnic related issues as opposed to non-minority MPs (Bird, 2007, p. 12). Thus, having more aboriginal MPs in the House of Commons increases the chances for aboriginal-related issues to be put forward and put their concerns on decision makers' agenda. The PR system would increase their substantive representation and help their community on different levels of engagement.

Potential Challenges

Indigenous people and proponents of an electoral reform might face potential challenges. Although a proportional system could improve representation of aboriginal people in Canada's parliament, parties remain reluctant to such reforms. Elected parties beneficiate from the current electoral system and will thus promote the status quo in order to remain

in power. Because indigenous people are scattered through the territory, the current system disadvantages their communities as they are numerically outnumbered in ridings. As a result of this situation, they become less influential in elections' outcome, thus reducing their power to push forward such reforms. Geography remains a key challenge to face for politicians. For instance, it has been shown that remote communities in Yukon or Northwestern Territories did not see as much candidates or media coverage as other provinces during the 2015 election. Because of the long and costly trip to join remote communities, many politicians did not try to reach these villages. This situation is problematic even if the electoral system is reformed (Ladner & McCrossan, 2007, p. 41).

The implementation of AEDs might be tougher as the adherence of indigenous population is yet to be proven. Their repeated claims over lands' sovereignty suggest that their political involvement may be in contradiction with their involvement in Canadian politics which would "undermine their differences" (Schouls, 1996, p. 742) and promote their uniformity within the Canadian electoral system. Furthermore, indigenous community's status and belonging is already complex and has created tensions both within and outside their communities. Aboriginals' official existing status are multiple and overlapping which posits a problem for proportional representation based on the total population if an AED system was to be implemented (p.742). There is a legitimate question to ask as to whether the various indigenous groups maintain a certain homogeneity and common desire to be represented separately. The proportional representation of AEDs based on provincial population would result in too few aboriginal districts and as a result, would not effectively represent Aboriginal Claims. Their implementation might create the opposite effect as the uniqueness of their identity would be constrained by their electoral representation. For instance, under an AED system, Quebec, Manitoba, Alberta and Saskatchewan would only have one Aboriginal district, while two would be established in Ontar-

io and in British Columbia. One Member of Parliament to represent the concerns of the whole aboriginal population residing in a province, without making a clear distinction between Inuit, Indians or Metis would create concerns and would be ineffective as different communities have multiple concerns and different realities (p. 742).

Conclusion

In this report, we have demonstrated that indigenous underrepresentation was an issue threatening the legitimacy of Canada's institutions as well as their community's ability to voice their concerns. This democratic deficit was partly due to structural barriers such as the electoral system or the systematic reliance on descriptive measures to address this issue rather than looking at their substantive representation as a way to analyze their 'alienation' from Canada's electoral system. An electoral reform focusing on the creation of Aboriginal Electoral District seems to be a viable solution to increase their proportional and substantive representation. Although it may posit challenges in the constitutional implementation or in their willingness to adhere to formal electoral mechanism, their creation has resulted in positive results in countries such as New Zealand facing similar problem with Maoris.

By increasing the number of MPs representing the indigenous community, the chances that their concerns will be heard would significantly increase thus empowering their community as a whole and reconnecting their values to the Canadian society. In order to create a channel of communication to better understand their aspiration, we should focus on structural barriers and reflect on Canada's implicit exclusion of alternative views. AEDs would align indigenous' will to have their interests represented by giving them a certain autonomy while increasing their adherence and confidence in Canada's electoral system. Indigenous population in Canada have faced through the years a dual relationship with Canada's government.

Their violent assimilation has created a long societal scar. Although successive governments have tried through the years to reconnect with indigenous communities, defiance as well as suspicion remain an important challenge for both parties to address. Future generations will have to understand that their perspective on the legitimacy of the electoral system is not unanimously shared and that many minorities or groups might face similar challenges to daily express their concerns. Governance and the implementation of policy should always match national and local priorities to maintain strong links with the nation's needs and aspirations. Future generations should enact policies that must always take into account internal dynamics and inequalities. Prior analysis should always value diversity and opposition, while refusing assimilation of groups that would undermine Canada's evolution as a united nation.

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Excarnation, Decapitation and Preservation: The Corpse in Celtic History and Myth

Keenan Churchill

In 2001, archeologists working at the Outer Hebrides site Cladh Hallan dug up an neolithic dwelling's stone floor and found human remains beneath, the two skeletons recovered being nearly 3000 years old. When a DNA examination of the skeletons was undertaken, a bizarre and macabre story emerged. The two skeletons were chimeric creations, a mishmash of several different individual's bones into two constructed skeletons. The two full skeletons, one male and one female were a combination of different jawbones, legs, arms and skulls, all of which when DNA tested were revealed to not even share a common mother (Kaufmann, 2012).

The dating of the individual bones further mystified researchers as various parts of the skeleton were hundreds of years older than other parts. Researchers found further curiosity in the fact that the bodies were deliberately placed in peat bogs, known for their power to preserve matter. This process arrested decomposition, allowing the corpses and their limbs to be articulated by the remaining connective tissues. The bodies would have been a shocking sight, their skin stained reddish black from the bogs, the skin sewn together with thread, the hair and details of the face perfectly preserved. Based on the state of the skeletons, it was determined that the bodies were displayed perhaps for hundreds of years before their eventual final internment beneath the dwelling's floor (Lobell et al., 2010). The bodies themselves are fascinating, their carefully tended to preservation and painstaking construction manifesting what could be speculated is an attitude of reverence. The Cladh Hallan bodies are a patchwork of body parts, representing a practice completely alien to a modern perspective.

The Cladh Hallan bodies are not the only example of this strange and reverent attitude taken towards corpses, taken by the Celts. The European Celtic peoples, with their long historical and ethnic continuity stretching back to 7th century BCE provide numerous examples of bizarre and reverent attitude towards corpses. From the Hebrides to Hadrian's wall, to the south of France and Ireland, the Celtic peoples that spread across these lands shared a similar fascination with the dead body and its constituent parts, spawning veneration, fear and tales of the magical powers of the corpse. These Celtic ideas surrounding corpses were folded into western myth and religion in ways that have been overlooked, the highlighting of Celtic corpse

practices revealing forgotten aspects of a Celtic European past.

This fascination with the corpse is present throughout the historical and archeological record, myths and religious practices of the Celtic peoples. When examined from these three perspectives, the diversity of Celtic funerary practices constitute a highly foreign attitude of corpse veneration that is a strong interpretive motif for examining the funerary attitudes of the Celtic world. Furthermore the funerary practices of the Celtic people has strong demonstrable links to the present through forms of Saint veneration and other constituent religious practices. An examination of the corpse veneration practices of the Celtic peoples throughout Europe provides a startling view into a parallel world that persisted far beyond antiquity, an inherent hidden aspect of many religious and foundational myths that constitute a part of the Western canon and religion.

Bog internment, as was practiced with the Cladh Hallan bodies, was a practice of the internment of corpses, ranging from accidental to advantageous and ritual, across the Celtic world. The particularly boggy and wet conditions of Ireland, Scotland and Denmark have afforded researchers a wealth of bog bodies and other preserved artifacts as evidence of such practices. Bodies are preserved by the anaerobic conditions of the dense decaying vegetal matter that constitute bogs, a perfect environment for the preservation of corpses and other artifacts in near perfect order for thousands of years. Even items such as bricks of butter have been recovered from Irish bogs in an edible state after thousands of years of storage (Lobell et al., 2010).

In the Irish Celtic world, the use of bogs to preserve ritual sacrifices was a practice that sought to emphasize boundaries in the time of Ireland's regional Kingships. Bodies of elites or rejected Kings were ritually sacrificed and buried at key boundary points, acting in either a guardian or apotropaic role ("Kingship and sacrifice", 2006). In some cases the bodies placed along these boundaries were interred whole, while at other times the bodies were decapitated and quartered. The bodies placed in the bogs along these borders seemed to act as taboos not to be violated, such a belief is reflected in the Irish myth, *Táin Bó Cúailnge.* The hero Cuchulain places a ritual wreath along the border between Ulster and Connaught kingdoms, forcing his rival Queen Maeve to take a circuitous route with her army to avoid violation of the taboo (Kingship and sacrifice 2006). This story appears to be a direct reflection of the older practice of burying human sacrifices, the power and taboo of the corpse reflecting down through time to demand the respect even of invading armies.

The Celtic use of excarnation is particularly unique in Europe, that being the ritual exposure of the corpse as a means of hastening the decomposition and scattering process. Perhaps one of the largest recorded incidents of Celtic excarnation occurred after the Battle of Ribemont in Northern France between two Celtic tribes around 260 BCE. After the battle, the slain were decapitated and a wooden framework was erected on the battlefield. The decapitated corpses were nailed to the frame, standing upright in mock battle lines, the structure reminiscent of Zoroastrian religious sites, 'towers of silence', which are sites of ritual mass excarnation (Allély, 2012). The corpses were submitted to the elements and allowed to decompose fully before the remaining artifacts and bones were interred in mass pit on the site. Drawing upon the contemporary account of the Celts from the Roman historian Silius Italicus, this treatment was not done as a humiliation, but as an honor. As Silius recorded in his historical work, *Punica,* "To these men death in battle is glorious, And they consider it a crime to bury the body of such a warrior; For they believe that the soul goes up to the gods in heaven if the body is exposed on the field to be devoured by the birds of prey" (Silius Italicus, 1934, p.340-343).

The ritual treatment of corpses at Ribemont was not an isolated incident, but part of a continuity of excarnation practices that were common at the time across the Celtic world. A recent and startling example coming down through the archeological record at the Ham Hill, Hill-fort in Somerset, England. The 2nd century BCE site recently underwent an excavation in which the evidence of de-fleshed and animal-eaten human remains was been uncovered, archeologists reporting the site as a mass exposure pit, which would reflect the excarnation practices of the Celts. The excavations still ongoing, but the massive scale of the find leads archeologists to speculate that the site could contain up to, "...hundreds, if not thousands of bodies" (Alberge, 2013). The archeological record has in the past been marked by a dearth of corpse remains across France, Britain and other Celtic lands in the 3rd and 2nd centuries BCE, a time of Celtic dominance. Archeologist Jean-Louis Brunaux has theorized, based on the numerous examples of excarnation practice sites across the Celtic world, that excarnation must account for the lack of traditional funerary internments in the Celtic world during this period (Brunaux, 2004).

Another crucial aspect of Celtic corpse veneration lies in the particular fascination with the magical powers of the decapitated human head, the Ribermont site and its decapitated corpses reflecting the common practice of decapitation among the Celts. The widespread na-

ture of Celtic decapitation and associated veneration coming down to us through the historical record as the Celtic peoples began to brush up against the Roman world in 3rd and 2nd centuries BCE. The historian Diodorus Siculus famously recorded his shock and revulsion at the Celtic practice of keeping trophy heads, "The heads of their most distinguished enemies they embalm in cedar-oil and carefully preserve in a chest, and these they exhibit to strangers..." (Cunliffe, 1988). On the other side of Siculus's disgust of the practice, for the Celts, it was considered rude, even a breach of etiquette if a guest did not honor one's host by inquiring about their head collection (Jones, 1994). Other Historians of the era like Ammianus, Livy, and Solinus have passed down lurid scenes describing the Celts as reverently drinking blood from the skull caps of their slain enemies and washing and anointing their faces in the blood (MacCulloch, 2009).

The Roman accounts have long been critiqued as overly dramatic, such depictions of the Celtic peoples as barbaric often having overt political motivations, as in Caesar's account of the Gallic Celts in his famous work, C*ommentaries on the Gallic War,* which sought to justify his expansionist campaign against the Celts by their depiction as savages (Osgood, 2009). Despite this, the various Roman accounts of Celtic decapitation practices have been backed up the archeological record. Recent scientific inquiries of suspected trophy skulls from the Celtic period, found with the presence of preservative oils and cedar sap on a number of skulls, granting scientific credence to Roman accounts (Ancient Celts Embalmed Enemy Heads as Trophies, 2018). Furthermore, Celtic ritual sites abound with the infrastructure for the presentation of decapitated heads, numerous pillars and walls built with recesses specially designed for the display of severed heads and skulls, such ritual sites present throughout the Celtic world (Fliegel, 1990).

The Celtic people saw the skulls and heads of slain enemies as granting great boons of power and protection, offered up to the 'strong shades', the ghosts of past heroes, as evidence of present victories (MacCulloch, 2009). Along the coast of Southern France, at the Celtic archeological sites of Entremont and Roqueperteuse are numerous examples of Celtic temple walls and homes alike built with holes for the display of decapitated heads (Jones, 1994). In Celtic Scholar Anne Ross's seminal work, *Pagan Celtic Britain,* an entire chapter is devoted to an examination of the Celtic veneration of the human head and as Ross reveals, the extensive use of stone head facsimiles. Within the chapter Ross provides an account of the widespread nature of ritual stone heads, her abbreviated list covering a massive range across some 32

locations from Ireland, Scotland, Britain, Wales and France (Trigger, 1968). Ross reflecting on the Celtic fascination with the decapitated head referred to the Celts as, "Singular in the extent to which they carried this veneration, incorporating the head in their art and in their religious practices as a symbol and as an object of superstitious regard." (Trigger, 1968)

The use of stone heads is well documented at the ritual sites of Entremont and Roqueperteuse in Southern France where numerous examples of stone heads have been recovered. The Roman Historian Livy recorded how Celtic peoples used ritual skull cups fashioned from the heads of slain warriors, the cups adorned with gold and used for the ingestion of libations. Reflecting this practice, ritual stone heads carved with cups into their tops are a common find in the Celtic world, the adoption of stone heads demonstrating a transition from the use of actual human remains to the use of stone carved heads (Fliegel, 1990). The use of stone heads with libation divots is geographically widespread, this ritual adaptation present at sites in Ireland, Scotland, France, Switzerland and Czechoslovakia (Jones,1994). Particularly striking examples of stone heads are preserved at the Celtic temple site at Entremont, a stone pile of 4 severed heads stacked into one piece. This depiction a visual recreation of a stack of severed heads, seemingly a depiction of a post-battle scene, the decapitated heads gathered together (Fliegel, 1990). These stone heads were used as magical wards and boons, the severed head in both its literal and stone form a powerful ritual device, Anne Ross identifying the human head in particular as, "...being a symbol of divinity and otherworldly powers." (Trigger, 1968).

The severed head as both a metaphorical and literal symbol of otherworldly power is scattered throughout the mythological world of the Celts. In the Ulster Cycle, the Hero Conall Cernach was known to sleep with a severed head under his knee each night to maintain his power (Fliegel, 1990). Likewise when Cernach was slain, his skull was made into a cup which when milk was drunk from, restored old warriors back to their full strength (MacCulloch, 2009). In the Cath Almaine, a myth based on a historical battle that occurred in the 6th century C.E in Ireland, one is afforded a mythic view of Celtic corpse veneration practices. After the battle, one of the defeated warriors, Donn Bo is beheaded. Upon decapitation the head of Donn Bo lets out a magical scream that echoes in the hills for three days afterwards. Taken by the enemy on the march, Donn Bo's head is placed on a pillar and begins to entertain the men with a mournful song about the horror and futility of war. The song moves his conquerors to tears and inspired they return Donn Bo's head to his body where he is magically revived to life

(Ó Cathasaigh, 2004). The story, aside from being a cautionary tale about the evils of war, is a clear example of the continuity of the belief in the magical powers of the decapitated head. The belief in the magical abilities of decapitated heads is carried over into the Arthurian legends, demonstrating the long life of the belief. Arthur in the course of his battle with the Black Knight is wounded, afterwards a maiden instructs Arthur to behead the knight and bring her the head. She then uses the blood of the head to heal Arthur's wounds and proclaims, "You would never have been cured without the blood of this knight … And the head will be of great value to me, also; for with this in my possession a castle which was treacherously seized from me may be returned …" (Jones, 1994). In this excerpt one is able to see the continued and widespread influence of Celtic corpse veneration practices.

Mythological accounts of the power of decapitated heads is plainly evident in the Celtic world, the practice of decapitation veneration so extensive that tales of the power of the head stretched beyond the time-period of the Celts. One such example being in the Mabinogion, a compendium of Welsh and British myths from the 12th century. Within the tales, the severed head of the Welsh King, Bran the Blessed is carried by his compatriots to where London is now situated. The head is buried facing France, the myth stating that as long as Brans head remained buried facing France no invasion could come from that country across the channel (Wagner, 1975). In this tale the power of the decapitated head is demonstrated as being able to ward away armies, such a belief recalling the use of bog bodies as a border taboo which was previously demonstrated in this paper. The decapitated head of Bran the Blessed acts in the same manner as the head of Donn Bo, the Head of Bran was said to able to converse and sing along the road to London, "the head [was] as pleasant company to [them] then as ever it was at best when it was on [him]" (Jones, 1994).

The practice of corpse veneration is carried over from the Celtic past into Christian contexts with an essentially unbroken continuity of practice. From some of the earliest time of the Christian Church, there existed a sense of corpse veneration that shared a common sense with Celtic peoples, opening the door for the cross-bleeding of religious practices. John Chrysostom, the 4th century Archbishop of Constantinople, provides a powerful demonstration of this confluence of belief when he wrote on the practice of Saint corpse relics: "The bodies of the Saints are a stronger protection for our city than any adamantine and inexpugnable fortification" (Wortley, 2006). There exists a rich well of early Christian Saints that display aspects of Celtic corpse veneration, commonly referred to in the Christian sense as relics. Some particularly potent

examples of this continuity of practice lie in the martyrization of Saint Melor of Cornwall. The Saint was slain by an assassin who decapitated the head as proof of his deed to his employer, however along the road the assassin lost his way and began to starve. The assassin, after crying out for aid, began to hear the head of Saint Melor speaking. He told the assassin to break the ground under his feet from which sprung forth a well and a magical tree full of fruit (Trigger, 1968). This connection of severed Saint heads bringing forth springs, wells and magical trees is common motif shared throughout the early Christian period, a story repeated *ad nauseam.* To construe a list of the Saint with the power to spring forth holy wells from where their severed heads fell or at their severed head's instruction would constitute a significant section of this overall work. However, by the example of Saint Melor, one is provided a succinct example of the intersection of several Celtic Corpse veneration practices with Christian adaptation.

The most obvious is found in the magical powers of the severed head displayed by the story. In the Christian context the severed heads of specifically martyred Saints are the source of magical boons. A second connection comes to the foreground as well, for the association of severed Saint heads and wells also points towards a Celtic belief. Archeologists in examining Celtic era wells have frequently found a trove of offerings and severed heads in the bottoms of these wells. Celtic peoples have been widely documented by the archeological records as depositing severed heads and other artifacts in natural wells across Ireland and Scotland to Britain and Sweden (Trigger, 1968). One particularly shocking discovery being in an underground cave in Somerset, England, where 14 skulls were discovered from the Celtic era. By the highlighting of these two motifs within Saint Melor's tale, one is clearly able to see the continuity of Celtic corpse veneration beliefs in the stories of Christian martyred Saints.

The Welsh Saint Teilo stands as potent example of the long continuity of Celtic corpse veneration practices and the blending of Christian and Celtic modes. Until the 1960's, pilgrims traveling to the healing well at Llandeilo Llwydiarth in Wales could drink from the holy well of Saint Teilo from a cup made from the skull of the Saint's head (Jones, 1994). This example is particularly dense, presenting the confluence of Celtic corpse veneration practices, Celtic belief in decapitated head's powers and magical wells and the practice of Celtic skull cups all into a Christian context. Other such examples as Saint Cuthbert's Finger to the severed head of Saint Catherine of Sienna clearly delineate the Celtic and Christian overlap of corpse veneration practices, a topic of its own and can only to begin to be gestured at in this paper.

The reverence towards decapitated heads and their magical powers a potent example of the continued beliefs of Celtic peoples carried over into Christian practices.

Further enforcing the ties between Celtic corpse veneration practices and Christian practices lies in the myths surrounding the Holy Grail. The Grail, a magical relic which once contained the blood of Christ and as such is imbued with magical powers such as the ability to manifest a feast with food perfectly suited for the audience. This ability is a direct translation of Celtic corpse veneration practices, the severed heads of heroes cited as having the ability to manifest feasts, among their other magical powers (Jones, 1994). In this sense, the Celtic veneration of the heads of slain heroes and their sacrifice in battle is transformed in a Christian context into the Grail, a symbol of Christ's sacrifice. The importance of the sacrifice motif for Celtic peoples represented by slain hero's heads and the sacrifice of Christ acting as bridge that connects the Celtic past with Christian religious continuity, all bound to Celtic corpse beliefs.

So the reader is left with the question, what is to be understood from these bizarre series of practices? The historical continuity of these Celtic practices has been clearly demonstrated as having a continued influence upon Western myth and religion. Celtic modes of corpse veneration having been readily folded into Christianity, incorporated into myths and legends and peppered throughout the archeological record. The superstructure of the corpse veneration practices of the Celtic people, scattered throughout the legacy of the European past. These Celtic practices, obliquely absorbed into cultural and religious contexts, continue in unforeseen ways to our present time.

An archeological expert on holiday in Brittany, France, upon seeing a distantly Celtic-style head carved into a garden wall inquired to the owners about the provenance of the carving. The archeologist noted that the carving looked newly carved. The woman whose home it was replied that it was her husband who had carved the wall, with a head in his own likeness some years earlier. The woman told the archeologist that her husband had passed away, adding, "…he's there… he's in the head, looking after the house" (Clarke, 1999). The modern carving, done in the distinctly Celtic style of the severed head, connecting to a Celtic continuity of practice, stretching back some 2500 years. The woman and her husband were, perhaps unwittingly, participants in a long gone culture's practices that could easily be seen as foreign to the modern perspective. The story of Celtic corpse veneration is one of the power of cultural dissemination and the universality of human reverence towards the corpse. Though this reverence took on bizarre forms throughout Celtic history, it was nonetheless passed down the generations to the

present day, and sometimes in subtle ways, as with a freshly carved head tapping into centuries of hidden beliefs.

At first, the funerary and corpse rites of these Celtic peoples seem bizarre and alien. Practices ranged from the frankenstein-ian mishmash of body parts, to preserved severed heads and skull chalices. These are practices from another time, from the perspective of humans that the modern reader can scarcely begin to comprehend. But what all these practices share is a deep sense of reverence and veneration of the dead body. The body of the individual in these ancient times was a collective tool to be used against the constant and incipient threats of war, subjugation, starvation and predation. When a person died, it represented the loss of an invaluable resource. The human body was a part of the collective fight of society to perpetuate itself (Kuijt, 2009). In this sense the severe, unflinching manner with which the Celtic peoples looked upon corpses as objects of power which demanded reverence, can begin to become clear to a modern perspective. The universal human experience of viewing a corpse is a powerful moment. Anyone who has gone through this experience is able to attest to the near magical reverence that a loved one's body can take on in death. When we, as modern humans, experience this event, we are able to see the spark of the Celtic people's reverence, echoing down to our present through the vault of time. The intense temporal incongruities between our modern time and the Celtic past, smoothed over by this common understanding and shared attitude of reverence towards our dead.

