BETWEEN ARTS AND SCIENCE

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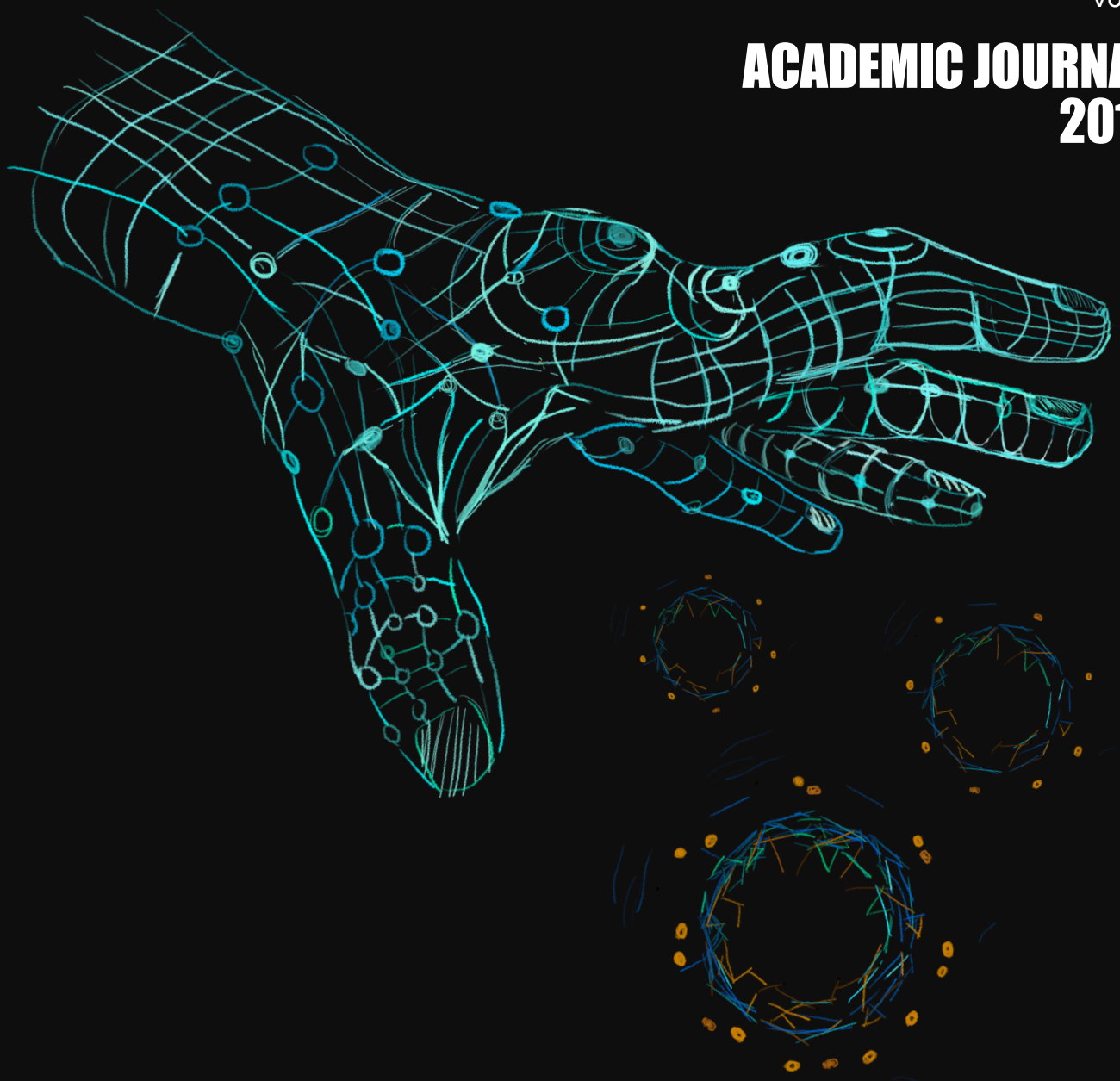

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PREFACE

Between Arts and Science is an Interdisciplinary Academic Journal introduced for the first time last year by Concordia University's Arts & Science Federation of Associations (ASFA). This year's ASFA Academic Committee decided to pursue a second edition, while building on the foundations laid out by our predecessors. The ASFA is one of the largest faculty associations in North America, representing over 20,000 students from over thirty-four departments under the Arts & Science umbrella. As impressive as these numbers are, successfully creating a sense of community is an ambitious challenge, which we have attempted to tackle head on. We believe that by creating one journal that connects the Arts & Sciences, students will be inspired to go beyond their respective domains and see value in interdisciplinary networking.

The journal team consists of sixteen dedicated individuals who worked arduously from the very start of the year to select the best submissions, and create a cohesive final product that would appeal to all readers. The Editorial Board consisted of Department Editors, Copy Editors and Proofreaders, while the Creative Board consisted of Art, Promotion & Advertisement Directors, and a photographer. **Throughout this process, our motto was to build a journal entirely by students for students.**

With this second edition, we aspired to provide young writers with the opportunity to be published, and inspire students to think of innovative ways of connecting the Arts & Sciences, thus creating a stronger sense of community within the faculty.

It was an honour being Editor-in-Chief and I am extremely proud of all the hard work that was dedicated to this project by my team. Following our extensive call-out, we were thrilled with the large volume of papers received from numerous departments within the faculty. After delibera-

tion, eight excellent papers were retained by the Editorial Board to form the following sections: Canadian Colonial History, Science of Sleep, and Diaspora in National Identity.

We hope that Between Arts & Science will see a third edition, and several more in the years to come, and that this project will continue to empower students the way it did for the past two years.

Rachel Rammal
Editor-in-Chief, *Between Arts & Science*
Vice-President of Academic & Loyola Affairs

1 | Canadian Colonial History

Two-Spirited in a Binary World: Indigenous Peoples Challenging Western Dichotomies and Discourses on Race and Sexuality

Taylor Goodleaf

"There is power in this. I get to pick and choose what the prison means to me, float in between the prison bars, return in my mind when and how I want to. We're all cursed to haunt and revisit the people and places that confine us. But when you can pick and choose the terms of that confinement, you, and not your prison, hold the power."
–Anonymous

There is a lack of discussion and a loss of general knowledge of what it means to be "Two-Spirited" in Indigenous cultures, especially in my community of Kahnawà:ke, located on the south shore of Montreal. This paper will argue that Two-Spirited people challenge the Western binary concept of gender. In doing so, they face inter-community and intra-community discrimination, raising the importance of erasing the stigma around the term "Two-Spirited" and promoting a discourse of inclusion and acceptance. Why do we know so little about this topic? My own knowledge of the subject has been very brief and often just the concept of identifying as a Two-Spirited person is widely misunderstood, even amongst Indigenous populations. Questions arise such as; who is allowed to use this term, who determines who is allowed, and how is it different than Lesbian Gay Bisexual