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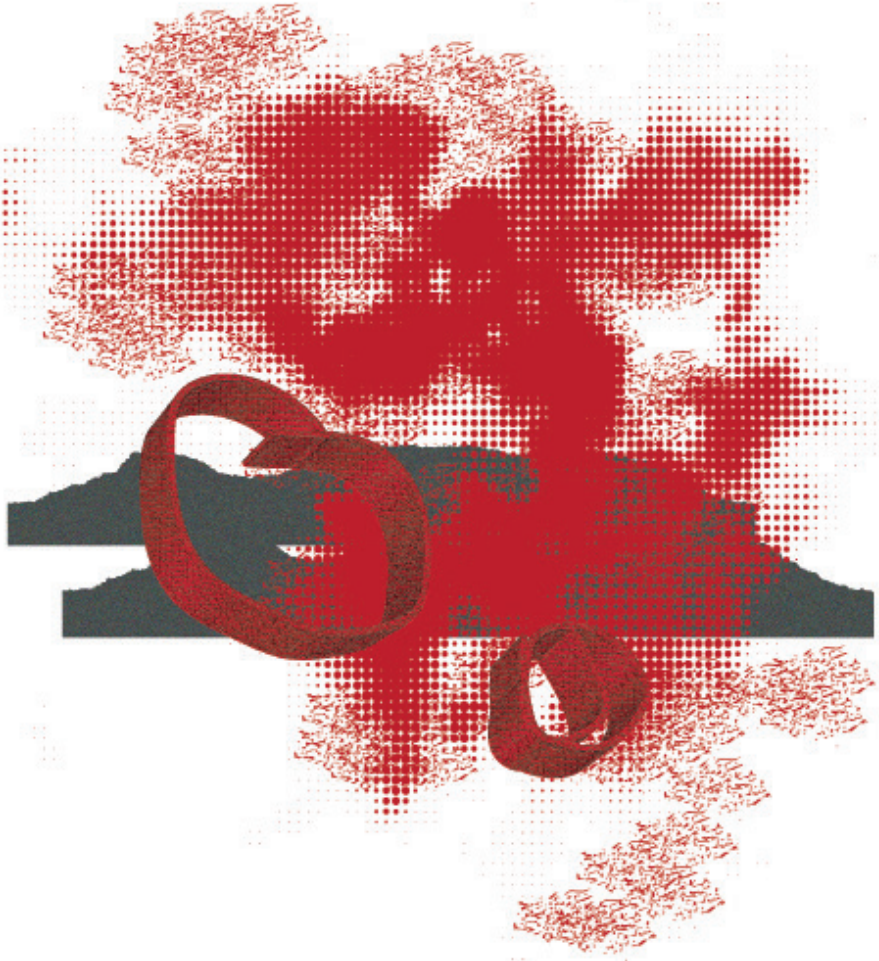

"To be creative means to connect. It's to abolish the gap between the body, the mind and the soul, between science and art, between fiction and nonfiction."

— Nawal El Saadawi

2 | *AMORPHOUS*

Covert Contrasts: The Implications of Motor Control on Speech Production

Konstantina Charamis
Melanie Rich

Introduction

Language acquisition is a complex process that integrates both mental and physiological mechanisms. The manner in which language is acquired is not perfect, nor is it immediately attainable. Coherent human speech requires the synchronization of the motor system and the processes that it commands. Motor skills are purposeful movements of the body, ranging from gross to fine. Just as a child develops their motor skills, the same gradual course can be attributed to speech. A typically developing infant will begin their acquisitional journey by babbling, and as they gain control of their articulators, they can produce more complex utterances. If we consider that speech is a motor skill and consequently that articulation is a fine motor skill, then we can propose that, to some extent, speech errors can be attributed to erroneous phonetic productions. This does not necessarily mean that the child has a deficit, but rather that their fine motor skills are not tuned to perfection, which can lead to errors or 'slips'. Just as an amateur bowler lines up their wrist, takes stance, and aims for the center, sometimes without intention, the ball hits the back pin. Other times, they aim for the center pin and knock it down with ease. It is not as though they are a chronically bad bowler, it is that they are inexperienced and require practice. This is comparable to covert contrasts. Covert contrasts can be described as the perceived homophony of two speech syllables that are in fact produced by dissimilar articulatory gestures. They are often are misdiagnosed as being phonological deficits rather than phonetic production difficulties. This can lead to improper therapeutic interventions and overdiagnosis of speech disorders (Cleland et al., 2017).

Speech Disorders

Speech disorders can be characterized as impairments of articulation or production, whereby the speech output deviates from the linguistic norm of a particular speech community. These anomalies are said to be either biological or environmental, stemming from sensory to cognitive deficits. They can also be attributed to physical abnormalities, such as vocal tract malformations or cleft palate (Gibbon, 1999). It is important to focus on finding what is the rooted underlying cause driving errors of articulation.

Motor Skills

Due to the fact that phonetic acquisition and command is still in its mastering phase until the age of 12, it is logistically possible that the articulation of homophonous phonetic productions is attributable to underdeveloped speech mechanisms (Scobbie, Gibbon, & William, 2000). How then do we account for problematic phoneme productions that persist into speech extending past early adolescence? It was previously thought that speech impediments could be characterized as phonological shortcomings (Gibbon, 1999), however recent literature has been a proponent of the view that speech disorders are categorically phonetic misarticulations. The implications of a phonological disorder would entail a faulty speech organizational system at the mental level. On the contrary, impairment at the phonetic level would imply a motor control dysfunction. This idea opens the debate of performance versus competence. Classifying erroneous speech as being phonetic entails that the error itself is an issue of performance rather than of competence. Covert contrasts give insight as to how an individual affected by an impairment of speech can in fact be competent as their existence shows that those afflicted by disordered speech do in fact have a grasp of the phonological system (Tyler, Edwards, & Saxman, 1990). Speech impairments can be the result of an inherent motor deficit. By looking at the steps taken in the production of a particular sequence, one can infer that there is a clear mismatch between the intention of the speaker and their executed motor plan. The incorrect motor execution of a particular phoneme may be due to the fact that its plan of realization is parallel with that of another phoneme, causing it to come out as homophonous. It may also be the case that the motor execution plan is inherently abnormal or underspecified for a distinctive feature (Tyler, Edwards & Saxman, 1990). The importance of considering speech sound disorders is rooted in the fact that this classification of impairments affects 10% to 15% of children under the age of five, and further continues to affect 6% of school-aged children (Cleland, Scobbie, & Wrench, 2017).

Supporting the view of motor constraint is the notion of undifferentiated gestures. The latter are characterized by articulatory movements, whereby primary and secondary articulators (namely the tongue and the palate) move and come into contact with one another in such a way that it is virtually impossible to pinpoint exact locations of articulatory contact (Gibbon, 1999). This involves articulations where contact of the tongue body and apex become parallel and congruent, and are thereby undifferentiated. Such instantiations are motor in nature, bringing forth evidence of the inability of the various regions of the tongue to move as independent units (Gibbon, 1999). In individuals with normal speech patterns, mature articulatory control is evident in

the ability of the motor system to autonomously constrain the movements of each articulator (Gibbon, 1999) to only move when it is called upon by the phonemic production at hand. Thus the tongue tip should move independent of the tongue body, unless otherwise specified by the motor plan of phonemic execution. Temporal and spatial aspects of lingual control must align themselves in order to materialize independently of jaw movement. "Timing difficulties in closure and release phases" (Gibbon, 1999, p.384) due to involuntary movements of the articulators (or the lack thereof) can also be attributed to a loosely configured organization of fine motor movements. From this we can draw on the inherent complexities surrounding coherent speech production, an automatized phenomenon that is done with such seeming ease.

Speech can be characterized as the most intricate of motor skills, necessitating the collaboration of up to one hundred muscles at once (Ackermann, 2008), firing and constricting at just the right times with the goal of producing coherent articulations. One of the primary physiological contributors in the domain of disordered speech is the cerebellum (Ackermann, 2008, Mostofsky, 2009, Ziegler & Ackermann, 2017). This relatively small part of the brain houses a complex system of neural networks (comprising of more than 50% of the brain's neurons), which regulate motor movement and further govern over the temporal coordination of these gestures. The cerebellum is also responsible for the execution of the multifaceted physical commands rendered by motor control, namely muscle coordination, control and movement. It is equally said to regulate some aspects of cognitive function, such as language (Mostofsky et. al, 2009). The existence then of some level of cerebellar dysfunction directly translates into flawed motor commands and executions. In light of this, we can liken disorders in fine movement realization to impediments in speech articulation. The loss of precision and coordination associated with coherent functioning of the cerebellum can result in faulty speech productions.

Functional magnetic resonance imaging (fMri) has revealed the modular organization of the various operations executed by the cerebellum (Pulvermuller, 2005). This technology has brought to light the existence of anatomically divergent activation patterns of the cerebellum in both covert and overt speech. The hemodynamic stimulation of the brain during syllable production can be observed in two different cerebral circuitries (Ackermann, 2008). The first of these structures is the driving force behind the preparatory aspect of speech, greatly attributable to the uppermost parts of the cerebellum's hemispheres. This phenomenon has

been observed in the production of inner speech, which activates a particular constellation of cerebellar stimulation. During covert syllable repetition, activation is restricted to the upper cerebellum. In overt speech on the other hand, fMRIs have shown different patterns of activation. A second pathway must be considered, namely that of the lower cerebellum, which is responsible for the execution and externalization aspect of the utterance (Ackermann, 2008, Ziegler & Ackermann, 2017).

Because these two structures seem to work interdependently in the process of speech realization, mishaps in one of these areas may have dire effects on its totality. This is evident through instances of faulty speech production accompanied by diminished activation in the execution part of brain, in studies of individuals with congenital neurological defects. Evidence of the latter is revealed in the fMRI studies of children afflicted by Autism Spectrum Disorder (Mostofsky et. al, 2009). This neurodevelopmental disorder is characterized by deficiencies of both gross and fine motor skills. Shortcomings in the neural circuitry that conducts motor command execution are directly detected through the decreased hemodynamic activation of the inferior cerebellum.

Identical activation frailties were found by Vargha-Khadem et. al (1998), who analyzed a family with verbal dyspraxia. Characterized by the difficult coordination of orofacial dexterity, dyspraxia-attained individuals produce grossly misarticulated verbal utterances. Dyspraxia is also marked by an inability to correctly produce both words and nonwords. This consistent ineptitude advocates for a phonetic-based deficiency rather than one that is phonological (Vargha-Khadem, 1998). In their study, half of the family members presented with the articulation disorder, whereas the other half (the control group) remained unaffected. Those touched by the genetic impairment showed less brain activation in their erroneous verbalizations than their family members.

The consensus that can be drawn from fMRI analysis has great implications on the parallel interdependence of the preparatory and performance based neural structures. The brain signals driving motor command which are initiated in the superior part of the cerebellum may misfire and fail to adequately meet the inferior cerebellar structure, resulting in faulty articulations. This is directly observable through neural activation in the part of the brain responsible for phonetic planning, but then identified later through covert contrasts as poor motor planning in configuration of vocal tract movement. All this considered, we must then ask ourselves, what happens when there are inconsistencies between the motor movements put forward by the ner-

vous system and the speech output? At this point we must recognize the existence of covert contrasts.

Covert Contrasts

Covert contrasts are sounds that appear to be homophonous by the transcriber, though are contrived from different articulatory gestures (Gibbon & Lee, 2017). When Macken and Barton (1980) first considered covert contrasts, they examined the acquisitional processes of speech production, specifically voiced segments and how they are distinct (Gibbon, 1999). Prior to when covert contrasts were established, various misconceptions were put forward, and as a result, led to misdiagnosis. As per current research, only children are affected by covert contrasts (Gibbon & Lee, 2017). Covert contrasts are phonetic and can only be described as motor control difficulties, as a "lack of discernible phonologically patterning for tongue shapes points towards a motor based speech impairment" (Cleland, Scobie, Heyde, Roxburgh, & Wrench, 2017, p. 37). Although seemingly indistinguishable, evidence for convert contrasts was initially established through studies of acoustics that measured the differences in Voice Onset Time (VOT) of voiced and voiceless stops (Cleland, et al., 2017). Previously referred to as sub-phonemic contrast or pseudohomonymy (Gibbon & Lee, 2017), covert contrasts were thought to be an overlap of different types of articulation. For instance, a child attempts to utter [k], though the listener hears a [g] and attributes it to phonological deficits as they are unable to differentiate between two distinct phonemes (Cleland, et al., 2017). They are producing the same sound to the listener by different articulatory processes (Cleland, et al., 2017). Their motor control lacks precision by either over or under-compensation, which leads to sounds that are close in approximation but inherently different (Cleland, et al., 2017). It has been posited that children with poor control in the domain of one of their articulators, compensate by the overuse of another articulator (this same phenomena is also observable in individuals who lose the capacity of one of their five senses, which is later overcompensated for with another sense thriving). This overemphasized use of the dominant articulator is possibly picked up later as a covert contrast by the instrumental techniques of acoustic analysis.

There are at least two well-identified types of covert contrasts, including sound substitution and phoneme omission, which are the result of phonetic distortions at the level of misdirected articulators and gestures. Sound substitution involves the target phoneme being heard as a different phoneme altogether. This phenomena is observable in the case of velar fronting,

where pronunciation of velar targets such as [g] are realized as [d]. Upon further looking into the observable data, this type of erroneous articulation can be deduced to a double alveolar-velar articulation. This provides evidence that the speaker is likely aware of the steps it takes to make a sound realization of the target phoneme, but their motor system is not working in tandem with the execution plan, resulting in the manifestation of double articulation. Although not immediately available to the auditory system of the transcriber, in cases of phonemic omissions, such as instances of cluster reduction, the influence of neighboring consonants is measurable in the instrumental data analysis. In investigating consonant cluster production, it has been observed that instantiations of [s] and [sn] were reduced to the single phonetic production [s]. Upon deeper investigation, it is apparent that what on the surface seems to be neutralization, is in fact underlyingly two distinct phonetic realizations. The fricative produced in isolation was different than that produced in the presence of a second consonant. When a neighbouring alveolar nasal consonant /n/ was present, the fricative was produced at a more forward position in the mouth, than when it was produced alone. As demonstrated by the data, the latter suggests that there is some kind of residual impact from the alveolar nasal onto the fricative, suggesting coarticulatory effects (Gibbon & Lee, 2017).

The existence of covert contrasts implies that the speaker has distinct phonological representations for contrastive phonemes, as instead of exhibiting a collapse of phonemic classes, categorical differences in phonetic articulations can be both observed and measured (Cleland, et al., 2017). This again vouches for the interpretation that covert contrasts identified in impairments of speech are phonetic rather than phonemic as posited in earlier research. The consideration of covert contrasts gives insight on the notion that things are not as black and white as they appear. On the surface, it may seem that those afflicted by speech language impairments (SLIs) are either right or wrong in their productions, but there is more to that than what meets the ear. This is evident when we incorporate the use of visually based technologies into the picture, namely, EPG and US analysis. These give us some insight on what is happening beneath the surface of what is available to us to for interpretation from auditory stimulus alone.

Methodology

In examining covert contrasts, it has been important to introduce methodology with more reliable cues and measures. Phonemic transcription based solely on the acoustic qualities absorbed by the listener's auditory system, result in the biased "neutralisation of phonological contrasts" (Gibbon & Lee, 2017, p.39). On the other end of the spectrum, there have been some

recorded cases of speech productions that have been judged and transcribed by the listener as correct, but whose actual instatiations were later shown to be erroneous through analysis at the level of instrumental techniques of articulatory investigation. Fundamental inaccuracies such as increased lateral tongue-palatal contact throughout the production of an alveolar plosive, resulting in a lisp-like sound with increased air frication, can be shown through EPG and US review. This is equally problematic because if underlyingly incorrect productions are not identified, there is no room for correcting them. This heightened contact can also be attributed to a lack of control on the level of the articulators, which can be accounted for by its attribution to a motor deficit. Instrumental techniques are thus necessary in order to assure that no small detail go unnoticed (Gibbon & Lee, 2017).

Auditory-Based Transcription

Auditory-based transcription has been the most prevalent methodology for identifying covert contrasts (Gibbon & Lee, 2017); though, it is the most problematic. Though different forms of covert contrasts have emerged through acoustic recordings, the process is only capable of detecting auditory distinctions and does not consider the intended plan of the articulators of the speaker. Through analysis of temporal cues by VOT, the most evident contrasts can be identified (Gibbon & Lee, 2017). Phoneticians make use of VOT to examine "voicing distinction in word-initial, word- final stops, cluster reduction, fricative stopping, and velar fronting" (Gibbon & Lee, 2017, p. 5). Auditory-based transcription takes into consideration the shape of the vocal tract, thus inferring differences within place and manner of articulation. The analysis of formants demonstrates distinctions between glides and semivowels, while spectral tilt is used to recognize voicing discrepancies in stops and consonant clusters (Gibbon & Lee, 2017). While conducting broad phonetic transcriptions, neutralization of phonological contrasts takes place as the distinction among phonemes goes unnoticed (Gibbon & Lee, 2017). While there is importance in discovering covert contrasts to treat underlying speech disorders, there is little interest in the faulty articulation of a speech sound if there is not a problem in the acoustic output (Gibbon & Lee, 2017). Auditory-based transcription does not obtain information on the performance of articulators, as a result, phoneticians deduce ways in which segments were produced (Gibbon & Lee, 2017).

Electropalatography (EPG)

According to Gibbon (1990), the technique utilized primarily to discover covert contrasts as well as covert errors is the EPG (Cleland, et al., 2017). The EPG is an instrumental technique that considers where the tongue, among other articulators, creates contact in the mouth during speech production. The process for this method is through the creation of a device similar to an orthodontic retainer that contains electrodes sensitive to touch. Data is collected through an external processing unit when any contact takes place (Gibbon, 1999). This palate requires customization to the participants' mouth as the device is designed to be firmly pressed against the roof of the mouth of the speaker (Gibbon, 1999). The EPG method takes information from a speaker through the sensors on the device and displays the patterns. The relevant output can provide insight on "articulatory parameters, such as place of articulation, lateral bracing, groove formation, timing of tongue movements and co-articulation" (Gibbon & Lee, 2017, p. 42). Each EPG device contains 62 sensors that are organized in eight rows situated according to the places of articulation, gathering more in the alveolar area to account for different types of lingual movement (Gibbon & Lee, 2017). The data of average duration, amplitude and frequency is recorded (Gibbon & Lee, 2017). There are five sounds, /s/, /t/, /ʃ/, /d/, /k/, that are frequently observed through the EPG as they demonstrate a significant amount of contact with the tongue and palate articulators (Liker & Gibbon, 2008).

Prior to the research, it is imperative to perform a *transcription-based phonological assessment* to distinguish differences in a child's discourse that demonstrate overt linguistic errors as well as speech sounds that appear to be alike (Gibbon & Lee, 2017). To identify whether there are speech sounds that are unintentionally homophonous, minimal paired words are provided and the child is required to repeat it. To avoid the effects of coarticulation, the researcher will place the word in a sentence between two mid-central vowels, such as a schwa /ə/ to visually emphasize the target sound (Gibbon & Lee, 2017). It is noted, according to Gibbon and Lee (2017) that there are no clear criteria for a covert contrast; thus, it is improbable to know how the covert contrast may manifest and what the outcome of the test will be.

Although the EPG has been utilized as the primary testing device to detect the presence of covert contrasts, it does have drawbacks. For instance, the device can report faults in the accuracy of tongue positioning, in addition to inaccurate timing results in the production of articulatory gestures (Gibbon, 1999). More so, the EPG only displays when the tongue makes full contact with the device, it does not reveal approximations nor does it show which portion of the tongue interacts with the palate (Cleland, et al., 2017). Another shortcoming of the EPG is that

the child is required to wear the device prior to the test to acclimate to the unfamiliar object; failure to do so may lead to erroneous results (Cleland, et al., 2017). As the device is customized to each participant, it is impossible to have a randomized control study, which can lead to biases among researchers and participants (Cleland, et al., 2015). The study cannot take place without the assistance of an orthodontic specialist to create the individually customized palate as well as a specialist specifically trained to read and interpret the results (Gibbon, et al., 2004). SLPs have allowed covert contrasts to go unnoticed as the EPG devices and results are difficult to analyze without proper training.

Ultrasound Analysis

As opposed to EPG, which saw its central focal point in tongue to palate contact, the US method focuses primarily on observing the shape of tongue contours that are produced in the articulatory process (Cleland, et al., 2017). This method makes use of standard medical US technology, whereby a rather small transducer probe is placed under the chin, as to capture a view of the tongue. Also known as sonography, the US process involves the emission of high frequency sound waves through the probe device, that when bounced back off a given surface, allow for the production of an image. US is advantageous in that it can show not only the composition of internal structures of the mouth, but also allows us to have insight on the real-time lingual movements taking place within a subjects mouth, at any given stage of the articulatory analysis. All in all, the process is less invasive as there is no need for any foreign objects being inserted into the mouth, which can be quite uncomfortable as the participant needs to acclimate to the device prior to the session. This method is useful in examining the production of both velars and alveolars (Cleland, et al., 2017). This is due to the fact that all points of the tongue, from the apex to the root are in view. In light of this, the distinction between coronal and dorsal productions is heavily pronounced. Through US analysis, it is possible to detect subtle variations in the shape of the tongue that may arise due to coarticulatory effects (Cleland, et al., 2017). Contrary to the capabilities of the EPG, US constructs an image of the tongue that is correctly representational of the participant's own anatomical construct (Cleland, et al., 2017).

US analysis does have its shortcomings. Unlike EPG, with US, tongue to palate contact cannot be overtly observed, but can rather only be inferred. This is due to the fact that there is no possible imaging of the palate. Through echolocation, only the lingual movements are

recorded. If we introduce the measurement of participant swallows, we can map out the source and location of tongue-palate contact (Cleland, et al., 2017). Another source of drawback is that hand-held probing devices are used in lieu of headset mounted probes. Participants in these cases hold the burden of stabilizing the US probe, which is held in their hands for the entirety of the session. Hand-held probes may lead to inconsistencies in measurements, whereas headset probes may result in discrepancies due to restricted jaw movement (Cleland, et al., 2017). If we look past EPG, the importance at this stage in technological development of US imaging involves the ability and feasibility of comparing tongue shapes side by side, in an effort to correct erroneous articulations. It may be useful to superimpose two images, or even to supplement the process with acoustic and visual recordings (Cleland, et al., 2017). This might allow the participant to take a step back, and analyze their own flawed speech in the context of correct articulatory productions of the target sounds. A useful complementary process to the US imaging technique, may be to display a snapshot of the participant's live image at the moment the misarticulation occured, with the contrasting correct production of another speaker's articulatory gesture next to it. This method can allow the participant to see where they went wrong, while simultaneously showing them the target features that they should be aiming towards (Cleland, et al., 2017). This takes away at the old adage, "it's easier said than done", as it allows the participant to see how it can be done, in order to facilitate the correction process of their speech. Real-time visual biofeedback is a means of instant feedback that can allow for a more interactive form of acquisition of phonemic articulations. There is something about being able to see one's own performance processes and mechanisms in action that is beneficial to the learner. The ability to view the mechanics of one's own production, cross-referenced with that of a third party, offers a better perceptive opportunity to the subject undergoing US visual biofeedback. Perceptual information that is readily available for participant absorption is considerably beneficial to the therapy progression. It has been observed that children with developmental speech sound disorders who failed to successfully respond to conventional forms of therapy, have shown increased accuracy in their articulatory performance of various phonetic segments (Cleland, et al., 2017).

Conclusion

Covert contrasts, classified as speech impairments, refer to a situation where specific articulatory gestures produce non-specific auditory outputs, and therefore go unnoticed by listeners. The consideration of a phonological deficit has the implication of fallacies at a cogni-

tive level, whereas a phonetic problem indicates difficulties in the motor execution of speech. There is little literature on the topic, which is alarming considering its implications on children. Covert contrasts allow us to consider the complications with speech disorders as well as atypical speech acquisition and how these faulty preconceptions or misdiagnoses have prevented proper treatment from being implemented (Cleland, et al., 2017). This calls into question the distinction of competence versus performance and provides empirical evidence that the afflicted person has correct mental representations of speech. The speaker has the intention of producing the conceptualized segment, in spite of the fact that it is produced in a manner that is not distinct to a listener (Cleland, et al., 2017). Children with motor-driven speech difficulties need motor-based therapies. The probing of covert contrasts through the visual biofeedback methods allows us to use a remediatory technique that appropriately and masterfully target the specific problematic dimensions of articulator positioning (Cleland, et al., 2017).

Although research on covert contrasts becomes more prevalent, there are few therapeutic practices implemented in SLP sessions. Just as the name suggests, covert contrasts are inconspicuous. The traditional approaches, such as acoustic analysis, to identifying speech language impairments still remain inconclusive. Unfortunately, as "phonemes do not have a single easily identifiable acoustic correlate" (Cleland, et al., 2017, p. 38), there is not a dependable way of identifying covert contrasts with the current methodology. Albeit, acknowledgment of these contrasts is a necessary step for appropriate assessment and effective therapy (Gibbon & Lee, 2017). As we grow and develop, our physiology allows for progressively more methodical motor control over articulatory gestures. The maturation of kinesthetic learning abilities allows for an easier grasp on the ability to fine-tune motor skills, namely those that constitute speech production. We hoped that by clarifying causation of these motor control deficits, we could provide empirical evidence for the most successful methodology to identify and treat them.

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Description, Evaluation, and Comparison of Descartes' and Spinoza's Account of Error

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The aim of this paper will be to describe, evaluate, and compare the account of error Descartes and Spinoza both respectively give in the Metaphysical Meditations and the Ethics. While the first part focuses on Descartes' account of error, the second one puts it in perspective by presenting a detailed description of Spinoza's conception of error. Finally, the third part will in a first phase evaluate and compare these two conceptions of error on the basis of their consistency with the Principle of Sufficient Reason, and in a second phase compare their functionality regarding their conception of freedom.

Descartes' problem of error can be traced back to "Meditation Three" in which he establishes the proof of the existence of God. Being omnipotent, it should logically follow that he would have created humans as perfect beings. Yet, Descartes states early on in his Fourth Meditation that experience shows us that supreme perfection is not included in our qualities for we constantly make errors during our life. Did God, having the power to create perfect beings, willingly create us as imperfect ones? This claim must be rejected for Descartes. Since God is omnibenevolent, malice does not pertain to his character. He could not have intentionally deceived us. Descartes' problem of error thus arises from the seeming irreconcilability of the experience of error and God's perfection. In a first attempt to make sense of this opposition, Descartes considers human beings as only halfway to God's perfection and places them on a scale ranging from God (supreme being and perfection), to that which is the least perfect (void or non-being). Participating in both, errors human beings make would not proceed from God's perfect legacy, but from their participation in imperfection. Not satisfied with this account, Descartes nevertheless retains the idea that error in not a product of God but of human beings alone. Error stems from our own imperfections, not God's. Further in the Meditation, the meditator settles for two determining factors causing error. These are the two main faculties of the mind, the intellect and the will. The former he defines as "la puissance de connaître qui est en moi", and the latter as "la puissance d'élire, ou bien (...) mon libre arbitre" (for both Descartes, 1641/1992, p. 141). On this definition, the intellect is said to be a power or a capacity of understanding and forming knowledge. Descartes gives more details in his *Principles of Philosophy* and includes under the word intellect "sense-perception, imagining, and con-

ceiving purely intelligible things" (Sommerlatte, 2017, p. 8). These denominations are rather loose and their accurate meaning in relation with the intellect is tricky to pin down. Descartes does not give much more information in his Fourth Meditation, it is therefore best suitable for the purpose of this paper to stick to the rather broad definition of the intellect established so far, and, unfortunately, so should it also be the case for the will. I think a correct understanding of its definition could be worded as an ability to freely give, but also withhold assent to something: Descartes adds in his *Principles of Philosophy* that the will includes "desiring, holding in aversion, affirming, denying, doubting" (Sommerlatte, 2017, p. 8).

Understanding the will and the intellect in their relation to each other rather than separately gives a better insight into their meaning and constitute the kernel of the problem of error. The intellect is only an ability to form knowledge, that is, to form judgements. To the contrary, the will does not form them but only gives or withholds assent to them. Moreover, whereas the intellect is limited, the will is infinite. This discrepancy is argued by Descartes as follows. The intellect is shown, by experience, to lack a great amount of ideas. The intellect is "d'une forte petite étendue, et grandement limitée" (Descartes, 1641/1992, p. 143). However, this lack is not due to its nature, for there is no reason why God should have created a human intellect possessing a greater ability to know. The intellect, limited as it is, has been created as such for good impenetrable reasons safeguarding God's omnibenevolence. The limited nature of the intellect is therefore not in itself the source of error. On the contrary, Descartes speaks of the will as follows: "Il n'y a que la seule volonté, que j'expérimente en moi être si grande, que je ne conçois point l'idée d'aucune autre plus ample et plus étendue" (Descartes, 1641/1992, p. 143). The will is indeed the vastest ability to the extent that it can give or withhold assent to any possible thing it encounters. It is a capacity to affirm or deny and act accordingly without any feeling of coercion. In other words, the will is the locus of freedom. Nevertheless, God's will is far more perfect than ours, and the meditator sees his will as a smaller instance of God's. As stated above, imperfection is not incumbent upon God, but upon human beings' participation in non-being, or imperfection. Therefore, the meditator's will, imperfect as it is, still does not undermine God's perfection, and God's creation cannot be in itself the source of error.

Even more, the source of error is still not found in the combination (itself) of the will and the intellect. Their combination technically allows the will to freely choose between possibilities offered by the intellect. However, it is only the case when the intellect has knowledge to offer to the will. Otherwise, the will should remain indifferent. Making a choice is considered more valu-

able than staying indifferent to it for the latter option reflects an incapacity to form judgements rather than a greater ability of the will. This incapacity in turn constrains the will, for the will is in a sense compelled to stay indifferent due to a lack of information. Its freedom is seen to be restricted if it stays as a freedom to be indifferent. For this reason, indifference is seen as a lower degree of freedom than choice, for the latter is not limited by the intellect. In this sense, the encounter of the intellect and the will is a gift of a higher degree of freedom from God, and as such, if well utilized, is in itself a very valuable capacity that cannot be the source of error. Utilization is here the key to error. The will is the ultimate instance of decision. Therefore, if in face of a lack of information, if it still decides to give assent, its decision might be ill-founded and result in error. In this sense, error does not fall to God's creation, but to our use of it (and thus to our own imperfection). Error arises when the will steps outside the intellect's limit and assent to that which the intellect does not understand. Therefore, error is explained on a first aspect by the discrepancy between an infinite will and a finite intellect, and on a second one by their misuse in face of their difference of nature.

Turning to Spinoza's account of error, it is necessary to give an explanation of the reasons why he cannot appeal to Descartes' distinction between the will and the intellect. According to him, the will is not infinite but finite: "Il n'y a dans l'esprit aucune volonté absolue ou libre" (Spinoza, 1677/2012, p.48). The will cannot but be finite for the mind is necessarily determined to will a particular thing for a reason, which is itself determined by an anterior reason or cause, which is itself determined by another one, such as to be related to an infinite chain of causes. Therefore, because the will is necessarily determined by a particular cause, the mind does not have the faculty to freely will what it wants. Were it to possess this ability, it would break away from the chain of causes determining its action and be a free cause. But according to I., P.17, Cor. 2, only God is a free cause. Insofar as the mind cannot possess the properties only pertaining to God, it must be inscribed in the chain of causes and therefore possess a finite will. Being in the impossibility to apply Descartes' views on the will to Spinoza's, it is necessary to analyze the latter's theory of ideas.

An idea is according to him "un concept de l'esprit que l'esprit forme parce qu'il est une chose pensante" (Spinoza, 1677/2012). He employs the term "concept" to show that, as we will see, an idea is not necessarily psychological as it can exist outside one's mind. An idea's object can be of two sorts: it is either a mode of thought or a mode of extension. Thought and

extension are the two fundamental forms of being that the substance, or God, can take. Each can have an infinite number of modes, that is, each can have an infinite number of determinate manifestations. Modes of extension designate any particular extended object, from a grain of sand to a building. Therefore, there is an idea of the grain of sand, an idea of the building, and an idea for any other mode of extension. For any mode of extension, there is an idea of it. Modes of thought designate any particular idea of an extended object. The modes of extension "grain of sand" and "building" will therefore have corresponding modes of thought, which will be "the idea of a grain of sand" and "the idea of a building". Applying ideas to modes of thought is a little bit trickier than to modes of extension. Modes of thought are already ideas. However, similarly, for any mode of thought there exists an idea of it. Therefore, every idea of a mode of thought is an idea of an idea. The idea of the mode of thought "idea of a building" will thus be the idea of the idea of the building.

Spinoza's account of ideas is highly related to his metaphysics and epistemology. He advocate through his Sufficient Reason that for each thing there must be given reasons as to why it exists (instead of not) and why it exists as it is (and not otherwise). A thing's existence as it is must therefore be accounted for by a series of previous reasons, or causes, that would have necessarily caused it. A thing being here a mode of extension, this principle applies to every mode of extension. Each one of them is inscribed in a chain of causes in which each is the effect of previous causes and each is the cause of further effects. For instance, if some water boils in a saucepan, this fact can be accounted for by several previous necessary causes that led the water to boil, such as the temperature of the baking tray and the composition of the metal of the saucepan, but also by less direct ones such as the electric machinery of the baking tray or the electric machinery of the house that led the baking tray to function. The boiling water will then constitute a necessary cause of further effects such as infusion of a tea bag or the cooking of rice. However, Spinoza also applies the Principle of Sufficient Reason to modes of thought. His Axiom 4, Part I. is helpful to comprehend how he makes this leap. He writes that "la connaissance de l'effet dépend de la connaissance de la cause et l'enveloppe" (Spinoza, 1677/2012). Therefore, the knowledge of an effect is determined by the knowledge of all its preceding causes. In this sense, any mode of thought (or any idea of an effect or a cause) is kept accountable for its previous causes. Any idea must be sufficiently explained by a series of other ideas. As such, the Principle of Sufficient Reason must apply to ideas as well.

The Principle of Sufficient Reason applying to both ideas and things, and each thing

having its corresponding idea, the two necessary arguments are now laid down to comprehend Spinoza's parallelism: "L'ordre et la connexion (ordo et connexio) des idées sont les mêmes que l'ordre et la connexion des choses" (1677/2012, p. 7). Insofar as modes of thought and extension correspond and insofar as they obey to the same organizational law, the organization of modes of extension with each other will correspond (or be the same as) to the organization of modes of thought with each other. In this sense, just as an effect is determined by a cause, so too will the idea of this particular effect be determined by the idea of this particular cause. Each relation of causation between two modes of extension is necessarily reflected in the corresponding relation of causation between the two corresponding modes of thought. Simply worded, if a cause is causally related to this particular effect, the idea of this cause will be in the exact same way causally related to the idea of this particular effect. Therefore, just as the fact that the water boiling in the saucepan is causally related to temperature of the baking tray, so too, in the same way, will the idea of the boiling water in the saucepan will be causally related to the idea of the temperature of the baking tray.

Focusing more in-depth on Spinoza's epistemology and his conception of adequate ideas will open up the path to the comprehension of his problem of error. The kernel of his epistemology, called causal rationalism, has already been stated in Axiom 4, Part II.: the knowledge of the cause of an effect determines the knowledge of that effect. What remained implicit in the previous treatment of this proposition is that an effect can *only* be known if its causes are known too. In this sense, every mode of extension and thought are known only if all of their causes are known too. Knowledge is necessarily related to causes as knowledge is always knowledge of causes. Therefore, one will know that water is boiling in the saucepan if one knows all the causes related to the fact that the water is boiling in the saucepan. Similarly, one will know the idea (or have an idea of the idea) having for object that water is boiling in the saucepan if one knows all the ideas having for object the causes related to the fact that the water is boiling in the saucepan. As causes of an effect can be quantified, knowledge comes in degrees: the more one has knowledge of the causes, the more one has knowledge of the causally related effects. An adequate idea will, in this sense, be an idea exactly mapping on its object and the causal relations it has. This definition applies to ideas of modes of extension and thought. Therefore, the content of an adequate idea might be an extended object as well as an idea of an extended object. According to Sommerlatte (2017, p. 2), the requirements for

an idea to be adequate are the following. An idea is adequate if it contains complete knowledge of its object, that is, if it contains all of the object's properties, a full causal explanation of its relationships with its causes and effects, and if it "depends solely on other ideas contained in one's mind". This last condition expresses the fact that an adequate idea must be considered in itself solely in its relation to other ideas, without any relation to its object or to any other objects. Ultimately, only God possesses adequate ideas for he is the unique substance in which the idea of its essence and all the ideas deriving from it are contained. Therefore, only him has adequate ideas of every modes of thought and extension. However, as mentioned earlier, knowledge comes in degrees, and the more an idea has the required conditions to be adequate, the more adequate it is. Human beings, being a finite mode of extension (body) and a finite mode of thought (mind), can have adequate ideas, but to a lesser degree than God.

From this conception of adequate ideas, arises the problem of error. Because human beings are finite, their knowledge is thereby somehow bounded and cannot be as complete as God's. Therefore, they can have inadequate ideas, that is, ideas that do not perfectly match the required criteria outlined above to be adequate. Ideas might not be causally linked together correctly, or they might not depict correctly their object by missing one of its properties. In other words, in any cases, the content of inadequate ideas remains partial. From this partiality arises error. Because the adequacy of their ideas might remain partial, their order and connection might not correctly match the perfect order and connection of ideas that God has. And insofar as the order and connection of God's ideas perfectly match the order and connection of things, the order and connection of human beings' ideas will not match the order and connection of things either. Thus, error consists precisely in the mismatch between the order and connection of human beings' ideas and the order and connection of God's ideas, which leads to a further mismatch between the order and connection of their ideas and the order and connection of things. This mismatch is caused by the existence of inadequate ideas. However, ideas are caused to be inadequate because of a lack of knowledge. Therefore, error is determined negatively and said to be due to missing information. Thus, error is not considered as incorrect knowledge, but as lack of knowledge: "La fausseté consiste en une privation de connaissance" (Spinoza, 1677/2012, p.35). Error is ignorance. The more knowledge a person possesses, the less errors they make, the less ignorant they are. Although human beings cannot possibly achieve this level of knowledge, their ignorance is subject to change according to their level of adequacy between *their* order of ideas and *the* order of ideas (that is, God's).

In my evaluation of these two different understandings of error, I came to settle for Descartes' account. His conception of error not only is the one that fits best the Principle of Sufficient Reason, but is also the most functional one. This last point is premised on the basis that his account of error fits better to his conception of freedom than does Spinoza's account of error with Spinoza's conception of freedom. Establishing an account of error presupposes, for Descartes and Spinoza, that their account fits the Principle of Sufficient Reason. A good way to assess if they do is, in a first phase, to evaluate the possibility for error not to exist, and in a second phase, to evaluate the possibility for error not to exist as it is. However, answering the first question appeals to factors determining the existence of error as it is. Regarding both accounts, the reasons brought forward to justify error's existence appeal to reasons as to why it must exist as it is. Therefore, it will be equally satisfactory to give an answer directly to the second question. In the case of Descartes' account, why is it impossible for error not to exist as it is? If error were not to exist, the discrepancy between the will and the intellect would have to be inexistent. Thus, two possibilities are available (which appeal to the reasons why error cannot not exist as it is). Either the intellect becomes infinite, or the will becomes finite. In the first case, the intellect would be as unbounded as is the will, thereby permitting the will to form judgements on everything without the possibility of making any error. However, human beings are according to the Great Chain of Being finite substances. Placed under God in the hierarchy, they would break its law by having a property only God has, which would elevate them at his level. But since the hierarchy impedes it, they cannot. Therefore, their intellect must necessarily be finite. In the second case, the will would be as limited as the intellect is, thereby also only making judgements about what one knows, and therefore being in the impossibility to produce errors. However, if the will were limited, it would not be free anymore. Not to make any errors would entail losing freedom, for the only way to account for the non-existence of error (and thereby overthrow Descartes' account of error) would be to limit the will. Therefore, the will must necessarily be infinite and error must necessarily exist, for otherwise freedom would not hold. This assessment not only showed the necessary existence of error as it is by proving impossible both the will and the intellect to be respectively finite and infinite, but it also showed the role that error plays in the existence of freedom. Error must necessarily exist, otherwise the will could possibly be limited. If the will were to be so, freedom would not exist. Thus, the inexistence of error would possibly cause the inexistence of freedom. Error has to exist in order

for freedom to exist too. It safeguards freedom's existence. For this reason, error can be said to play a functional role in freedom's existence.

Now turning to Spinoza, why is it impossible for error, on his account, not to exist as it is? If error were not to exist, the discrepancy between the order and connection of one's ideas and the order and connection of God's ideas would have to be inexistent. Therefore, as for Descartes, two possibilities are available. Either the order and connection of God's ideas become limited in order to match the order and connection of one's ideas, or the order and connection of one's ideas become unlimited in order to match the order and connection of God's ideas. The first possibility is refuted by the fact that everything that exists must exist in God. Nothing can exist outside of him for God is the unique substance of which every mode is made. Were some modes to be external to him, they would be made of another substance than God, which has been proven impossible for God is necessarily the unique substance. Therefore, everything must be contained in God, thereby endowing him with unlimited knowledge of all the order and connection of ideas. The second possibility can be refutable on the basis of the finitude of human beings. However, Spinoza does not give a clear explanation accounting for the fact that human beings are finite. It could be derived from the fact that only the substance being unlimited, everything existing in it must be limited in nature. But this would only explain the finitude of human beings by what they are not, that is, by a negative explanation. Spinoza does not give a positive account of human beings' finitude which seems to lack in order to show the necessary impossibility for human beings to be infinite beings having infinite knowledge. This necessary impossibility lacking, the necessary existence of error is seen undermined. Thus, Spinoza's account of error seems slightly inconsistent regarding the Principle of Sufficient Reason and for this reason is seen less preferable than Descartes'. However, the validity of his conception of freedom granted, error has to exist in order to safeguard the substance's infinity and human beings' finitude. Were it not to exist, these accepted propositions would be called into question and directly undermine Spinoza's whole philosophical system. Here, the existence of error is shown necessary, as it was the case for Descartes. However, unlike Descartes, the nature of error in Spinoza's account completely undermines his conception of freedom. Freedom is according to Spinoza the lack of external constrains on one's existence and action. Even though human beings are constantly constrained by external determinations, one can internalize them through acquiring knowledge of their complete causal explanation and thereby willingly and knowingly obey to them. By internalizing their necessary determinations, human beings are not constrained

by them anymore. Rather, by knowing them, they constrain themselves by their own initiative, and therefore act and exist according to their own nature without being externally compelled to act in a certain way. Here, knowledge is crucial in the acquisition of knowledge because it is that which permits to internalize external determinations and act according to one's own nature. The more knowledge one has, the freer one is. Therefore, error directly hinders one's freedom. Unlike for Descartes, error is dysfunctional in the existence of freedom. Yet, error's dysfunctionality enters in opposition with its necessary existence. On the one hand, error must necessarily exist, otherwise it would call into question the conception of God as unlimited and human beings as limited. On the other, error must necessarily be fought against for one to gain freedom. Spinoza's problem of error brings forth a contradiction uneasily escapable. For this reason, in comparison with Descartes' case, Spinoza's account seems less in accord with his conception of freedom and his overall philosophical system than is Descartes' with his own conception of freedom and philosophical system. Moreover, the Principle of Sufficient Reason fits less to Spinoza's account than to Descartes', which shows a lack of consistency in Spinoza. For these reasons, Descartes' account is more desirable than Spinoza's.

To conclude, in a first phase, this paper gave a description of Descartes' account of error. According to him, error is a misuse of the discrepancy between the intellect and the will. In a second phase, this paper offered a detailed description of Spinoza's conception of error. According to him, error is a lack of knowledge producing a mismatch between the order and connection of one's ideas and the order and connection of God's ideas. In a third phase, this paper evaluated and compared the two philosophers' accounts. Insofar as Descartes' account is more consistent with the Principle of Sufficient Reason than Spinoza's, and insofar as Descartes' conception of error is more aligned with his conception of freedom than is Spinoza's conception of error with his own conception of freedom, Descartes' account has been declared preferable to Spinoza's.

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Tourism in North Korea: A Reinforcement of the Government's Ideology or a Chance for Promoting Peace Between Hostile Nations?

Elizabeth Hanisch

Tourism is defined as a basic human need by the World Tourism Organization, its importance stemming from how it promotes enhanced intercultural exchanges and a better understanding of other cultures (Kim, Timothy & Han, 2007, p. 1031). It plays an important role in international relations and is a potent form of low-politics to promote face to face diplomacy. Low politics entails political procedures undertaken on an informal level related to everyday experiences and thus, poses as the counterpart to high-politics, such as closed-door diplomatic discussions between the governing bodies. Authoritarian governments will most often reduce and strongly regulate international encounters to ensure their ideological monopoly (Yu & Chung, 2001, p. 537-538). Tourism in the Democratic People's Republic of Korea (DPRK) has, until recently, been virtually nonexistent. However, current developments under the Kim Jong-un administration suggest that the travel industry is undergoing vital alterations. This raises questions as to whether the development of North Korea's tourism industry will simply seek to reap the economic benefits and attempt to spread the government's ideology or whether it can be seen as a chance to promote peace between hostile nations. The understanding of this subject offers relevant insight into North Korean political methodology. It also engenders possibilities to approach the vastly secluded domestic population, to achieve improved cultural understanding. Today, tourism in the DPRK is still vigorously regulated and follows the previously established core principles of socialist tourism. However, their revised tourism policy enables more cultural encounters and supports the formation of a differentiated view of the local people. Thereby, tourism, as a consciously political activity, can lead to augmented cultural exchange and hence,

is a potent form of low-politics in North Korea. In this paper, I first analyze current changes to the tourism policy and assess their effect on the travel market. Secondly, I evaluate tourism as a form of low-politics activity from a Communication Studies perspective and draw upon media critic James Carey's ritual view of communication as a way to achieve shared cultural beliefs. Furthermore, I contemplate the rearticulating of North Korea's image as a possible travel location through increased contemporary discourse. I also examine whether media representation of travelling to the DPRK is consciously perceived as a political undertaking or whether the heightened discourse around the subject simply reinforces the country's stigmatization.

Tourism is still underdeveloped in North Korea. It is primarily used for economical gains created by the revenue produced and to reinforce the government's ideology, both domestically and internationally. While the recent developments in the tourism industry still operate within the same ideological framework as before, they also offer significant opportunities for enhanced cultural experience. There is little statistical data available to monitor this industry in North Korea; most information is classified as confidential and safeguarded by the DPRK's government. The figures that are accessible suggest that travel activity is extremely limited. The majority of visitors are South Korean or Chinese and their travel experience is highly regulated and supervised by the local authority (Kim et al., 2007, p. 1034). The government owns all travel organizations and determines pricing policies. The Visa acquisition process is also very restricted. Those that are allowed to enter the country can only choose between a few destinations. Permitted locations are mainly restricted to sites that are relevant to the government's ideology or historical places, such as temples and pagodas (p. 1035). These harsh restrictions ensure that the policy respects the concept of socialist tourism, which ascribes the role of establishing propaganda in all touristic activities (Ouellette, 2016, p. 424-425). Furthermore, it is driven by financial interests; It enables the development of the economy.

This is achieved the acquisition of valuable foreign currency (p. 424). Tourism was, however, an underdeveloped and less prioritized field until recent years (p. 425).

It is under Kim Jong-un's rule that tourism changed. Even if it still follows the same guidelines and ideological framework, modern developments also offer increased opportunities for intercultural exchange and thus, leave room for tourism to potentially function as a form of face-to-face diplomacy through the increased interhuman exchange provided in the realm of the travel industry. The most significant alteration is the shift from tourism as a largely disregarded field to a declared state priority (p. 425). This is put into practice through a major increase and diversification of accessible locations. Furthermore, the government is investing supplementary funds into travel-related infrastructures, such as airports and hotels, which creates new jobs in the industry (p. 427). In order to train qualified workforces, a tourism college has been established in the capital, Pyongyang. The program enables selected students to go to Shanghai, in China, to acquire knowledge and work experience. While the hiring of local North Korean staff is encouraged, the new policies also allow a limited number of foreign personnel to work in tourism facilities. Consequently, there are numerous novel opportunities for North Koreans to interact and engage with international clients, colleagues and instructors (p. 426). Moreover, a greater number of travel agencies now offer tour packages to visit North Korea and thus, facilitate visits of the isolated country for Western tourists (p. 427). The changes to the DPRK's tourism policy undertaken by the Kim Jong-un virtually allows for increased interpersonal exchange, which holds powerful possibilities in inducing better diplomatic understanding (p. 428). Moreover, the combination of past achievements of the special Mt. Kumgang project travel zone, a project established in 2002 by North Korea to accommodate South Korean tourism, and modern changes suggest that tourism holds the potential to function as an effective form of low-politics in the specific case of North Korea. Tourism is widely regarded as a way to create better under-

standing between opposing political and cultural beliefs because it enables contact between ordinary people. Therefore, it does not threaten sensitive topics such as military matters but focuses on superficial exchange through face to face communication. This personal diplomacy can lead to improved global relations and mutual understanding (Yu and Chung, 2001, p. 538).

The recognition of tourism as a powerful tool of diplomatic exchange is based on a "ritual" view of communication. Media critic James Carey argues, in his work "A Cultural Approach to Communication" (1989), that communication is most commonly perceived as the transmission of messages with the goal of spatial expansion and control (p. 15). However, it also includes another more deeply rooted aspect. He presents it as a representation of shared beliefs. Communication is thus defined as a process that constructs a community and reshapes common culture. The focus does not lie on rhetorical persuasion but on the subtle rearticulating of values and creation of consensus (Carey, 1989, p. 18-19). Drawing upon this conception, the interpersonal exchange enabled through tourism is also not rhetorically persuasive. Instead, it relies on superficial, yet powerful, exchanges that can build, maintain and improve social relations through phatic communication (p. 19). While this is a relatively slow and gradual process, any way to improve the problematic relation between North Korea and other nations should be investigated and pursued. This is particularly relevant when considering the long history of tension and limited achievements accomplished through high-politics in the case of North and South Korea (Ouellette, 2016, p. 447).

Ever since the introduction of the South Korean Sunshine policy in 1987, which led to a shift of South Korean diplomacy regarding North Korea to a more open and embracing attitude, various attempts have been made to better the relations between the two Koreas (Yu and Chung, 2001, p. 540). One major project is the Mt. Kumgang tourism zone established

in 1998. It is a joint agreement between the two sates that enables the Hyundai group to operate a travel zone in the Mt. Kumgang region in the eastern coastal region of the DPRK, in close proximity to the South Korean border. The area is primarily used for tourism as well as official political negotiations between the two states. Since the launch of the project, it has been critically questioned by the South Korean population. Nevertheless, the continued support is based on the perception of the project as a way to achieve peaceful coexistence and possible reconciliation between North and South Korea. It is also regarded as having the potential to reunite separated families (Kim and Prideaux, 2006, p. 125). However, the project has been faced with various challenges. Visits to Mt. Kumgang are highly controlled and offer next to no opportunity for interaction with the local population (Yu and Chung, 2001, p. 541). Moreover, non-political factors, such as economic aspects, influence the investors', like the Hyundai group or groups from North Korea, financial support and thus, further limit the project's expansion and travel activity. Despite all of those shortcomings and restrictions, the political relevance of the Mt. Kumgang tourist zone is still highly recognized and marks the vital factor determining its reception (Kim and Prideaux, 2006, p. 126).

The recent changes to the DPRK's tourism policy include a vital expansion of possible travel locations compared to the Mt. Kumgang project and leave more room for face to face communication. Thus, the study of tourism as personal diplomacy and the analysis of prior projects suggest that modern policy increases the political value of tourism in North Korea. The combination of the renewed tourism infrastructure and amplified representation of travel experiences on Western social media create enhanced discourse around the subject matter. Consequently, this leads to a gradual articulation of North Korea on the international scene. The philosopher Michel Foucault argues that discursive growth is mainly achieved through diffusion of institutions from which discourses emerge (Foucault, 1978, p. 34). This shift from prior se-

crecy and censorship towards more diversity and available information can also be observed in the talk surrounding tourism in North Korea. A greater variety of discursive centers, including Western travel agencies and travel blogs on social media, contribute to reshaping previous conceptions of the DPRK through the impactful diversification of modes of approaching the subject matter (Ouellette, 2016, p. 431).

Discourse is incredibly powerful because it "produces the world as it understands it" (Rose, 2001, p. 137). The conversation around tourism in North Korea forms the way people think about the subject. In order to understand a particular discourse, it is necessary to analyze the manner in which it is articulated through source material and evaluate the practices and power relations of involved organizations (p. 140). Foucault puts forth the notion that making a topic a matter of necessarily increased discourse can, in fact, reinforce the established narrative and preceding secrecy. He emphasizes that the focus should instead lie on the analysis and development of the framework in which the discourse takes place (Foucault, 1978, p. 35). In the case of tourism in North Korea, the notion of further proscription through amplified discourse is supported by the widespread critique that Western tourists travelling to the DPRK primarily seek the exciting thrill of danger and the forbidden (Connell, p. 357-358). Based on this conception, heightened travel activity simply results in a reiteration of the customary mystification and stigmatization. This idea of almost forbidden tourism is further maintained through the increased number of travel agencies that promote North Korea as a particularly exhilarating destination (Ouellette, 2016).

In addition, the contemporary discourse around tourism in North Korea is still strictly regulated and controlled by imbalanced power relations. On the one hand, the North Korean government aims to employ tourism as a way to rearticulate their international perception towards a more humanitarian view. Their image makeover is mainly outsourced to the West

through for instance, travel agencies promoting the country as attractive destination (Ouellette, 2016, p. 431). On the other hand, the coverage of North Korea in Western mass media is still dominated by a generalized demonization of the country, which feeds into the notion of dark tourism. However, power in the sphere of discourse is not just executed from the top to the bottom, but instead, flows everywhere (Rose, 2001, p. 137). Therefore, in spite of the existence of clearly dominating discursive institutions, smaller, alternative channels still have a relevant impact. People sharing their travel experiences on social media is thus, a significant alternate outlet contributing to the rearticulating of the discourse around tourism in North Korea towards increased cultural openness and acceptance (Ouellette, 2016, p. 431).

The profile of the Western tourists travelling to North Korea contradicts and, in fact, counterpoises the notion of dark tourism. Most of them are highly educated, experienced travellers that do not seek the sensational (Connell, 2015, p. 358). Instead, their journey to DPRK is motivated by a wish to form their own opinions as an alternative to the unfavorable perception of the authoritarian state presented by Western media. They want to look beyond the curated surface in search of a genuine insight (p. 359). Their travels to the DPRK are conscious political endeavours that focus on the mundane elements and normality of the North Korean reality. This enables a cathartic relief caused by the deeper understanding of an otherwise secluded population and is often even described as a semi-spiritual experience (Wassler and Schnuckert, 2017, p. 132). The reports of travellers' experiences shared on social media are generally well-researched and hence, offer diverse outlooks on the state. In that way, they present a more differentiated alternative to the stigmatized conventional media portrayal (Ouellette, 2016, p.

433-434). The mode of more considerate discussion of North Korea on social media is precisely what makes it so meaningful to the perception of the topic because it alters the conditions under which the general discourse takes place. By offering an alternate view to the dominant discursive institutions, travel blogs rearticulate the discourse around the DPRK on the level of both content as well as power relations. Therefore, the current social media representation of tourism in North Korea does contribute to a gradual reshaping of the country's image in favor of enhanced cultural understanding.

In conclusion, tourism is a powerful tool of low-politics that has been employed to improve the hostile relations between North Korea and other nations in the past. The renewed tourism policy introduced by Kim Jong-un's regime still follows the socialist tourism ideology and provides largely underdeveloped infrastructures, ranging from a limited total amount of hotel facilities as well as highly restricted and regulated sightseeing spots. Nonetheless, it displays potential for the creative opportunities for cultural understanding between North Koreans and other nations through phatic communication. Furthermore, this development is supported through the sharing of travel experiences to the DPRK on Western social media. These politically conscious stories change the discourse around North Korea towards an increased understanding of the local population and their reality. While this paper mainly focused on cultural and communication aspects related to the tourism industry in the DPRK, there are additional factors that are relevant to the subject matter. For instance, economic elements, like the evaluation of the extent of financial profit gained from international tourism, also influence the industry's perception. A deeper analysis of the government's use of financial resources gained from tourism would add to a more profound consideration of the benefits and disadvantages of developing the travel market in the DPRK. Another aspect of interest is the correlation of developments in official government diplomacy parallel to low-politics and how the two spheres that

can be strategically aligned to supplement one another. In order to formulate a more inclusive analysis of the North Korean tourism industry, it would be necessary to consider those additional dynamics as well. The cultural opportunities outlined in the course of this paper nevertheless demonstrate that the tourism industry offers valuable diplomatic possibilities that are worth being pursued. Therefore, tourism as consciously political activity is a valuable form of low-politics should be employed in the process of approaching North Korea and other nations.

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Realism of the Body: Female Agency and Vulnerability in Hannah Wilke's Intra-Venus

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From her position as a female artist living and producing work in New York City throughout the peak years of both the 1960's Sexual Revolution and 2nd wave feminism, as these corresponding phenomena evolved in America over the second half of the 20th century, Hannah Wilke has come to be regarded as one of the most iconic feminist artists of her time. She is considered a crucial component of the late 20th century feminist movement itself. Dealing dominantly with imagery of the female form and its manifestations within the cultural climate of a mid-Sexual Revolution America, the mass of Wilke's artwork drew on a range of prevalent stereotypes surrounding the female body as represented within art history as well as the sexually liberated, contemporary art world in which she worked and experienced life. The linking of Wilke's personal life to her artistic work emphasizes Wilke's lack of distinction between the two, instilling a realism upon her creative endeavors prior even to addressing the specificities of the verisimilitude residing in the pieces themselves. This lack of distinction is perhaps most prominently found in Wilke's photography projects, where the artist gravitated towards self-portraiture and the use of her own body as a vehicle to reclaim agency of the female form through self-subjectivity. Against an artistic landscape accustomed to female representation centering on passivity and objectification in favor of male spectatorship, Wilke's bold, assertive manner of displaying her own body both at times of beauty as well as vulnerability showcased a naturalism that would permeate feminist discourse during her life as well as posthumously. Wilke made sure of this, in fact, by ending both her career and her life with perhaps the most organically realist photography project to her name, *Intra-Venus* (1991-1993).

With the *Intra-Venus* series, Hannah Wilke presents self-portraiture possessing such

raw honesty that the series may be recognized as the epitome of both female agency and vulnerable realism, amongst many other artistic accomplishments. The project was conducted as documentation of the artist's battle with lymphoma during the years leading up to her premature death in January 1993. Wilke's *Intra-Venus* exists as an indisputable work of vulnerable realism, this notion put forth by Andrea D. Fitzpatrick, a professor of history and art theory at the University of Ottawa, in her 2007 article "The Movement of Vulnerability: Images of Falling and September 11." The series also maintains the strong feminist themes of agency present throughout the sum of Wilke's work and artistic career in the assertive transparency through which the artist presents her body during the last days of her life. Wilke's prevailing feminist motivations are heightened here, as Wilke creates *Intra-Venus* with the intent of it living a solely posthumous life, claiming agency of her image even after her death. In capturing moments of both strength and beauty, as well as weakness and ugliness throughout her battle, Wilke attributes a powerful feminist agency to Fitzpatrick's vulnerable realism in her *Intra-Venus* series through self-subjectivity and the use of her illness as a means of critiquing notions of aesthetic experience regarding artistic representation of female bodies. In displaying her own body through a realist lens as it deteriorates before her spectator, an assumed heterosexual male, Wilke invites her audience to gaze upon her wounded, bloated female body after she herself has passed.

Working with mediums such as ceramics, sculpture, paint and photography, Wilke positioned her own body as the subject of female sexual liberation in her art from the young age of 14. It was at this age, in 1954, that she began exploring self-presentation through nude self-portraiture with her sister behind the camera (Princenthal, 2010). At this young age, Wilke recognized the power of liberated self-subjectivity in artwork as a means of realism and female agency. As suggested by the distinguished American philosopher and gender theorist, Judith

Butler, in her *Precarious Life*, "[the] body implies mortality, vulnerability, agency: the skin and flesh expose us to the gaze of others," (Butler, 2006). Leading up to her final project, the *Intra-Venus* photographs of 1991-1993, Wilke's artistic career cumulatively maintained these dominant themes of female liberation in her granting of access to her mortality and inherently human vulnerability through use of her body as "social barometer," (Princenthal, 2010). She faced her own humanity with her acceptance and assertion of it, stating, in a 1985 interview, that "gorgeous people die as do the stereotypical 'ugly,'" (as cited in Princenthal, 2010). She was perfectly aware that this was the most fragile aspect of her work. Perhaps an earlier, more innocent version of the *Intra-Venus* series can be recognized in drawings and paintings from her time at the Stella Elkins Tyler School of Art in the early 1960s (Princenthal, 2010), in which Wilke depicts herself sick with mononucleosis in "a realistic series, in pink and blue, of herself nude," (Princenthal, 2010). Of these paintings, Wilke explained: "I didn't have a subject, so I became my own subject," (as cited in Princenthal, 2010). This early instance of her interest in the rawness of the human body as a subject for realism merely foreshadows her later endeavours with self-portraiture as liberation from traditional, passive female representation.

Without existing as straight-forward activism, Wilke was devoted throughout her career to "unburdening women, herself first and foremost, of the cultural constraints that had inhabited their pursuit of pleasure and of power," (Princenthal, 2010). This was accomplished in the eyes of feminist art discourse (Souter 2018), through the conception of realism maintained in using her body as the subject of her work, the result of the mid-Sexual Revolution, artistic landscape in which Americans were not "merely seeking out sexual experience; they were talking about, writing about and reading about the meaning of sexual freedom," (Allyn, 2001). Her work was described as such:

Using her body as a statement became a trademark of Wilke's work. In the seventies

> body art was defined by the artist's own body employed as material or as form-in performance, in photographs and on film. It was a way for women artists to separate themselves from "male" art; the nude body pointed very directly to the difference in male and female experience. It gave artists the freedom to work subjectively: to work of and from themselves. (Tierney, 1996)

When diagnosed with lymphoma, the artist employed these feminist methods of realism to an unprecedented degree in her continuation of the raw self-portraiture, for which she became most widely recognized during her BC (before cancer) career, post-diagnosis (Princenthal, 2010). The Intra-Venus project refers to a series of 13 portraits taken of Wilke, with the help of her partner, Donald Goddard, chronicling the cancer-indebted physical changes to Wilke's body. The series is produced with an honest and veristic manner unparalleled by the artist's previous work (Souter, 2018). She shows her body "naked and bloated from her chemotherapy treatments, without make-up, and bruised where the intravenous tubes entered her body," (Souter, 2018). Wilke subverts conventional artistic representations of women through her reference to the idealized body of Venus, as enforced by Sandro Botticelli's *The Birth of Venus* (1485–1486), and art historical perceptions of beauty and the female body, as seen in Figure 1. The intravenous tubes "give the series its name, Intra-Venus, which, typical for Wilke's work, makes a play on words that compares her post-cancer body to the "Venus" typical of conventional artistic representations of women," (Souter, 2018). Wilke challenges society's tendency to disregard women once they grow "old, ugly or ill" (Souter, 2018) and therefore "refuses the construction of woman as the pathetic, obscene, victimized subject of the patriarchal gaze" by "offering her body within a fully theorized array of expressions [...] that articulate a pro-active rather than re-active feminist subject," (Souter, 2018). Looking directly into the camera's lens in assertive acknowledgement of her viewer (Figure 2), an assumed heterosexual male, Wilke

claims an agency over her body in a manner that evokes the 16th-century work of Sofonisba Anguissola, as well as the female subjects of Édouard Manet in his Realist paintings from the late 19th century.

When observing the reclaiming of female agency from an art historical perspective, one must begin an analysis with the work of the Italian Renaissance painter Sofonisba Anguissola (1532-1625) and, primarily, her work entitled *Bernardino Campi Painting Sofonisba Anguissola* (1559). In this double portrait, Anguissola presents herself as a painting being conducted by her teacher, therefore producing "the first historical example of the woman artist consciously collapsing the subject-object position" (Broude & Garrard, 2005). The barrier between the viewer and the observed is challenged with the artist's dual self-presentation as both the model for the male artist producing the work in the painting, but also as the painter herself, directing the man who is creating the painting of herself as subject, in the portrait. This agency possessed by Anguissola over the way in which the man depicts her body, as her image stares directly back at the viewer of the canvas, allows for a self-subjectivity that invites the spectator first to objectify her body in the manner of the male painter as he represents her on the canvas, but then challenges his ability to portray her; it reclaims agency of the entire operation as its primary agent. The male viewer of the work consequently feels foolish in his attempt to assume spectatorship over Anguissola's representation as he is quickly confronted with the agency she exhibits both as the creator of the image as well as the image being created. It is hers, not to be claimed.

This notion of male spectator as inferior or foolish was again introduced during the Realist movement as it evolved over the second half of the 19th century, with Édouard Manet and his subversive representations of the modern woman, (Smith, 1995). Though Manet is commonly recognized as an Impressionist painter by art historical discourse, it must be noted

here that the artist himself never identified with this title, rather considering himself as a Realist (Smith, 1995). In his depictions of women, Manet expressed a philosophical dimension that does not reveal itself in the rest of his work. His strategy was similar to that of Anguissola, in its inviting of the male viewer to "adopt the imaginary standpoint of the spectator in the picture, only to make him feel uncomfortable in this role and make him reflect "philosophically" about the attitudes it involves," (Smith, 1995). In a painting such as his *Olympia* (1863) (Figure 3), Manet depicts his female subject as an agent of her own body, through her direct address of the artist and spectator as she stares unapologetically back at her viewer from a relaxed position nude on her bed. *Olympia* is evoked in Hannah Wilke's work as Manet produced this piece in reference to the over 35,000 registered prostitutes, and an unknown number of unregistered, working in Paris for a population of approximately one million during the second half of the 19th century, (Smith, 1995). These statistics can only suggest an abundant demand for sexual satisfaction in Paris at this time, comparable to the late 20th century in a sexually revolutionized America in which Wilke produced Intra-Venus. Wilke's *Intra-Venus Triptych ["Marilyn Monroe"]* (1992-93) (Figure 4), a three-photo series created as part of the *Intra-Venus* project, in which Wilke is reclined nude on a bed in various placid positions, addresses the spectator similarly to *Olympia*'s prostitute who declares the viewer her client (Smith, 1995). Wilke stares back at her spectator in the assertion of herself in control of her subjective body. As expressed by American theorist and interdisciplinary artist, Tina Takemoto, "making work about illness sometimes produces the feeling of agency, as if you are somehow fighting illness by transforming it into something else," (Takemoto, 2008). Therefore, though unlike the idealized *Olympia*, Wilke's body is ridden with gauze and chemotherapy-related bloating, it is in this refusal to conform to female beauty ideals in displaying her damaged body with realist honesty, that her feminist agency lies.

Simultaneous to *Intra-Venus*'s reclaiming of the female subject, attributed to the art-

ist's deep conflation of her art and her private life, where the divide is distinguishable only through the concreteness of art's physical existence in contrast to the ephemerality of lived experience, Wilke's realism further possesses a strong sense of vulnerability as she grants access to her most fragile years through photography. This notion of the concrete versus the ephemeral in realist subjectivity appears most tangibly after her death, as seen explicitly with the Intra-Venus series, to be examined within the ethical frameworks of capturing "embodied subjects" (Fitzpatrick, 2007) on their way to necrosis, as most clearly articulated by Andrea D. Fitzpatrick in her article, "The Movement of Vulnerability: Images of Falling and September 11". In her piece, Fitzpatrick examines photographic images taken of bodies falling to their deaths from the collapse of the Twin Towers on September 11th, 2001. Fitzpatrick poses the question: "[are] those who fell to their deaths on September 11, 2001, exploited or honored by the display of images representing their experiences?" (2007). She then embarks on a process of breaking-down the ethical framework through which viewers may encounter fatal bodies as aesthetic experience contextualized within visual culture. Though Fitzpatrick focuses on images of falling figures, where she explores the vulnerability of movement when captured by static photography, I would like to apply her article to Wilke's Intra-Venus based on her discussion of ethical vulnerability and subjectivity of the dead, as the Intra-Venus photographs were displayed first at the Ronald Feldman Gallery in 1994, posthumously (Ronald Feldman Fine Arts, 1993). I would further like to examine the ways in which Wilke subverted Fitzpatrick's vulnerability through her agency, where realism remains the core theme, approached from the position of the female subject.

On the viewing of subjects as they approach their impending death, where the subject is assumed deceased upon said viewing as an aesthetic experience, Fitzpatrick discusses vulnerability as an issue of representation both visually and linguistically (Fitzpatrick, 2007).

Visually, regarding the subject whose body is captured by the medium, *Intra-Venus* possesses the implications of concrete, physical documentation and artwork which heighten the subject's susceptibility to representations of violence, ethically speaking. Fitzpatrick views this arresting of the fatal subject for the purpose of visual art, as the unfolding of an ethical paradigm in her analysis of September 11th photography, in the subjects nonconsenting, and post-mortem inability to consent, to the use of their vulnerability as an aesthetic experience, (Fitzpatrick, 2007). Fitzpatrick states that "[where] vulnerability is or is not apparent in the images of falling, formal and ideological problems are revealed," (2007). However, the deliberate intent with which Wilke produced Intra-Venus specifically as a physical document to be viewed after her death causes agency to override Fitzpatrick's ethical paradigm as we experience her self-subjective, aesthetic document. Fitzpatrick says:

> Subjectivity as I understand it is an ongoing series of effects (involving language, images, cultural and political institutions and their discourses, names and identity categories) that form a subject that must always be assumed to be under construction, a work-in-progress, changing and contingent, less a source of agency than a scene or site through which the effects of power are materialized. (2007)

I would argue that when applying this description to Wilke's work, where agency and power are conflated, realism is precisely the element that manifests her agency strongly enough to overcome Fitzpatrick's ethical paradigm, as a subject under the construction of herself indefinitely.

Linguistically then, in the viewer's ability to respond to and identify with what is seen, Fitzpatrick views September 11th photography under the framework of Roland Barthes' punct-

um, where the punctum in these images causes their viewer to feel a shared sense of vulnerability through Butler's intersubjectivity (Butler, 2006; Fitzpatrick, 2007). This linguistic response, however, regarding *Intra-Venus,* is enabled and encouraged by Wilke as she sets up a platform for introspection for her viewer where our focus is shifted internally through the sharing of her humanness. Unlike the images of falling figures, Wilke leaves no room for ethical manipulation of representational violence, she stands, staring back at us, inviting us to feel our own mortality through the acceptance and presentation of her own.

Though Hannah Wilke's *Intra-Venus* series is inevitably exposed to representational violence and ethical discourse surrounding the viewing of deceased subjects as aesthetic experience, the themes of feminist realism dominant throughout the body of work become heightened by her final project, overcoming the subjective vulnerability put forth by Fitzpatrick. In conclusion of this analysis, I would like to reference one of Wilke's earlier photography series made under similar pretense to that of *Intra-Venus; her In Memoriam: Selma Butter (Mommy)* (1979-1983).

This series, taken of her mother, Selma Butter, during Butter's own battle with cancer in the late 1970s, (Princenthal, 2010) maintains Wilke's fascination with the unguarded body as a means of obtaining agency exhibited throughout her career. These photos, while not featuring Wilke herself as the visible subject, remains a series of vulnerable subjectivity in their reflection of the artist's personal struggle to cope with the "anger at her mother for getting sick and threatening to leave her," (Princenthal, 2010). This form of indirect self-portraiture can also be seen previous to Wilke's career, in the photo series by Richard Avedon taken of his terminally ill father, Jacob Israel Avedon, during the last years of his life between 1963-1974, ("Jacob Israel Avedon"). Both series, by Wilke and Avedon, depict the artists' parents with the same brutal honesty that is employed in Intra-Venus, however the way these projects work as self-portraiture

regardless of the subject not being the artists themselves formally speaking, evoke Fitzpatrick's discussion of Butler's intersubjectivity as a linguistic code of representation further, (Fitzpatrick, 2007) in a three-fold process of vulnerability. The visual representation of the artists' dying parents' vulnerable states reflects the vulnerability of the artist, felt as both Wilke and Avedon experience and grieve the impending loss of their parents. Both series could be considered cases of representational violence (Fitzpatrick, 2007) performed by Wilke and Avedon due to the photographs' brutal honesty. This introspective vulnerability is further extended to the series' viewer, causing Butler's intersubjectivity to be experienced by the viewer as we feel both the vulnerability of the artist's parent as well as the artist, within ourselves in the reflection of our own mortality. Vulnerable realism, in the sum of these cases, works as a way of claiming agency over the artists' own experience, whether through the loss of a parent or one's own life, rather than succumbing to objective vulnerability and representational violence. Mortality is confronted and accepted by the artist and their subject, and then presented to the viewer to provoke deep consideration of one's own self as reflected in the frame.

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Figure 1. Intra-Venus No. 1, 1992.
Wilke, H. (n.d.). No. 1[Photograph found in Intra-Venus Series]. Retrieved April 8, 2019, from https://feldmangallery.com/index.php/artist-home/hannah-wilke (Originally photographed 1991)

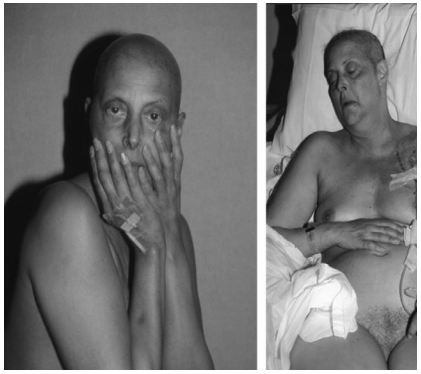

Figure 2. Intra-Venus Series No. 4, July 26, 1992.
Wilke, H. (2015, May 25). No. 4 [Photograph found in Intra-Venus Series].
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(Originally photographed 1992, July 26

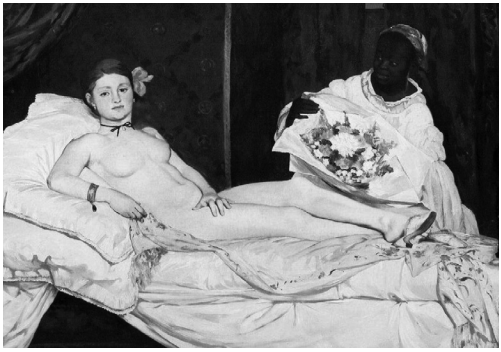

Figure 3. Manet, Edouard. Olympia, 1863. Manet, E. (1963).
Olympia [Painting]. Musée d'Orsay, Paris.

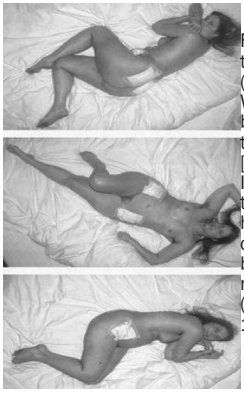

Figure 4. Intra-Venus Triptych ["Marilyn Monroe"] (1992-93)
Wilke, H. (2015, November 19). Intra-Venus Triptych ["Marilyn Monroe"] [Photograph found in Intra-Venus Series]. Retrieved April 8, 2019, from https://www.artspace.com/magazine/art_101/body-of-art/body-of-art-reclining-nude-53286
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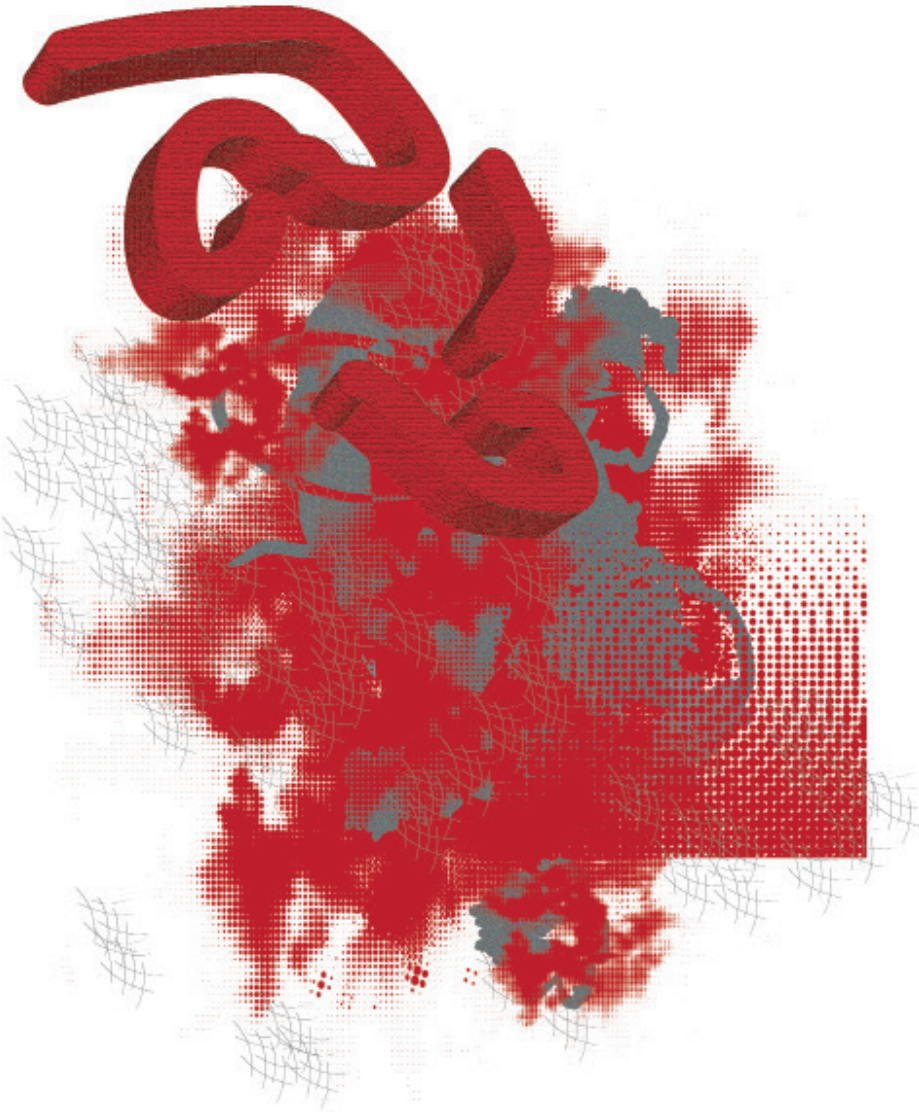

"Sciences provide an understanding of a universal experience, Arts are a universal understanding of a personal experience... they are both a part of us and a manifestation of the same thing... the arts and sciences are avatars of human creativity."

— Mae Jemison

3 | *NEBULOUS*

Émile and the Noble Savage: Imagination and the Becoming of the Social Man

Natalia Espinel-Quintero

Jean-Jacques Rousseau's most famous words, "man is born free, and everywhere he is in chains" (Rousseau, 2011, p. 156), refer to the limitations of a free man within a civil society. This idea that man's freedom and goodness have been taken away and corrupted by society is pivotal in the understanding of his philosophy. His writing revolves around the idea that man, and the society he lives in, must return to a natural state. Nature, in Rousseau's terms, is uncorrupted and therefore good. However, the idea of returning to a state of nature is rather utopic, as he was well aware. The theory of the savage man is, in fact, a mere metaphor he uses to discuss the evils of society and its corruption of morality.

It is with this in mind that in 1762, at the same time his famous *Social Contract* came out, Rousseau published *Émile*, a treatise on education but also on the nature of the human condition. In *Émile,* he puts forth the idea that a good education can nurture a person's inner goodness and therefore create a virtuous and happy man fit to live in society without being corrupted. Rousseau introduces Émile, the main character of the book and a figure that could be read as the representative of mankind. His education will serve as a healing tool, a guide that will allow him (and all humans) to return to himself and his natural goodness. As readers, we witness Émile's development from infancy into adulthood and the different techniques Rousseau uses to turn him into a good man. His education, we will see, is special; it is not only aimed to educate his intellect and create a man able to function within a society, but also to educate his spirit and tame whatever instincts arise to corrupt his morality.

Imagination is not an instinct, but rather a natural faculty that gives rise to instincts. Rousseau tends to present it as a detrimental force that gives room for vices to spring. Howev-

er, to say that imagination is just a source of man's vices and unhappiness would be reductive. As we will see, this faculty has a pivotal role in the development of the social man; it is what allows him to connect with others. Imagination is innate to man, and is the faculty that bridges his inner self with the outside world. In the process of bringing man outside himself, imagination becomes a social faculty. In the *Discourse on the Origin of Inequality*, where he presents his theory of the state of nature, we encounter imagination as the faculty that differentiates the savage man, a man that lives within himself, from the civilized and pre-civilized man, who live outside themselves. In *Émile*, we see it as the faculty that allows the child to develop and establish moral relations with others.

This paper will analyze the role and treatment of imagination in Rousseau's *Émile* and the *Discourse on the Origin of Inequality* (second discourse). I will first establish the similarities between the savage man and the state of infancy, as well as those between the pre-civilized man and the adolescent/young man. I will then study the development of mental faculties and sentiments in both the pre-civilized man and the child in order to show how *amour propre* (self-love) gives rise to the distinction between the *moi* (self) and *l'autre* (the other). Finally, I will argue that however detrimental imagination seems to be, it is a pivotal faculty of the social man, for it is what allows man to transcend the physical world (*l'homme de la nature*) (man in the state of nature) and establish moral relations with other humans – becoming *l'homme de l'homme* (social man).

Émile, Rousseau (1979) writes, is a "savage made to inhabit cities" (p. 205); his childhood resembles the state of nature of which Rousseau talks about in his second discourse. Childhood, or infancy, as presented by Rousseau, is the time in which man should study himself in relation to things (p. 213). It is a state in which the child establishes physical relations to the world. In the third chapter of *Émile* (1979), we learn that he "has only natural and purely phys-

ical knowledge" and that "he knows the essential relations of man to things but nothing of the moral relations of man to man" (p. 207). Like the child, the savage man can only relate to things outside him in a physical way. In the second discourse, we encounter the savage man as a being that has no moral relations, and this characteristic alone allows him to be naturally benevolent. It is because he has no sense of morality that he has no knowledge of vices or virtues; he cannot distinguish good from evil, and his vices and virtues exist purely in a physical sense. Virtues are those that contribute to his self-preservation, and vices, those that harm it (Rousseau, 2011, p. 62). Man in the state of nature lives in himself and deals solely with his *self*. He lives without reflection (Rousseau, 2011, p. 63), and the only way in which he sees others is through pity. However, the pity of the savage man is a natural sentiment that assures self-preservation rather than a departure from inner self into the outside world.

In *Jean-Jacques Rousseau: La transparence et l'obstacle, Jean Starobinski* (1971) explains that:

> à cet état [l'état de la nature] où l'homme est supposé vivre en deçà de la distinction du vrai et du faux, Rousseau accorde le privilège de la possession immédiate de la vérité. De l'aveu même de Rousseau, c'est bien là un état d'enfance, et qu'un enfant d'aujourd'hui pourrait encore vivre si on le ne « corrompait » précocement. (p. 40)
>
> [in this state [the state of nature] where man is supposed to live below the distinction of true and false, Rousseau grants him the privilege of the possession immediate truth. By Rousseau's admission, it is a state of infancy, which a child of our time could still experience if we do not "corrupt" him prematurely]

In fact, this can be observed in *Émile*. Like the savage man, Émile – as a child – lives within himself and is naturally benevolent. This immediate possession of truth and state of uncor-

rupted childhood is only possible because Jean-Jacques, the governor, makes sure to keep the child away from the *dangers* of society when he is growing up. He watches the language used in front of the child and meticulously selects the interactions he has. Émile's childhood is spent in isolation, which allowed him to develop his instincts *naturally*. He, in a way, lives under a state of nature crafted by Jean-Jacques.

Though the state of childhood mirrors the state of nature, the child, unlike the noble savage, is able to transcend this state. As the child grows older, and wiser, he begins to extend his relations, and in doing so, he steps outside himself and develops his morality and his notions of good and evil. The fourth chapter of the book is dedicated to the depiction and study of this transition from Émile's first nature into his second nature; that is to say, his adolescence. Rousseau explains that man is "born twice: once to exist and once to live" (p. 211); it is in adolescence that Émile's "second birth" takes place. It is here that begins his journey as a social man and that he starts to establish moral relations to things and people. The savage man cannot establish moral connections, but the next man in Rousseau's chain of evolution, the pre-civilized man, can relate to others in a semi-moral manner.

Émile's introduction to the moral world resembles the moment in which man in the state of nature steps out of his isolation and starts gathering with his fellowmen for common interest (Rousseau, 2011, p. 71). At this moment, man in the state of nature is still living within himself, and his social relations are bridged by an interest in his self-preservation. The coming together of humans is, at this point, selfish, and each individual joins the others for pure survival. Starobinski (1971) explains: "de même que l'enfant, en grandissant, quitte le monde de la sensation pour entrer dans de « monde moral », puis dans le monde social, de même l'homme primitif perd le paradis de la pure sensibilité" [just as the child, growing up, leaves the world of sensation to enter a "moral world", in the social world, the primitive man loses the paradise of

pure sensibility] (p. 41). This evolution that both the child and the savage man have to undergo in order to enter the social sphere is slow and requires the awakening of mental faculties and sentiments related to the self and the other. The first step towards socialization, as we have seen, is a selfish step; it will take further mental development for sympathy and genuine interest to awaken. Starobinski notes that "les modifications psychologiques ne surviendront qu'après l'utilisation des outils. Chronologiquement, c'est le travail et le *faire* instrumental qui précèdent le développement du jugement et de la réflexion" [the psychological changes will only occur after using tools. Chronologically, it is work and instrumentality that precede the development of judgment and reflection] (p. 41). Judgment and reflection are important in the development of social relations, but to understand how these work, it is necessary to understand what are *amour de soi* (love of oneself) and *amour propre* (self love)[1].

In the state of nature, man can only perceive and feel what is around him (Rousseau, 2011, p. 54); his first sentiment is that of his existence (p. 69). In this state, passions are minimally active, and do not interact among themselves – there is no vanity, contempt or esteem. At this point, man possesses only *amour de soi-même*, "a natural sentiment that moves every animal to be vigilant in its own preservation and that, directed in man by reason and modified by pity, produces humanity and virtue" (Rousseau, 2011, p. 117). Under *amour de soi-même*, man considers himself his sole judge. He has no reasoning yet and therefore no *amour propre*[2], "a sentiment that is relative, artificial and born in society that moves each individual to value himself more than anyone else, that inspires in men all the evils they cause one another, and that is the true source of honor" (Rousseau, 2011, p. 117). In other words, *amour propre* is born once man abandons the territory of the self and extends his relations to others.

1 Allan Bloom (1979) explains that "[t]he distinction between amour de soi and amour-propre is meant to provide the true explanation for that tension within man which had in the past been understood to be a result of the opposed and irreconcilable demands of the body and the soul" (p. 4). Amour propre depends on the opinion of others about us and is artificial, while amour de soi meme is natural.

2 We read in the second discourse that reasoning is the first step towards amour propre: "Reason engenders [amour propre], and reflection strengthens it" (Rousseau, 2011, p. 63).

Amour de soi-même is also the child's first sentiment; it is the source of all passions and it is, according to Rousseau, natural to every man. As in the case of the pre-civilized man, amour propre arises when the child extends his relations and starts establishing connections with others – this connection, it must be noted, is associated with the idea that others should have sentiments of duty and preference towards him (Rousseau, 1979, p. 213). The problem with *amour propre*, Rousseau explains in *Émile*, is that it transforms *amour de soi-même*, which then "[ceases] to be an absolute sentiment, [and] becomes pride in great souls, vanity in small ones, and it feeds constantly in all at the expense of their neighbors" (p. 214). This is not natural to the child but it is likely to happen as he transforms into a young man. However, Rousseau tells us, *amour propre* can be good as long as it remains neutral, and also that "it becomes good or bad only by the application made of it and the relations given to it" (Rousseau, 1979, p. 92). Therefore, the role of the governor is to raise a child whose *amour propre* is "tamed" and that remains as close to nature as possible. It is at this point, when *amour propre* springs, that the distinction between the *moi* (self) and *l'autre* (the other) arouses (Starobinski, 1971, p. 42); both the adolescent and the pre-civilized man start making judgments of the outside world and start reflecting on their relationship with others. This relation is, however, one-sided; as the term suggests, *amour propre* is used to relate the *moi* to *l'autre* always in service of the *moi*. Yet, as Starobinski explains, "De cette lutte qui oppose activement l'homme au monde résultera son évolution psychologique" [man's psychological evolution will spring from this conflict that actively opposes man to the world] (p. 41); with this psychological evolution, the development of more complex and reciprocal relationships will come.

Once both the child and the pre-civilized man start expanding their relations, not only is *amour propre* ignited, but other faculties such as reason, memory and imagination are awakened. It is at this point that man finally starts the journey outside himself. Reason and memory

are important but not pivotal for this journey: imagination is. As Mira Morgenstern points out in *Rousseau and the Politics of Ambiguity: Self, Culture and Society* (1996):

> Rousseau does not give us a direct definition of the imagination. Rather, he chooses to describe it in terms of its effects. In all of the instances in which the imagination appears, it possesses the property of transforming the perceived reality of its originator or its surroundings or both. Through these changes the imagination also succeeds in altering precious existing situations. (p. 72)

The first time we encounter imagination is in Rousseau's *Discourse on the Origin of Inequality* (2011), where he explains that imagination is not only a mental faculty that does not speak to savage hearts, but also what "wreaks havoc among nature" (p. 65). It "wreaks havoc" because it is the faculty that not only allows man to connect to others, but it is also the faculty that allows man to *compare* himself to others, and in this, it allows him to step out of himself and his edenic state. Imagination marks the difference between the social man and the savage man. Without imagination, and without *amour propre*, the savage man has no consciousness of his self (*moi*) because there is no reflection about the other (*l'autre*); he cannot imagine what it is to be someone else than himself because he lives for and within himself. Lacking imagination, the savage man lives in a peaceful mental state; he lives in the right *here* and right *now*, and his sole concern is to subsist.

The child, unlike the savage man, does possess imagination; however, in an early stage, his imagination sleeps. "[The child's] imagination is in no way inflamed and never enlargers dangers" (Rousseau, 1979, p. 208), Rousseau writes. He explains that there are two ways in which the child's imagination gets ignited: by nature and by man (p. 215). When the child grows up "under nature's instruction", imagination's awakening is always late and slow, and it comes after the other senses (p. 215). In this case, the senses wake the imagination, and it is

this awakening that Jean-Jacques, the governor, believes is more appropriate. The second way is when the child grows up "under man's instruction" (p. 215). In this case, the awakening of imagination is premature; it comes before the senses and it "gives them a precocious activity which cannot fail to enervate and weaken individuals first and in the long run the species itself" (p. 215).

Though imagination is usually antagonized by its role in the creation of vices and its destruction of man's happiness[3], as Morgenstern explains, it "forms an essential part of man's humanity" (1996, p. 73). In allowing man to compare himself to others, it not only gives rise to vices, but also engenders friendship and sympathy. In *Émile*, Rousseau explains that:

> Every being who has a sense of his relations ought to be affected when these relations are altered, and he imagines, or believes he imagines, others more suitable to his nature. It is the errors of imagination which transform into vices the passions of all limited being (1979, p. 219).

Imagination is then what finally transports man outside himself (p. 223). Once imagination is ignited, man starts bridging and judging himself and his world in comparison to others. This juxtaposition of the *moi* against *l'autre* is not necessarily negative, as seen in the case of *amour propre*. Love, friendship, and sympathy are products of imagination, as they are features of the social man. The three do not only require man to relate *l'autre* to the *moi*, but also to *give* a part of the *moi* in order to reach *l'autre*.

As Allan Bloom (1979) points out in the introduction of the English translation of *Émile*, the use of imagination in the early years of maturity engenders love:

> From imagination thus purified and exalted comes the possibility of Emile's first real relationship with another human being, i.e., a freely chosen enduring union between

3 Imagination transforms passions into vices, permits man to envision what is not, and to desire what he does not possess, which can be detrimental for his morality and happiness.

> equals based upon reciprocal affection and respect, each treating the other as an end in himself. This completes Emile's movement from nature to society, a movement unbroken by alien motives such as fear, vanity, or coercion. (p. 22)

The love produced with the use of imagination is that of man's moral being[4]. In both, the second discourse and *Émile*, Rousseau makes sure to differentiate between *physical* and, what could be called, *moral* love. In the state of nature, there is an ardent passion that precedes love and brings the sexes together. Love for the noble savage is a mere sexual appetite; it is purely physical (Rousseau, 2011, p. 65). With the evolution of man's mental faculties and sentiments, there comes a different way of experiencing love. The moral aspect of love is founded on certain notions of merit and beauty that the savage man does not have, and because he is not able to compare he is not able to fix his desire on a single object (p. 65). In *Émile*, he explains that sexual attraction comes first, and that "time and knowledge are required to make us capable of love", because "[o]ne loves only after having judged [and] one prefers only after having compared" (1979, p. 214). After all, love comes out of reason.

The child, as the savage man, knows no attachments other than those of habit: "He loves his sister as he loves his watch" (p. 219). He possesses nature's ignorance, but nature itself takes care of enlightening the child at the right time. The child loves what helps to preserve his existence; this generates mechanical attachments to people that are later transformed into love. Habit transforms attachments into love (Rousseau, 1979, p. 213). As explained by Rousseau in the second discourse, it also habit that gives rise to the concepts of beauty and pref--erence: that produced feelings of preference" (2011, p. 73). These are important because it isbased on them that moral love develops. As the child starts to relate to others he starts using these judgments of beauty and preference to cultivate the moral side of love.

4 According to Rousseau man has to ways of establishing relations with the world: first, as a physical being, and second as a moral being (Rousseau, 1979, p. 213).

Rousseau in the second discourse, it also habit that gives rise to the concepts of beauty and preference: "People became accustomed to consider different objects and to make comparisons. Imperceptibly they acquired the ideas of merit and beauty that produced feelings of preference" (2011, p. 73). These are important because it is based on them that moral love develops. As the child starts to relate to others he starts using these judgments of beauty and preference to cultivate the moral side of love.

Rousseau also explains that in the early stages, imagination teaches the young man that he has fellows and engenders friendship (1979, p. 220). Rousseau seems to contradict himself when he explains which sentiment came first. At first, he explains that love is the first sentiment to arise, and that from it, friendship springs: "From the need for a mistress is soon born the need for a friend. He who senses how sweet it is to be loved would want to be loved by everyone; and all could not want preference without there being many malcontents" (1979, p. 214). But later on, he suggests that it is friendship and not love the first sentiment the young man experiences: "The first sentiment of which a carefully raised young man is capable is not love; it is friendship. The first act of his nascent imagination is to teach him that he has fellows; and the species affects him before the female sex" (1979, p. 220). Regardless of this discrepancy, it is obvious that both sentiments are interconnected and that both materialize thanks to the intervention of imagination.

With the development of love and friendship, we see a man that is now capable of attachment and reciprocity. Rousseau makes sure to clarify that both moral love and friendship are reciprocal sentiments. Love ought to be returned; he explains:

> Love must be reciprocal. To be loved, one has to make oneself lovable. To be preferred, one has to make oneself more lovable than another, more lovable than every other, at least in the eyes of the beloved object. This is the source of the first glances at one's

> fellows; this is the source of the first comparisons with them; this is the source of emulation, rivalries, and jealousy. A heart full of an overflowing sentiment likes to open itself (1979, p. 214).

Similarly, he states that "attachment can exist without being returned, but friendship never can. It is an exchange, a contract like others, but it is the most sacred of all. The word friend has no correlative other than itself" (p. 233).

Finally, in allowing man to compare himself to the others and to think himself in their place, imagination plays an important role in the arousal of sympathy – or a version of the savage man's pity in the social man. Rousseau explains:

> At sixteen the adolescent knows what it is to suffer, for he has himself suffered. But he hardly knows that other beings suffer too. To see it without feeling it is not to know it; and as I have said a hundred times, the child, not imagining what others feel, knows only his own ills. But when the first development of his senses lights *the fire of imagination*, he begins to feel himself in his fellows, to be moved by their complaints and to suffer from their pains. It is then that the sad picture of suffering humanity ought to bring to his heart the first tenderness it has ever experienced. (p. 222)

Furthermore, he clarifies that to become sensible the child needs to know that "there are him who suffer what he has suffered, who feel the pains he has felt, and that there are others whom he ought to conceive of as able to feel them too" (p. 222). This, however, can only take place once man has stepped outside himself. Sympathy manifests itself in a reciprocal way; for it to arise man needs to identify with the suffering other by putting himself in the place of the other, and suffer as if it was he the one in pain. Rousseau states: "we suffer only so much as we judge that it suffers. It is not in ourselves, it is in him that we suffer. Thus, no one becomes sensitive until his imagination is animated and begins to transport him out of himself" (p. 222

-223).

Thus, imagination appears as the key element in the transition from the *l'homme de la nature* into *l'homme de l'homme*. This transition, which begins with the awakening of *amour propre* is part of every man's life and can come at different times. Once *amour propre* appears, man becomes conscious of the existence of *l'autre*, but it is only with the use of imagination that he can step out of the moi to truly connect with l'autre. "Societies form because of a confluence of selfish interests", Rousseau explains, "but [they] stay together because of the sympathy awakened by their common miseries" (p. 221). Sympathy, as well as love and friendship, can only come with the work of imagination. It is this way of bridging his *self* with *others* that redeems man's sociability and brings the positive qualities of the social man. Imagination is therefore important in a society because it is what transports man (the child/the savage man) outside himself, allowing him to connect to others in a bidirectional way. This "connection", usually followed by judgment and reflection, can generate vices and bad sentiments, but with the help of a good education man can discover how to tame his imagination in order to establish true connections.

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Arthropod Diet Choice In The Boreal Forest

ARE THE HERBIVOROUS ARTHROPODS IN QUEBEC BOREAL FOREST PHYSIOLOGICALLY OR REGIONALLY ADAPTED?

Diana Haider

Key Words

Arthropods, boreal forest, regional adaptation, diet choice, black spruce, white birch, evergreen, broadleaved.

Abstract

Plants-herbivores relations are challenging to study because of their co-evolutionary interactions and the large abundance of polyphagous species. As plants develop resistance to limit herbivory by producing secondary metabolites, herbivores adapt to digest them. Herbivory in homogenous forests is not completely understood and more data is required to better model the ecosystem response to environmental changes. Here, we propose a system to study the diet choice of phytophagous arthropods in the boreal forest of Quebec. We hypothesized that arthropods abundance is different on evergreens and deciduous trees, and more abundant on the deciduous trees because of the more labile foliage. To do so, we sampled by visual survey and shake-cloth technique *Picea mariana* and *Betula papyrifera*. We found that abundance was statistically larger in the evergreen species, proposing that diet selection in the boreal forest may be the result of regional adaptations rather than physiological adaptations to more labile foliage.

Introduction

To avoid competition pressure from grazing on the same high quality food source in homogenous patches, herbivorous arthropods have to partition their available resources by occupying different niches (Schoener, 1971; Southwood et al., 1982). Niche theories predict that species will use different resources to allow for coexistence, decrease competition and promote

ecosystem stability depending on resources availability (Miller et al., 2014). It has been previously shown with communities of parasitoid aphids that resource partitioning results in an increased and more efficient resource consumption (Finke & Snyder 2008). Niche divergence is, although dependent on life history trade-offs, based on nutritional requirements and physiological adaptations.

Heterotrophic organisms maximize their resources use with species-specific evolutionary adaptations (Charnov & Stephens, 1988; Holling, 1992). Just as predicted by classical foraging work, the most cost-effective trade-off will be selected for and passed on in a transgenerational fashion. Whether it's cooperation, cheating, or specialization, individuals able to maximize energy intake will have a fitness advantage over their conspecifics (Schoener, 1971). Notably, the most profitable diet choice in insects has been modeled as being dependent on the proportion of available, suitable, and unsuitable food sources (Levins & Macarthur 1969). As an example, parasitic wasps (Charnov & Stephens 1988) and grasshoppers' (Joern 1979) life history models show that they have situation-specific trade-offs for their host selection to maximize their fitness benefit. All in all, eco-evolutionary adaptations among arthropods for diet selection are dependent on the habitat and they will shape the communities' functional diversity.

Derived from the optimal foraging theory, the physiology efficiency hypothesis states that phytophagous insects will physiologically adapt to graze on high-quality vegetation, i.e. more nutritious and less fibrous (Coley, 1983; Singer, 2001). The diversity of feeding patterns of phytophagous arthropods ranges from highly specialized to polyphagous species (Kennedy et al. 1984; Bernays & Graham 1988). Although, monophagous species with high affinity to their food sources are rare in comparison to polyphagous species which can adapt to a larger diversity of chemically different host species (Jactel & Brockerhoff 2007). Notably, the evolu-

tionary arm's race of chemical or physical co-evolution between hosts and herbivores is driving the host-plant specificity (Bernays & Graham, 1988). However, it was shown that food choice in many species is different along environmental clines, implying the role of local effects on diet choice (Fox & Morrow 1981). More specifically, the knowledge on diet selection of herbivorous arthropods in the boreal forest is premature and there is still no consensus on the relationship between the different trophic levels at the local scale (Sobek et al., 2009).

Boreal forests are dominated with conifers and few deciduous trees can survive the dry and cold environments. Evergreens are generally more shade tolerant and have a slower growth than most deciduous trees (Hoddinott & Scott, 1996; Gauthier et al., 2000). As such, evergreens and deciduous trees have different chemical composition and it has been found to influence the gamma diversity of herbivorous invertebrates feeding on them (Southwood et al., 1982; Kennedy et al., 1984; Ozanne, 1996). To reduce herbivory when growth is limited by biotic factors such as temperature, plants will modify their carbon-based secondary-metabolites (CBSM) content in needles, leaves and phloem (Cooper & Smith 1985; Wink 2003). CBSM are produced by organisms, but are not used for primary metabolism such as for cell growth and division. Rather, in primary producers, they would have evolved for protection against herbivory. To reduce their palatability to insects, plants produce high levels of CBSM, such as hydrolysable tannins among others. Hydrolysable tannins are phenolic compounds that have been hypothesized to inactivate digestive enzymes of herbivorous insects. As a result, plants with a lower level of phenolic and polyphenolics will be preferred by herbivores since it reduces the cost of digestion (Bennett et al., 1994). It has been shown that oak trees, for example, seasonally allocate different concentrations of CBSM depending on temperature to limit herbivory by moth oaks when growth is limited by cold temperatures (Feeny 1968). As a result, moth oaks will shift their diet during winter when oaks growth becomes limited.

In this article, we studied the abundance of arthropods in Quebec's highly homogenous coniferous forest. It is predominantly composed of Picea mariana, covering around 75% of the forest, and the most abundant broadleaf tree is *Betula papyrifera* (Gauthier et al., 2000; Harper et al., 2002). Limited by harsh environmental conditions, *Picea mariana* compensate for its slower growth by increasing the CBSM composition of its needles to limit herbivory. As a result, Picea mariana is less palatable than the fast-grower *Betula papyrifera* (Nykänen & Koricheva, 2004). We examined levels of herbivory by two sampling techniques on both trees to explore the underlying mechanisms of food choice by arthropods in the boreal forest. We also wanted to answer whether the small forest coverage of broadleaf trees has a higher diversity of herbivorous arthropods in contrast to coniferous trees because of its more labile leaves and phloem. Due to the unpalatability of evergreen foliage, we hypothesized that arthropod abundance should be higher in the deciduous species.

Material and Methods

Site Description:

Sampling was performed in the Montmorency Teaching and Research Forest, located at the north of the city of Quebec (47°13' and 47°22'N, and 71°05' and 71°11'W). Quebec coniferous boreal forests are characterized by the domination of Picea mariana and moss (Gauthier et al., 2000). The ecoregion also comprises the mixed-wood species Abies balsamea and Betula papyrifera, which dominate the southern area of Quebec's boreal forests. Because of their high predominance in the forest, the most abundant evergreen *Picea mariana*, and deciduous tree *Betula papyrifera* were sampled for the comparative study. Precipitations are highest during summer, reaching an average of 118mm in August with temperatures averaging 17°C. On the first sampling day, the study area temperature was of 19°C with a sunny sky. On the second sampling day, the temperatures averaged 22°C with rain. As shown previously,

the weather does affect arthropods abundance, but the sampling period could not be changed (Harris et al., 1972).

Field sampling:

During the summer of 2018 over August 31st and September 1st, arthropods were sampled using two sampling methods on *Picea mariana* and *Betula papyrifera*. Each tree was examined by visual survey, then by the shake-cloth method. The sampling methods have been shown to be effective when no power or fuel is available, and for comparing relative densities (Basset et al., 1997). Trees were selected as a function of size, sun exposition and accessibility. All sampled trees had a diameter at breast height (dbh) smaller than 30cm, with tree height smaller than 2m. Tree size was controlled to facilitate the beating of the tree and because tree size has been shown to influence the arthropod count (Herbert & Harper 1983). Sun exposition has been previously shown to influence the allocation of CBSM in trees (Koricheva et al. 1998; Nykänen & Koricheva, 2004). As such, all sampled trees were roadside trees. The absence of a relationship between the side of the road and arthropod count was confirmed statistically ($F = 0.759$, d.f. = 1, 29, $P = 0.391$; Figure S2). Roadside trees were also selected because they are more easily accessible.

A total of 30 trees were sampled, comprising 15 *Picea mariana* and 15 *Betula papyrifera*. The samples were taken following the hiking trail around Lac Piché (Figure S1). Trees distanced by at least 10m were sampled. The distance between the trees ensure the samples do not overlap and are independent, and minimizes the variation due to different distribution patterns and disturbances caused by the sampling (Herbert & Harper, 1983).

The searching time by visual survey for each tree was 5 minutes. The bark, leaves and branches were randomly inspected. Each arthropod seen was counted and aspired in empty laboratory plastic vials. Following the visual survey, a 150x200 cm white cloth was placed un-

der each tree and it was shaken and beaten 10 times by a wood stick on the trunk by the same observer (Amalin et al., 2001). The arthropods collected from both methods were aspired in the same plastic vial.

All vials were identified, and transported to the laboratory. Each vial was frozen, then filled with 70% ethanol for identification and counting. Arthropods were separated by functional groups, morph species and further identified down to families, except for Araneae and Acarus. Catches were further preserved in ethanol.

Statistical Analysis:

To test whether the dominant coniferous species in the Quebec boreal forest Picea mariana has a different micro fauna inhabiting it compared to Betula papyrifera, species richness and abundance were compared with an analysis of variance (ANOVA) on R. Further, the abundance of herbivores and predators was compared using another ANOVA. The data was checked for normality and homoscedascity with the Levene test before computing the ANOVA.

Results

Our analysis showed that arthropods are more abundant in *Picea mariana* than in *Betula papyrifera*. Among the 437 arthropods sampled, 13 orders, 26 families along with 71 morph species were identified. The most abundant genus sampled was *Dicranocentrus* (Collembola, Entomobryidae), sampled 181 times among both trees. Spiders were sampled 111 times, and were the second most abundant order sampled, after Collembola.

Arthropods were 2.2 fold more abundant on black spruces than on white birches (Fig. 1). According to this data, the two tree species have significantly different arthropods abundance inhabiting them (F = 5.917, d.f. = 1, 28, P = 0.0216). Richness was also compared among the two species, but was not found significantly different at both the morph species and family levels (morph species: F = 0.609, d.f. = 1, 28, P = 0.442; family: F = 1.504, d.f. =

1, 28, P = 0.23). Among the 26 families sampled, 10 were only found in birches, and only 4 were specific to spruces. The remaining 12 families were common to both trees. Because of the difference at the abundance level, but not at the richness, additional variables were tested to confirm the difference in both tree species.

To describe the functional communities of arthropods sampled on both trees, two consecutive ANOVAs tested for the difference in abundance of herbivores and predators present on the two tree species (Fig. 2). We did not test for the difference in decomposers presence because we did not sample arthropods from the leaf litter, but specifically on the foliage and bark of the trees and we were interested in herbivores. The abundance of herbivores is statistically different in *Picea mariana* and *Betula papyrifera* (F = 6.055, d.f. = 1,28, P = 0.0203). However, the same statistical procedure conducted to compare the abundance of predators concluded that there was no difference in the abundance of predators in both trees (F = 0.589, d.f. = 1,28, P = 0.539).

Discussion

The present study provides evidence on the regional distribution of arthropods in the boreal forest of Quebec during summer. Among the dominating *Picea mariana* and deciduous *Betula papyrifera*, arthropods were found to be more abundant in the evergreen species. Surprisingly, the proposed hypothesis based on CBSM content of foliage is rejected, suggesting that other processes must be regulating the diet choice of arthropods in a boreal type of ecosystem.

Just as described previously, the coniferous forest is dominated by a single species, and it differs greatly from temperate climates found at the lower boarder of Quebec's province. The increasing knowledge about boreal forests supports that the typical pyramidal food chain is misleading and that different ecological processes may govern the relationships between the

trophic levels (Ghent, 1958; Jactel & Brockerhoff, 2007). Previous studies found that coniferous species are more affected by herbivory when they are dominating the forest, in contrast to temperate forests where they are less common.

Although abundance was found to be different between the two tree species, richness patterns were not. Similar patterns of richness suggest that both trees are labile to arthropods since they attract the same average number of species. However, the patterns may be a result either of resource availability or a result of differences in sampling efforts or conditions of observations (Gotelli & Colwell, 2001). Just as previously mentioned, weather influences the number of arthropods sampled which may have reduced the robustness of the model since the weather was different on the sampling days. While 12 families were common to both, *Betula papyrifera* was found to have 10 families only feeding on it, compared to 4 specialized to *Picea Mariana*. Despite the small sample size and large variances, this may suggest that more species were monophagous to the optimal food source *Betula papyrifera* in this study. The similarity of the overall richness in both species can then be due to the larger abundance of polyphagous species.

We also found that herbivores were more abundant on *Picea mariana*, suggesting that diet choice in the boreal forest may be suboptimal. The optimal foraging theory predicts that food choice will maximize the benefit/cost associated with the choice. As such, the food with the highest nutrient composition, easiest to digest and easier to find should be the optimal choice. Acknowledging the many factors influencing life history choices such as resource availability, inter- and intra-specific competition, predation pressure and abiotic factors, the cost associated with feeding on broadleaved trees in the boreal forest must overcome the benefits, resulting in a higher abundance of phytophagous arthropods on evergreens. *Betula papyrifera* abundance is 3 to 9 times lower than *Picea mariana* in the coniferous boreal forest (Gauthier

et al. 2000). Therefore, arthropods encounter *Picea mariana* more than they encounter the more labile deciduous trees.

To efficiently predict community changes in ecosystem due to environmental changes, an understanding of the functional traits and mechanisms present in the ecosystem are essential (Bachand et al., 2014; Lavorel et al, 2013). The lack of knowledge on the ecological relationships in the boreal forests make it difficult to model long term effects of global climate change on primary production and herbivory. The boreal forest is subject to habitat loss and fragmentation due to economic interests and the ecosystem resilience will be affected by these changes (Wegge & Rolstad, 2017). The effects of increasing CO_2 levels will promote the migration of cold adapted conifers to move further north, and the temperate forest is predicted to replace the southern boreal forest (Hoddinott & Scott, 1996; Nuland et al,. 2017). Further research should look at transgenerational effects of plant-herbivory interactions and look at complex interactions, beyond a pairwise model, such as a tritrophic model, to better understand diet choice in arthropods.

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Figure Legends

Figure 1. Arthropod abundance across *Betula papyrifera* and *Picea mariana* measured from 30 samples in Quebec's boreal forest. Each box represents the interquartile range. The lower whisker represents the minimum, and the upper whisker is the maximum. Any dot outside the whiskers is an outlier. The dark line in the box is the mean. One star is significance with $p < 0.05$.

Figure 2. Abundance of herbivores and predators across *Betula papyrifera* and *Picea mariana* measured from 30 samples in Quebec's boreal forest. Each box represents the interquartile range. The lower whisker represents the minimum, and the upper whisker is the maximum. Any dot outside the whiskers is an outlier. The dark line in the box is the mean. One star is significant, and n.s. is non-significant result with $p < 0.05$.

Figure S1. Map of the site in Quebec where arthropods were sampled during 31 August and 1 September 2018. The red line indicates the sampling trajectory, and the circled 1 indicates the reception building of the Montmorency Teaching and Research Forest.

Figure S2. Abundance of arthropods sampled measured from 30 samples in Quebec's boreal forest in two sides of the sampling road. Each box represents the interquartile range. The lower whisker represents the minimum, and the upper whisker is the maximum. Any dot outside the whiskers is an outlier. The dark line in the box is the mean, and n.s is a non-significant result with $p < 0.05$.

Figure 1.

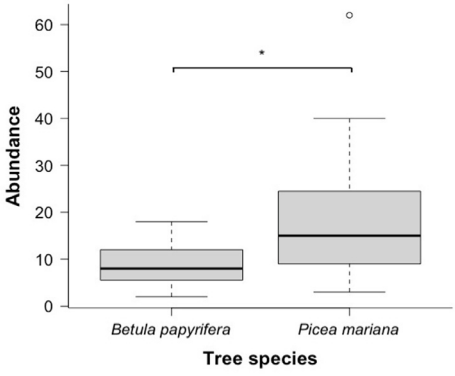
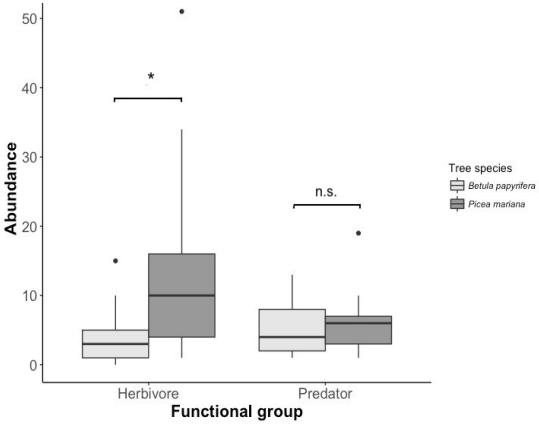


Figure 2.



Annex A Supplementary information

Figure S1

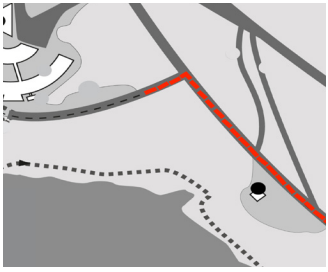
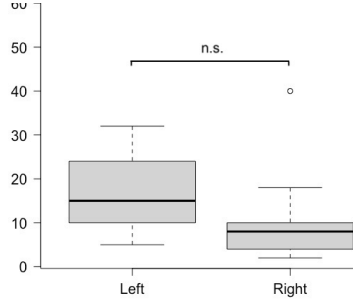


Figure S2.



—THE FOLLOWING ESSAY CONTAINS DISCUSSIONS OF SUICIDE. READER DISCRETION IS ADVISED.—

Between Fantasy and Fallacy: Maternal Suicide as a Pathological Response to the Cultural Contradiction of Motherhood

Alia Nurmohamed

The Limits of a Medicalized "Regime of Truth"

Based on the United Kingdom's Confidential Enquiry into Maternal Deaths, suicide is often cited as the principal cause of maternal death up to one year after pregnancy (Grigoriardis, Wilton, Kurdyak, Rhoes, VonderPorten, Levitt, Cheung, & Vigod, 2017; Oates, 2003a; Oates, 2003b). In Canada, it is the fourth leading cause of death in the postpartum period; and, in Ontario, 1 out of every 19 maternal deaths is due to suicide (Grigoriardis et al., 2017).

Much of the data on maternal suicide is from statistical studies on maternal mortality. In Canada, until 2000, "maternal death" was defined as the death of a woman who is pregnant and up to 42 days after childbirth or the termination of a pregnancy (Grigoriardis et al., 2017). This timeframe coincides with 6-week postpartum check-up new mothers attend to ensure they are physiologically healed after the strain of childbirth. It is when mothers are expected to "feel like themselves" again (HealthLinkBC, n.d.).

After 2000, the definition of maternal death was expanded to include "late maternal death", encompassing women who died after the 42-day postpartum period but within the first year after the end of pregnancy or delivery (Turner, Cyr, Kinch, Kramer, Fair, & Heaman, 2002; Public Health Agency of Canada, 2013). These maternal deaths are further broken down into direct deaths that are caused by physiological issues related to pregnancy and childbirth, such as a pulmonary embolism (Turner et al, 2002); and, indirect deaths from a preexisting condition that are aggravated by pregnancy (Public Health Agency of Canada, 2013). Suicide falls

into the latter category of indirect deaths.

However, the causes of death found in maternal morality statistics are taken from death certificates. In the Canadian context, errors in coding the cause of death have led to a significant under-reporting of maternal mortality and its various triggers (Turner et al., 2002), including suicide. Moreover, the indirect maternal death category, which captures maternal suicide, is criticized for being subjective and is rarely used to classify death even when a physician notes pregnancy as a significant contributing factor on the death certificate (Turner et al., 2002). This indicates the possibility that maternal suicide is an under-reported phenomenon within a generally under-reported maternal mortality. Though rare, perhaps maternal suicide is more common than statistics might suggest.

With high rates of maternal suicides completed by women with a history of mental illness, it is often assumed that suicide and mental illness go hand in hand (Grigoridardis et al., 2017; Bodnar-Deren, Klipstein, Fersh, Shemesh, & Howell, 2016; Patrick, 2013; Oates, 2003a; Oates, 2003b; Frautuschi, Cerulli, & Maine, 1994). This association is deeply entrenched and can be seen from the sheer volume of the available literature that is overwhelmingly epidemiological, medical, psychiatric, and psychological in orientation (Grigoriardis et al., 2017; Bodnar-Deren et al., 2016; Zhong, Gelaye, Miller, Fricchione, Cai, Johnson, Henderson, & Williams, 2016; Mendz-Bustos, Lopez-Castroman, Baca-Garcia, & Ceverino, 2013; Patrick, 2013; Gentile, 2011; Henshaw, 2007; Gentile, 2005; Lindahl, Pearson, & Colpe, 2005; Oates, 2003a; Oates, 2003b; Frautuschi et al., 1994). With rates of major depression among pregnant women in developed countries ranging between 3% and 16% and of up to 33% for mothers in developing nations, there is no doubt that maternal mental health problems pose a significant risk to pregnant and newly childed women (Gentile, 2011). Yet, this valid health concern results in mainly physiological and psychopathological explanations of suicide, obscuring other accounts. The

immense credibility and authority of the scientific and medical communities that backs this assumption has led to a medicalized "regime of truth" (Marsh, 2010, p. 32) about suicide in general, and maternal suicide in particular, that is accepted without hesitation by the general public, mental health professionals, and the medical community.

Yet, not all mothers who take their own lives – within the first year postpartum – have a diagnosed mental disorder. Rather than simply assume these are all cases of mental illness slipping through the cracks of the mental health surveillance system, what if some of these mothers did not have a mental disorder at all? What if they were just mothers who chose to end their lives? Why would they do this and how did they get to the point of suicide? The medicalized regime of truth cannot answer these questions because it does not situate the individual experience within that person's social context. Its reliance on hormones, brain chemistry, and medication cannot account for the meaning mothers may ascribe to their unique and individual act of suicide.

Becoming a mother is more than a merely biological event. Motherhood and maternal identity are relational (Bailey, 1999; Sevon, 2007; Davies & Welch, 1986). This suggests it is possible for mothers, who do not have a mental illness coursing through their bodies, that one's relationship with others, themselves, and larger social discourses can impact their individual action towards suicide. Thus, a sociological approach can be employed to better understand some mothers' actions to take their lives.

This paper will apply the multiple meaning model (Rosenberg, 2018) to maternal suicide. It seeks to explain maternal suicide's unique characteristics while putting the medical and psychopathological model aside. Becoming a mother transforms a woman's identity to encompass the mother role (Bailey, 1999). She goes from being an autonomous individual to suddenly having to live up to gendered expectations of nurturing (Hallstein, 2012). Further-

more, she experiences powerful cultural discourses that simultaneously idealize and denigrate motherhood (Phoenix & Woolett, 1991). How a woman negotiates these contradictory social beliefs (Hays, 1996) can be meaningful to her in more than one way at once (Rosenberg, 2018); and, this mediation can turn pathological, driving her to suicide.

What Is Unique About Maternal Suicide?

To understand maternal suicide as its own phenomenon, it needs to be distinguished from female suicide in general. Beyond occurring in new mothers, maternal suicide's chief characteristic is that it defies gendered differences associated with suicide. Women who are not mothers tend to use less violent means to end their lives than men – most commonly an overdose (Grigoriardis et al., 2017; Henshaw, 2007; Lindahl et al., 2005; Oates, 2003b). On the other hand, mothers who take their lives in first year postpartum tend to use very violent means. The most common methods of maternal suicide are hanging and jumping (Grigoriardis et al., 2017; Lindahl et al., 2005; Oates, 2003a; Oates, 2003b). However, Henshaw (2007) and Lindahl et al. (2005) both reported more dramatic methods including self-incineration, drowning, throat-cutting, and deliberately causing traffic accidents. Henshaw (2007) interpreted the brutality of these methods as an indicator these suicides were driven by psychotic illnesses. While some of these women may have been suffering from mental disorders, it is possible some were not and that mental illness cannot explain all acts of maternal suicide.

Putting Psychopathology Aside: Investigating Motherhood

To move beyond mental illness, which is often treated with medication (Gentile, 2011; Gentile, 2005; Frautschi et al., 1994), as the sole explanation of maternal suicide, motherhood and its impact upon women needs to be investigated.

Childfree Women

Before women are mothers they are perceived as individuals. Second wave feminists

insisted women be seen as equal and independent beings; and childless women started leading lives similar to men, finding liberation in joining the labor force (Hallstein, 2012). With these advances in women's status, contemporary Western women, without children, may have avoided any noticeable form of gendered discrimination (Hallstein, 2012). Individual women are seen as free and autonomous beings. In the public sphere, their lives are equal to men's lives, entrenching the notion that "all feminist battles have been won" (Hallstein, 2012, p. 245). It is when they become mothers that gendered expectations of caregiving are suddenly thrust upon their shoulders (Hallstein, 2012).

Becoming a Mother

Motherhood starts during pregnancy. Pregnant women engage in a host of activities that revolve around pregnancy and childbirth: prenatal classes, antenatal exercise classes, support groups, relaxation routines, and special diets for instance (Bailey, 1999). Expectant mothers also look inward as they think about becoming a mother (Bailey, 1999). Part of this introspection is about the maternal role they will soon undertake. They imagine what their unborn child will be like. They imagine what they will be like as mothers. Thus, pregnancy is a period of maternal fantasies. These fantasies facilitate the development of the mother-child bond; by imagining their future, mothers start to love their unborn child (Lax, 2003).

The fantasy child is often a perfect child; and, the fantasy mother a perfect mother (Lax, 2003). These idealized children and mothers are rooted in the mother's own childhood. It comingles her own childhood experience of being mothered and the cultural beliefs she was exposed to about motherhood (Lax, 2003). Each new mother unconsciously carries this fantasy mother, unique to her, throughout her life (Lax, 2003). She imagines, when she becomes a mother, she will not reproduce the "mistakes" of her own mother and her child will make her feel fulfilled and rewarded (Lax, 2003).

Pregnant women report feeling deeply fulfilled during pregnancy and they view their imminent maternity as a sign of personal progress; they are growing up (Bailey, 1999). They feel that pregnancy – the act of becoming a mother – "*raised* your status, it brought you *up*" (Bailey, 1999, p. 339, emphasis in original). In this manner, pregnancy and motherhood are socially and personally valorized. Expectant mothers are embarking on the most important job in the world. During pregnancy, a woman's identity is transformed and motherhood becomes a salient part of her sense of self (Bailey, 1999).

Rosenberg's (2018) multiple meaning model is a general model, described in Figure 1. Combining symbolic interactionism (Mead, 2015), phenomenological sociology (Schutz, 1970), and Weber's (1978) emphasis that meaning is created from interaction and any ensuing tension that, in turn, produces new meanings. The model allows for the individual, the social, or both to be the central sites of meaning an individual may ascribe to an event at any one point in time. Meaning can be made at multiple levels, demonstrating that individuals are reflexive, malleable, and with multiplex identities that correspond to multiple contexts that are simultaneously in play (M. Rosenberg, personal communication, February 21, 2019). The multiple meaning model's five categories are simplifications of the complete interactions described above. They provide a schematic, that become increasingly structural as the model extends outward, and can be active in meaning making at any moment. The five categories are described as follows: 1) the individual in question, 2) significant others are the individual's reference group, 3) community corresponds to the generalized other, 4) societal refers to symbolic others, and 5) wholly other are made up of pure stereotypes (M. Rosenberg, personal communication, February 21, 2019).

Applying the multiple meaning model (Rosenberg, 2018) to a woman's burgeoning sense of motherhood, the individual is of prime significance. Pregnancy is marked by personal

preparation for a new role, the mother role (Lax, 2003; Bailey, 1999). This preparation occurs as an expectant mother turns her gaze inward, through her fantasies of herself as a mother, her unborn child (Lax, 2003), and as she participates in activities about birth and childrearing (Bailey, 1999). Significant others, the community, and the societal do not become insignificant to pregnant women; but, these women are focused on how they "*practise* their pregnant selves" (Bailey, 1999, p. 343, emphasis in original) to become the mothers they wish to be. As the model radiates outwards, its more social elements become less prominent in the meaning expectant mothers attribute to their coming motherhood. In this manner, significant others are less significant than the individual; but, more significant than the community and so on. Pregnancy is about self-transformation, from a woman to a mother; and, these changes are occurring at the level of the individual and the relationship with the self.

The "Good Mother" Ideal

Once a woman gives birth she no longer prepares and practices for the mother role. She enacts it. While the fantasy mother for each woman is different, all women, with or without children, are subject to powerful cultural notions of motherhood steeped in ideals of femininity and womanhood. In Western society, mothers are socially portrayed and perceived as completely altruistic: they are endlessly patient, tender, loving, always available to their children, and only ever feel joy in motherhood. It is a Madonna archetype that radiates love, depicting mothers as "natural" primary caregivers by virtue of their biological capabilities (Rich, 1986; O'Reilly, 2014; Phoenix & Woolett, 1991). This social attitude about mothers is relayed to women, and men, from childhood. It culturally shapes the fantasy mother in pregnancy (Lax, 2003) and it represents a socially expected standard of behaviors (Parker, 2009) that women with children feel they must strive to meet (Rich, 1986; Hays, 1996; O'Reilly, 2014).

Yet, the "good mother" ideal is very one-dimensional: love without hate, patience with-

out irritation, bliss without despair. It is an impossible standard to live up to (Rich, 1986; Parker, 2009) that places children at the center of the mother-child relationship. Motherhood is valued insofar as it impacts children; the ideal neglects the maternal experience. Thus, mothers are understood in relation, as objects, to their children (Parker, 2009; Phoenix & Woolett, 1991). If children fail to meet societal expectations, it must be because they suffered some form of incompetent mothering. Consequently, mothers are fully responsible for their children's outcomes (Rich, 1986; Sevon, 2007; O'Reilly, 2014; Phoenix & Woolett, 1991). Such a burden of responsibility, in turn, can lead to maternal blame (Parker, 2009).

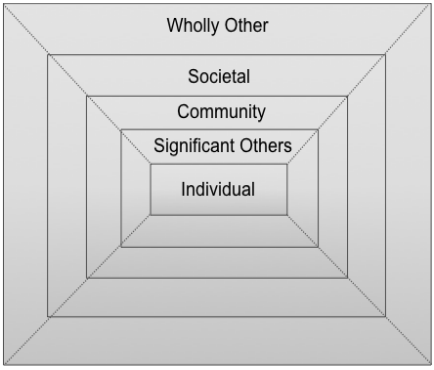


Figure 1. The multiple meaning model. Taken from: Rosenberg, M. 2018. "The multiple eaning model." SOCI 434: Sociology of Suicide. Concordia University. Course Handout.

At the same time that motherhood is romanticized, the tasks of caring for a child are denigrated. The duties of meal preparation, cleaning, laundry, diapers, and age-appropriate stimulation among many others, are seen as easy to accomplish and belonging to the private sphere of the home (Phoenix &Woolet, 1991). In this way, mothers go from being socially esteemed in pregnancy and having their status raised, to being socially devalued and isolated once they start performing the work of childrearing.

In the multiple meaning model, the "good mother" ideal is situated in the realm of the societal. It reflects cultural values and attitudes that shape the social perception and expectations of mothers. These beliefs trickle down through the level of the community and significant others; they infiltrate daily interactions as women navigate everyday motherhood, to eventually inform some mothers' behavior at the individual level. Yet, the "good mother" ideal is most potent at the social, cultural, level. It is the cultural standard mothers must endeavor to meet. They

judge themselves against it (Sevon, 2007); and, it is the bar that significant others and people in their community will compare them to.

The Cultural Contradiction of Motherhood

Once a woman has terminated her pregnancy or given birth, she does not stop thinking of herself as an individual. Her identity is not completely altered; it is transformed to accommodate the mother role (Bailey, 1999). In this manner, she still sees herself as an autonomous, independent woman with her own identity and life. At the same time, mothers are suddenly expected to live up to the "good mother" ideal that portrays them as unfailingly self-sacrificing, putting their children and families above themselves (Hays, 1996). Thus, mothers must confront a paradox, a "cultural contradiction" (Hays, 1996: x): they are both "natural" primary caregivers and individuals with their own lives and identities (Davies & Welch, 1986).

Contemporary mothers try to attain the "good mother" ideal through "intensive mothering" – investing huge amounts of "time, money, and energy" so children flourish and excel (Hays, 1996: x). Effectively, mothers monitor their behaviors against those prescribed by the "good mother" ideal (Sevon, 2007) while striving to meet professional expectations as productive workers – on-call, competitive, and driven (Hays, 1996). This paradoxical arrangement - being valorized in the public sphere and denigrated in the private sphere (Hallstein, 2012) - shapes women's experience of motherhood.

The cultural contradiction of motherhood represents a tension in the multiple meaning model. At the individual level lies the meaning of motherhood, discovered during pregnancy (Lax, 2003) and the reality of enacting the mother role for each individual woman. There is a friction between what kind of mother a woman thought she would be and the identity she has always known before pregnancy; and, she navigates this for herself as her sense of self shifts and transforms with the mothering experience. This internal conflict between a mother and

herself is then negotiated with culturally driven beliefs of what it means to be a mother, transmitted through the "good mother" ideal at the level of the societal. Contemporary mothers must face this paradox in motherhood. This tug of war, between the individual and societal level, is negotiated through a mothers' interactions with the people in her life: those closest to her, the significant others in the multiple meaning model, and the community she is a part of. It is the usual experience of everyday motherhood. But, what of mothers who take their lives?

A Pathological Response to the Cultural Contradiction of Motherhood: Suicide

Mothers who end their lives, they too experience the contradiction of motherhood. However, their experience can take a pathological turn, not one of mental disorder; but, an extreme way of dealing with this constant conflict between the self and romanticized social attitudes about motherhood.

Maternity is accompanied with the internal tension at the individual level of the multiple meaning model, between the fantasy mother (Lax, 2003), the reality of her mother role as it stacks up against the "good mother" ideal, and how motherhood relates to her long-standing identity before children. The fantasy mother is informed by one's own childhood experience and cultural ideals of motherhood (Lax, 2003); such that, a mother internalizes the wider social system of beliefs and attitudes that circulate about motherhood and intertwines it with her own private experience of being nurtured. This is then in conflict with the identity of herself as an independent woman, the identity she has always known. At the point of suicide, the meaning of this internal conflict at the individual level is of prime importance.

As women strive to meet the "good mother" ideal, they inevitably fail (Parker, 2009). This sense of failure can produce feelings of shame and guilt, which are common in motherhood (Parker, 2009, Sutherland, 2010). Guilt and shame are such ubiquitous emotions they are motherhood's most common finding (Sutherland, 2010). Continuous guilt and shame can lead

to feelings of incompetence (Sutherland, 2010) and worthlessness, producing a vicious negative feedback loop. As mothers spiral into shame, they may be unable to express emotions that are deemed socially appropriate (Hochschild, 2012) about mothering, as determined by the ideal. The emotional cauldron of guilt, shame, incompetence, worthlessness, and the struggle to keep up with the "good mother" ideal can bubble into anger: towards the self, towards others, towards society. Anger is an active emotion that can lead to action and, in this case, suicide (Giddens, 1966).

To better understand the meaning of maternal suicide at the level of the individual, Taylor's model of suicidal action (Taylor, 1982) can be applied to the multiple meaning model at the level of the individual (Rosenberg, 2018). According to Taylor, there are four types of suicide. Two are "ectopic" (Taylor, 1982, p. 185), or directed toward the self, and two are "symphysic" (Taylor, 1982, p. 185), or directed towards others.

For mothers who execute ectopic suicides, there are two types. First, "thanatation" that asks the question "Who am I?" (Taylor, 1982, p. 185). Mothers who engage in thanatation would likely experience a loss of self. They would be unable to synthesize their identity before children with their maternal identity and no other person can provide them with this knowledge – it must come from within. Second, is "submissive" suicide (Taylor, 1982, p. 168). These mothers are certain of their desire to die for they already perceive themselves as dead. They may experience an abject hopelessness that nothing they do will change their circumstance. Mothers who die by ectopic suicides are engaging with themselves.

In contrast, mothers who perform symphysic suicides are communicating with others. Like ectopic suicide, there are two forms of symphysic suicide. "Appeal", like thanatation, indicates a sense of "ordeal" these suicidal mothers experience (Taylor, 1982, p. 185). It asks the question "Who are you?" (Taylor, 1982, p. 185), most likely of significant others in the mother's

life, indicating that someone else has made her life difficult to deal with. Mothers who complete appeal suicides may feel that others cannot accept who they are, who they have become. On the other hand, "sacrificial" suicides, like submissive suicides, indicate a sense of purpose these women feel towards ending their lives (Taylor, 1982, p. 186). These mothers may experience that others, most likely significant others, have made their life worthless and not worth living.

Each mother who takes her own life makes the decision alone. Taylor's model helps to explain the individual act of suicide. Embedding it within the multiple meaning model demonstrates how social and cultural factors can affect a mother's relationship with herself, with others that are close to her, and within her community to become problematic to the point of suicide. In this way, individual acts of maternal suicide can be seen as socially informed.

Maternal suicide is largely seen through the lens of the medical community. According to this perspective, the problem is that prevention and surveillance systems are not spotting mothers with mental illness and they cannot get the help they need (Grigoriardis et al, 2017; Patrick, 2013; Oates, 2003a; Oates, 2003b; Gentile, 2011). This point of view denies the possibility that some mothers who take their own lives do not suffer from a mental disorder, that medication will not alleviate their burden, that there is another explanation for their deaths. By applying the multiple meaning model (Rosenberg, 2018), maternal suicide was approached by examining the momentous changes a woman undergoes when she becomes a mother. Investigating motherhood itself led to a socially informed account of maternal suicide, that mothers' negotiation between contradictory meanings of motherhood can become a pathological anger (Giddens, 1966). While significant others and the community can intensify this conflict, relationships can also assuage this contradiction. It is reasonable that mothers' relationships between significant others and the community may also allay this internal tension. Future ave

nues of research could investigate the relationships between mothers, their significant others and community members to tease out a more nuanced understanding of how the contradiction of motherhood is relationally negotiated.

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The Psychedelic Experience: How the '60s Drug Culture Came to Be

Trevor Cross

Take a trip back to the biggest counter-cultural period of the 20th century: the 1960s. The United States was ripe with countercultures; it was a time of beatniks, hippies, and protests against the Vietnam War, for civil rights and for women's liberation. These were often led by young people and were seen as a rebellion of the culture and values of the older generations. This was the era of free love, where people embraced relationships outside of the traditionally heterosexual and monogamous cultural norms. It saw the birth of the Beatle's songs *Come Together,* created for Timothy Leary in 1969, and *Lucy in The Sky with Diamonds* (MacDonald, 2005, p. 314). Drug use, especially of psychedelics, was heavily associated with this era and was celebrated in its popular counterculture. This counterculture of the '60s was a pushback against the era's politically mainstream culture. Today, many foundations of the American political left owe their origins to the counterculture of the '60s; for example, it cemented the importance of the concepts of feminism, pro-environmentalism and pro-civil rights. At the same time, the 2nd psychedelic revolution, prominently in London, England, was occurring. Research, on substances like DMT, LSD and psilocybin, were re-commenced and were becoming popular for academic research (Martin, 2018). From Berkeley's protests for freedom of speech and against the Vietnam War to peaceful bed-ins, the 60's counter-culture was where many of these issues first reached the public consciousness. Counter-culture has the potential to be a major catalyst for cultural change especially if it becomes large enough in reaching mainstream support. The focal subject of this essay will be on the drug culture, specifically psychedelic usage that emerged in this era. The purpose of this essay is to present how academia influenced the counterculture of the '60s, identified as the psychedelic revolution, in three trips: Dr. Albert

Hofmann's chemical research on LSD and *Psilocybe mexicana*, also known as magic mushrooms, the Harvard Psilocybin Project and validating psychologist Dr. Timothy Leary and his colleagues' revolutionary ways at the Millbrook Estate, New York, when psychedelics were still legal. This essay will furthermore discuss how the psychedelic revolution would not have been possible without that specific building. Correlations will be made between one of the most important psychologists of that decade, Dr. Timothy Leary, and his time at Millbrook reflecting his research, experiments, and the religious and spiritual practices using LSD.

The Father of the Psychedelic Age: The Bike Trip

The father of lysergic acid diethylamide, also known as simply acid, is a Swiss chemist named Albert Hofmann. Dr. Hofmann, after graduating from the University of Zurich in chemistry, joined the Sandoz Company's pharmaceutical and chemical research laboratory in Basel, Switzerland. In 1938, he began chemical research that would define the theme of his professional career: the study of ergot alkaloids, derived from a lower fungus (*Claviceps Pupurea*) that grows parasitically on rye called *Secale Cornutum* (Hofmann & Ott, 1979, p. 8). From his research, he created the twenty-fifth substance in a series of lysergic acid derivatives, called lysergic acid diethylamide, abbreviated to LSD-25 for laboratory usage (Hofmann & Ott, 1979, p. 9). Consequently, he believed that he had synthesized a compound that would act like a circulatory and respiratory stimulant; virtually, an analeptic. In the spring of 1943, after research on LSD- 25 continued, Hofmann was synthesizing the LSD-25 compound in the form of a tartrate when was interrupted by a weird sensation. The experienced was documented and reported to his director of chemical research at Sandoz, Professor Stoll. It read:

> Last Friday, April 16, 1943, I was forced to interrupt my work in the laboratory in the middle of the afternoon and proceed home, being affected by a remarkable restlessness, combined with a slight dizziness. At home I lay down and sank into

> a not unpleasant intoxicated like condition, characterized by an extremely stimulated imagination. In a dreamlike state, with eyes closed (I found the daylight to be unpleasantly glaring), I perceived an uninterrupted stream of fantastic pictures, extraordinary shapes with intense, kaleidoscopic play of colours. After some two hours this condition faded away. (Hofmann & Ott, 1979, p. 11)

Hofmann, in his book *LSD, My Problem Child: Reflections on Sacred Drugs, Mysticism, and Science* (1979), described the experience to be most remarkable. The duration of the trip was two hours, after just a small quantity accidentally touched his skin. For Hofmann, this demonstrated LSD potency and invocated curiosity as to dosage potency in the substance. Three days later he experimented on himself with a small dose of 0.25mg LSD tartrate. Hofmann's shortened summary of the experiment goes as follows:

> 4/19/43 16:20: 0.5 cc of 1/2 promil aqueous solution of diethylamide tartrate orally 0.25 mg tartrate. Taken diluted with about 10 cc water. Tasteless. 17:00: Beginning dizziness, feeling of anxiety, visual distortions, symptoms of paralysis, desire to laugh. Supplement of 4/21: Home by bicycle. From 18:00 ca.20:00 most severe crisis. (Hofmann & Ott, 1979, p. 12)

The LSD bike ride that Dr. Albert Hofmann documented in the chapter "Self- Experiments" of his book will be forever famously known by the psychedelic counter-culture as "Bicycle Day". What also inaugurates him as the father of the Psychedelic era is his work with Mexican magic mushrooms known as *Psilocybe mexicana*. In March 1958, Dr. Hofmann published in the journal "Experientia" the results of his experimentation by ingesting 32 dried specimens of *Psilocybe mexicana*, which together weighed 2.4 g:

> Thirty minutes after my taking the mushrooms, the exterior world began to undergo a strange transformation. Everything assumed a Mexican character.... When

> the doctor supervising the experiment bent over me to check my blood pressure, he was transformed into an Aztec priest and I would not have been astonished if he had drawn an obsidian knife... At the peak of the intoxication, about 1 1/2 hours after ingestion of the mushrooms, the rush of interior pictures, mostly abstract motifs rapidly changing in shape and colour, reached such an alarming degree that I feared that I would be torn into this whirlpool of form and colour and would dissolve. After about six hours the dream came to an end. (Hofmann & Ott, 1979, p. 54)

All in all, Dr. Hofmann is accredited also not just for work on LSD but for isolating, concentrating, and transforming a chemically pure state of the magic mushroom. He named the two new derived substances: psilocybin and psilocin. Both come in the form of colourless crystals. Dr. Hofmann's main belief about psychedelics was that their importance, mainly LSD, was centered around the possibility of providing the tools, in form of material aid, to meditation aimed at the mystical experience of a deeper, comprehensive reality (p. 101). These intentions can be seen mirrored in the views of the psychologists who moved in at Millbrook mansion with their following in the mid-1960s. This is what would conversely stimulate the psychedelic movement and drug subculture in later years.

The Academic Psychedelic Warrior's trip

On a sunny afternoon in 1960, in his summer villa in Cuernavaca, Mexico a 39-year-old American Harvard psychotherapist named Timothy Leary ate the sacred psychedelic, meaning mind- manifesting, mushrooms, *Psilocybe mexicana*, he bought from a witch doctor ("Timothy Leary", 1966). In 1966, Leary said, in an interview with Playboy (1966): "I learned more during the six or seven hours after I ate them then I've learned in all my years as a psychologist (Dowling, 1977)." He returned to Harvard in the fall, determined to conduct methodical exper-

iments on psychedelic properties, behavioural manifestations and symptoms of the *Psilocybe mexicana* mushroom. He and his colleague Richard Alpert, who would later become known as Baba Ram Dass, set up the Harvard Psilocybin Project, at 5 Divinity Avenue in Cambridge, Massachusetts ("Drugs and the University", 1963). The purpose of this project was to analyze the effects of psilocybin on human subjects, which was still legal at the time, and to continue the work that Albert Hofmann had commenced at Sandoz Pharmaceuticals. In their first experiment, they gave psilocybin to 175 different people. This sample included writers, housewives, musicians, psychologist, and graduate students. Most of the subjects were male and young with an average age of 29.5 years old. "Over half claimed they had learned a great deal about themselves, and about the same percentage felt that psilocybin had changed their lives for the better; 90 percent wanted to take it again," (Stevens, 1988, p.111). Beat poet Allen Ginsberg, after hearing about the Harvard research project, asked to join in the experimentation with psilocybin. Together, they began a campaign "to turn on", to a virtually discoverable elevated level of consciousness, or introduce other intellectuals and artist to psychedelics (Sirius & Joy, p. 250-252). Leary and Alpert were gaining a lot of attention for the many projects and experimentations with hallucinogens. Within two years, the professors had moved onto LSD trials and research. In 1963, Richard Alpert, Leary's closest colleague in the psilocybin project, was fired from his teaching position at for violating an agreement not to give LSD to an undergraduate. Later, they dismissed Leary for failing to attend an honours program committee meeting. What Harvard was attempting was to "stem the rising tide" of avid undergraduates' interest in psychedelics, which was growing rapidly ("Timothy Leary", 1966). Leary and Alpert, undisturbed by the news, afterwards organized a privately funded research group called International Foundation for Internal Freedom (IFIF) and established the location for experimentation at a hotel in Zihuatanejo, Mexico. IFIF was a grassroots non-profit group whose popularity grew quickly, with

three thousand dues-paying members. Local offices sprang up in Boston, New York, and Los Angeles. The group believed that everyone should be allowed to use mind-expanding chemicals because the "internal freedoms" they provide was a personal matter, not a governmental one (Lee & Shlain, 2001, p. 81). In 1963, after only six weeks (May 1 - June 16), the Mexican government deported Leary promptly after hearing about the large-scale LSD sessions that were going to be taking place.

The Long Trip to Millbrook, New York

In that same year, Timothy Leary accompanied by Richard Alpert and their small band of followers chosen from a pool of thousands of applications from the Zihuatanejo Project, moved to Millbrook, New York. They established a commune devoted to research, experimentation, and the mysticisms of using LSD. This resulted in media attraction that brought forth many to the estate and conversely propelled the drug culture of the '60s to new heights. Their new base of operations was a 64-room mansion, owned by Billy Mellon Hitchcock, located in Duchess County, New York (Blumenthal, 1967). Hitchcock was a wealthy man through his family ties; he was the grandson of William Larimer Hitchcock, the founder of Gulf Oil and the nephew of Andre Mellon, a Pittsburgh financier who served as treasury secretary during Prohibition (Tendler & May, 1984, p. 22). He and Leary were joined together by Hitchcock's sister Peggy Hitchcock, who was the director of IFIF's New York branch. Hitchcock, a stock trader with $15,000-a-week inheritance to spend, offered more than simply moral support to the psychedelic movement. Mr. Billy, as the servants called him, rented the mansion to Leary and his psychedelic clan for only $500 a month. With the newly cemented headquarters at Millbrook, IFIF disbanded and was replaced by the Castalia Foundation, named after the intellectual colony in Herman Hesse's *The Glass Bead Game*.

A core group of approximately thirty men and woman communally lived there. They

were often high on LSD, seeking mystical awareness and aiming for permanent spiritual transformation (Lee & Shlain, 2001, p. 83). The group kept records, compiled statistics, and published articles in their own journal called *The Psychedelic Review*. Ultimately, the group's main intentions were to become an active, educative and regenerative force, an example for others to follow. Leary later wrote: "We saw ourselves as anthropologists from the 21st century inhabiting a time module set somewhere in the dark ages of the 1960s. On this space colony, we were attempting to create a new paganism and a new dedication to life as art," (Lee & Shlain, 2001, p. 63). Leary believed that he was similar to the philosophers of the Scientific Revolution, with the goal of changing the mentality towards hallucinogens in society and in universities. It is in Millbrook that Leary's works on psychedelics were created. For example, *The High Priest* by Leary, first published in 1968, *The Politics of Ecstasy*, in 1968, and *The Psychedelic Experience: Based on the Tibetan Book of the Dead,* published 1964 and co-authored with Richard Alpert and Ralph Metzner (May, 1969). These books spoke about Leary's origins to psychedelics, the self-explorative properties of the human consciousness with LSD and how the practitioners or psychedelic guides should oversee a session and the benefits that LSD can have on the psyche. *The Psychedelic Experience* (1964) advocated for the necessary safeguards when administering LSD for a set and setting practice for psychedelic drug experiences and for recreational use and said that taking the hallucinogen should be strictly for mystic exploration of one's consciousness for a great understanding of their life. Moreover, Leary was further elevated into notoriety due to his two audio long plays (LP) under the same name called "Turn on, Tune in, Drop out"; they were both recorded in Millbrook. Both LPs were different in nature: the one created in 1966 contains only the voice of Dr. Leary delivering a message to the American youth and, in the four tracks, he describes his hallucinogenic trips in Millbrook and formulates a call to action to the youth stipulating that the older generation would not understand the intri-

cacies of psychedelics and how it was the way of the future. In the first LP, he even states that people under 40 should not listen to this recording (Leary, 1966). The second LP, which came out in 1967, was released under the same title. The content, however, was different than the first. It begins with a sitar-heavy psychedelic rock track before launching into a narrative trip by Dr. Leary. The mantra, "turn on, tune in, drop out" was Leary's most famous saying and important for many involved in the drug culture scene. Leary tried to construct his utopian social vision into a reality, methodically using the media to promote LSD, presenting lectures at universities, encouraging prospective supporters to "turn on, tune in, and drop out,". Turning on involved activating "one's neural and genetic equipment, becoming sensitive to the many and various levels of consciousness" (Leary, 1983, p. 253). Tuning in involved "interacting harmoniously with the world around you, externalizing, materializing, and expressing one's new internal perspectives," (Leary, 1983, p. 253). Dropping out involved "detachment from involuntary or unconscious commitments," and favouring "mobility, choice, and change" (Leary, 1983, p. 253).

Sammons, S. (Photograph). (1969). Rosemary Leary, Timothy Leary, Yoko Ono and John Lennon, reading the local paper about their "Bed-In."[photograph].

On September 1966, Leary and his academic circle created a religion called the League of Spiritual Discovery, which Ralph Blumenthal, from the New York Times, described as an "[initial] standing for the hallucinogenic chemical LSD, the use of which was to be a sacrament," (Blumenthal, 1967). In essence, Leary created the religion in response to the U.S. government's Drug Abuse Control Amendments of 1965, which made the unlawful manufacturing of psychedelics a misdemeanour. In consequence, having psychedelics in California and New

York became a crime. From October 7th, 1966, possession of LSD was punishable by a fine of $1000 and up to a year in prison, while the manufacturing of LSD could be punishable by 5 years behind bars (Blumenthal, 1967). Leary's argument was that LSD was a legal sacrament. This was an attempt to mirror the Native American Church, who had been granted legal immunity for peyote (Tendler & May, 1984, p.28). Media attention was ever growing for the group, as seen with the 20-page interview done with Playboy, where Leary preached the virtues of LSD. Additionally, in an interview from *The Realist* in September 1966, Leary answered and dispelled the controversies concerning LSD that are now very popular in the minds of the American youth in relation to "bad tripping". For example, he discussed the myth of LSD overdose, which one cannot physically do; at the time, there was a court case of a man who murdered his mother-in-law and blamed it afterwards on LSD, albeit there was no evidence of this. He also talked about Herman Kahnz's, a military strategist, occasional use of LSD and many more illuminating details about the drug against propaganda and the negative sociological sentiments of media (Krassner, 1966, p. 10). The interviews are relevant because Leary had been given a voice to dispel those controversies that were rising in mass media, seen in T*he New York Times, The Harvard Crimson* and many more journals that discussed personal negative accounts of a youth "bad-tripping" on LSD. Leary, in the Playboy interview, when asked about the risk of the 1% of his subjects "bad tripping" answered: "When men set out for Plymouth in a leaky boat to pursue a new spiritual way of life, of course, they were taking risks" ("Timothy Leary", 1966). This is a notion that Leary postulated many times when asked about the dangers of LSD; his argument would fall along the lines of "the automobile can be dangerous driven by wrong the person". Leary advocated for academic advancement using these drugs as tool for the goals of understanding the mind and advancements in psychology, but had many times warned of the dangers of recreational use.

To conclude, the purpose of this essay is to demonstrate, through facts presented in history, the earliest works and most famous works of LSD and how academia influenced the youth drug culture of the '60s before it became illegal. By contrasting the works of Dr. Albert Hofmann and Timothy Leary, one can surmise that these men were both of noble intentions. Hofmann's argument of psychedelics, that it could provide an important tool to aiding meditation at a mystical experience for a better "comprehensive reality", was ahead of its time. Roughly 25 years later, his words were echoed in academic circles at Harvard University with the Psilocybin Projects conducted by psychologists Timothy Leary and Richard Alpert. These men had a goal after using the magic mushroom compound to "turn on" the political anti-establishment youth of the '60s to explore mysticism and acquire a better understanding of one's own consciousness. From 1963 onwards their plight at communal religious living was important because it was there that most of the academic, experimental and mystical practices using LSD were being conducted. The purpose of Leary's intention was almost like Hofmann's, noble, but much more radical. He believed that, like Hofmann, psychedelics could be used to understand one's consciousness and that voyage into the inner-mind was as important as any academic research being conducted to the time. The Millbrook estate was to the psychedelic as to what Andy Warhol's factory was to art. Leary's media attraction stimulated many debates of the youth subculture and the mass population for the values of psychedelics, which were reflected by *The New York Times, The Harvard Crimson* and later why he became a high profile by the US government's war on drugs. From 1967 onwards, Leary started being jailed for various reasons related to drugs; his sentences, however, did not fit his crimes. The police and government only wanted to silence a man that wanted to "turn on" the world.

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Standing on the Shoulders of Giants: Kanye West, Hip-Hop Sampling, and Benjamin's Aura

Matthew Martino

Sampling, as a music production technique, is often discussed in terms of originality, or lack thereof, and theft. The process in which a portion, or a sample, of one audio recording is repurposed in another recording is a fundamental element of the hip-hop genre, which arrived with the advent of technological reproduction. From the very beginning, rap producers have drawn from vintage jazz, soul, gospel, and R&B records to not only create a sense of familiarity and nostalgia, but to also maintain connections to the Civil Rights and Black Freedom movements of the 1960s and '70s. Kanye West is a pioneer of this technique. His production style, which was dubbed 'chipmunk soul', for borrowing and raising the pitch of soul vocals, has had a profound impact on the rap genre. However, the legitimacy of sampling is constantly called into question. The purpose of this essay is to explore how hip-hop's appropriation of pre-existing material effects the uniqueness and authenticity of the completed artwork. Drawing from Walter Benjamin's seminal essay, "The Work of Art in the Age of Its Technological Reproducibility" (1935), the medium of recorded sound will first be discussed in relation to the loss of aura and the repetition of experience. Then, through the analysis of Dr. Dre's production style and prominent gospel samples in West's "Jesus Walks" (2004), "The Glory" (2007), and "Otis" (2011), this paper will ultimately argue that sampling builds upon and extends the narrative of the original source material in order to create new meanings that are both genuine and idiosyncratic.

Walter Benjamin, a highly influential twentieth-century philosopher and cultural theorist, first introduced the concept of the aura in his text, "The Work of Art in the Age of its Technological Reproducibility" (1935). Written in the wake of cinema becoming a mass medium, Benjamin's

aura is centred on visual mediums such as painting and sculpture. He argues that by replicating an artwork repeatedly, it loses its "aura", or its unique existence within a particular setting, and instead connects with the spectator in any situation and time (Benjamin, 1935, p. 21). He applies this theory exclusively to tangible art objects, describing the authenticity of a "thing" as "ranging from its *physical* [emphasis added] duration to the historical testimony relating to it" (p, 22). However, it can be argued that live music performances, although not perceptible by touch, posses an aura as well; they are distinct and unrepeatable artistic events that occur within a specific space. In many ways, concerts are the epitome of what Benjamin refers to as the "here and now" (p. 21), that underlies a work's authenticity. The fact that these performances are fleeting emphasizes their need to be experienced in real time. If photographing a painting diminishes its aura, a broadcast of a live music performance is less authentic than then the original performance. However, the medium of recorded sound—distinct from a filmed account of a concert—provides the unmatched opportunity for audiences to hear and absorb compositions exactly as they were intended to be heard (Chapman, 2011, p. 249). Owen Chapman, an associate professor in sound production at Concordia University, writes, "recordings, themselves inherently reproducible, nevertheless can possess aura as forms of studio-perfected artistic productions" (2011, p. 245). For Benjamin, the aura can only exist within the completed object, thus a music recording with its optimized frequencies, added compression, mixing, and so on, seeks to produce the same ideal circumstances for assimilation as a finished painting that is framed and encased in glass in a museum.

The ritualized repetition of recorded sound generates new meanings for listeners. Lisa Gitelman, a media historian and communications professor at New York University, refers to this as the "reproducibility of the experience" (2006, p. 67). Not only is the song itself reproduced, but by extension, its assimilation is also repeated. This notion of "continual re-consumption"

(Gitelman, 2006, p. 68) allows the composition to take on a new significance and context as its value now lies in the ability to be heard over and over again. These new aesthetic experiences are created on a mass scale and are distinct from the authenticity of the original work; they "[lift] recordings and allusions out of their historical contexts, resulting in a new aura" (Christopher, 2015, p. 206). Sampling contributes to establishing this new aura as it involves plucking portions of audio recordings from their original works in order to serve as a piece of another much wider musical puzzle. The resulting compositions possess just as much aura as a painting that is created using artificially or industrially manufactured colours and dyes. Exemplified, sample-based music is no different than, for example, Andy Warhol's appropriation of imagery from mass consumerism in *Campbell's Soup Cans* (1962), a series of 32 canvases each depicting one of the canned soup varieties the company offered at the time. There exist many examples of this kind of mass cultural appropriation in the pop art movement of the early-1950s. This demonstrates that employing styles from other contexts does not diminish the work's genuineness (Young, 2006). In this sense, sampling is an extension of the techniques of reference, allusion, paraphrase, and direct quotation in the literature (Christopher, 2015, p. 208).

These new contexts that sampling generates are symbolic as well as geographical. For example, hip-hop artist Dr. Dre's landmark debut album *The Chronic* (1992) was created and mixed specifically for listening in car stereo systems (Williams, 2013, p. 74). Rather than sample directly from a record itself, he would often have live musicians re-record the melodies, beats, or riffs that he wanted and then manipulate those sounds through samplers and synthesizers. This enabled him to add more low-end frequency and "apply dynamic compression (to help drown out road and engine noise during playback)" that occur while driving (Williams, 2013, p. 83). Most importantly, Dr.Dre emphasized synthesizers in his production

in order to suit car subwoofer technology. Available since the early 1980s, subwoofers are large, enclosed speakers that specialize in producing the lower-frequency waves in the sound spectrum, which in turn trigger a more full-body listening experience. This enables the listeners to "feel" the sound (Williams, 2013, p. 76), similar to the stereo systems used in nightclubs. Given that these powerful subwoofers are added accessories that do not come standard with a vehicle, "[t]he high status that an upmarket or customized automobile provides to members of the African American community [...] helps to compensate for the disenfranchisement and propertylessness [sic] experienced in African American history" (Williams, 2013, p. 74-75). Dr. Dre's production reflects how pre-existing musical content becomes repurposed literally and figuratively for a new space: the highly sought-after stereo technology in automobiles and the prestige that they provide for marginalized African American communities.

Much like *The Chronic*, the notable use of samples in Kanye West's debut album *The College Dropout* (2004) received widespread critical acclaim and had profound impacts on the genre as a whole. In songs like "Jesus Walks", West's production borrows heavily from religious music—further reinforced through his lyrics—which would eventually influence in a new wave of spiritual-themed rap artists, including Chance the Rapper and Kendrick Lamar, who similarly explore sin and redemption in their work (Guan, 2016, p. 62). However, unlike Dr. Dre, West uses the human voice as the ultimate instrument. "Jesus Walks" samples the traditional acapella gospel song "Walk with Me" (1997) by the ARC Choir and its pulsating rhythm, which evokes the urgency of a military chant or marching band. West's appropriation of the choir's thundering hymn "fills the entire song to the brim with vocal samples. They become the bass line, the percussion, and the melody" (Caswell and Posner, 2016). In other words, they become the very backbone of the track. Although a reverb-laden drum beat is layered on top of the choir, it is arguably not needed as the belting vocals serve as most, if not all, of the driving pace and

rhythm of the song. This demonstrates how West broadens the narrative and function of the original song. In addition, West incorporates the isolated vocals of singer John Legend but manipulates the R&B singer's voice using Auto-Tune, a computer-generated audio processor, in order to make him sound like an exotic and electronic flute (Caswell and Posner, 2016). Not only is Legend's voice completely unrecognizable, but it is difficult to decipher that this melodic section is, in fact, a human voice. West layers all these vocal samples together in order to effectively re-contextualize them through the blending of genres and by building upon their themes and sonic qualities to create a wholly new, cohesive composition that depicts the hardships of African-American life. Thus, "Jesus Walks" comes to possess a new aura. Its unique existence lies in the distinct intersection of West, the ARC Choir, hip-hop, and religious imagery.

A prime example of the 'chipmunk soul' style that cemented West as a leading figure in rap music can be found in "The Glory", an overlooked track off his third album, the Grammy-winning *Graduation* (2007). The song utilizes two prominent samples: the vocals and main melody from "Save the Country" (1971) by Laura Nyro and the introductory drum break in "Long Red" (1972) by Mountain (Kastrenakes, 2014). Both are recordings of live performances. West's appropriation of elements from these ephemeral artistic events effectively highlights the "here and now" (Benjamin, 1935, p. 21) of the original pieces. He simultaneously uses them to create a new piece that is ubiquitous, reaching the listener in any place and time. This is precisely what West set out to do with *Graduation*, the album considered a major turning point in his career and in hip-hop. Soon after "rappers from the 'bling' era brought the genre from the streets back into the club, Kanye looked to scale it up to arena size," with each song possessing "a sense of magnitude that his earlier work barely hinted at" (Raymer, 2017). Similar to *The Chronic*'s physical relocating of rap music to the automobile, "The Glory" intentionally unifies two pre-existing pieces of live musical performance for a stadium, whereby

a new aura is created through its ephemerality. West stated in a 2007 interview with Rolling Stone that the assimilation of the studio-perfected recordings on *Graduation* was secondary to the recontextualization of those pieces and their existence in the "here and now" (Benjamin, 1935, p. 21). In the same interview, he stated: "[all] those people that bootlegged the album, there's a chance they'll come to the concert, or play the music for their kids, that these songs will connect in different ways. That's more important than sales. My goal is playing stadiums" (as cited in Scaggs, 2007).

Furthermore, in "The Glory," West quite literally builds upon the Nyro sample, which originally consisted of simply the songwriter's voice and piano. He does this by adding lush string orchestration and heavy, layered electronic synthesizers, as well as assembling his own all-male choir, featuring Legend, once again uncredited, to belt out the song's chorus. In addition, while Nyro's lyrics refer to "the glory river" as a deeply religious symbol of compassion, peace, and tolerance, because the song was written in the context of the Vietnam War, West repurposes the term "the glory" to denote material wealth and fame. The lyrics describe in part his rise to mainstream consciousness though his invitation to the Grammy awards, celebrity acquaintances and upscale fashion. This suggests his departure from what Nancy Fraser, one of the most prominent voices in contemporary critical theory and professor at The New School for Social Research in New York, refers to as a "subaltern counterpublic" (1993, p. 14). Hip-hop is in many ways an alternative public sphere through which members of the African American community— a subordinated social group—achieve a sense of identity and empowerment. West uses sample-based hip-hop and "The Glory" as his inclusion into the wider public sphere, once again demonstrating how the appropriation of pre-existing material creates new, authentic meanings and contexts.

In "Otis," the second single off Kanye West and Jay-Z's 2011 collaborative album *Watch the*

Throne, the soul sample is stretched to its very limits. Most of the West-produced track is built around a mere two-second portion of Otis Redding's "Try a Little Tenderness" (1966). The sample contains no lyrics or melody. It consists of a "propulsive sweaty grunt" (Petridis, 2011) and a sharp strike on the electric guitar. This unique repurposing refutes the common criticism that sampling simply aims to capitalize on the nostalgia induced by beloved and well-known compositions to sell more records. While this may be true of certain songs, "Otis" demonstrates that sampling is just as effective when it uses obscure or largely overlooked portions of pre-existing music. This, in turn, alienates audiences from the sentimentality of the original source material. Redding's coarse grunt is looped into a beat, free of synthesizers and electronic production effects that characterized West's earlier work, like "Jesus Walks" or "The Glory". This creates a throbbing rhythm that recontextualizes the original, wistful ballad into a frantic back-and-forth boast between West and Jay-Z. This process of looping, a fundamental element in hip-hop production, "changes the entire sensibility within which this sound is interpreted. [...] When [a recording] is looped, the end of the second chord will lead directly back into the beginning of the first, creating a harmonic relationship —a new chord change— that was never intended by the original composer" (Schloss, 2014, p. 125). It is precisely in this sense that "Otis" and other sample-based compositions possess an aura: they achieve authenticity, a unique existence, through reworking established melodies and chord structures into new sonic relationships that simply did not exist before, and more importantly, can only exist through sampling.

The aesthetics of hip-hop cannot be discussed without talking about sampling. This production technique simultaneously ties the genre to its R&B, jazz, and gospel roots, while also enabling rap artists to defy tradition and thus shape the future of the genre. By analyzing the contemporary practice of hip-hop sampling through the lens of Benjamin's "The Work of Art in the Age of Its Technological Reproducibility" (1935), it is clear that the technique is not

only a legitimate form of musical storytelling but that it enhances the authenticity or uniqueness of the completed artwork. Albums like Dr.Dre's *The Chronic* or compositions like West's "Jesus Walks", "The Glory", and "Otis" possess an aura, which builds upon and extends the narrative of their original source material to generate new meanings and contexts. This can be repurposing religious imagery or physically relocating the genre. Ultimately, sampling revolutionized music production across all styles, enabling artists to quote the past in order to tell authentic and unique stories about the present.

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BIOGRAPHIES

Claudia Lamothe is a third-year co-op student in English to French translation. She joined the editorial board to be a part of student life one last time before she graduates and to collaborate with fellow Arts and Science students. With the experience gained from working on the Journal, she hopes to help promote student initiatives and foster interest in academic writing. She loves puppies, food and the outdoors.

Gabrielle Boyer-Antoni is a second-year Political Science student and seats on the ASFA journal dditorial board as an editor. She is involved in several clubs from her department and is also part of the Stingers Cross-Country team. Gabrielle wishes to continue her studies and pursue a master's degree in security issues, with a focus on the Middle East.

Justine Morin is currently completing her first year as an undergraduate in Political Science with a minor in Human Rights. She is part of the journal's editorial board as an editor. As an avid reader, she has always been interested in writing and is continuously pursuing a deeper understanding of the English language and how it can be best utilized. She aspires to work in international relations or abroad, in crisis zones.

Laurie Weinstein is entering her third year in Studio Art and Biology. While working towards a career in medical illustration, she aspires to use visual art and science as a fulcrum for intersectionality and communication. Being elected as the Creative Director for the Journal was an opportunity for her to not only work alongside an incredibly bright and dedicated team and to indulge in her love of art and science, but also to create a physical platform for students and their discourses. When not painting or sketching, Laurie likes to spend her time hiking, gardening, and watching the original *Star Trek* series.

Michelle Lam is currently a first-year student, studying Communications and Economics. She is an Independent Councillor on the ASFA Council and the Director of Marketing for the ASFA Journal. She is also ASFA's incoming Communications Coordinator for the 2019-2020 term. Michelle joined the Journal Editorial Board because she believes that the work that we, the students, produce should be seen by more than just our professors, and deserve to be celebrated. In her spare time, you can find her sweating it out in a spin class, trying out a new recipe she found, or watching the latest true crime documentary on Netflix.


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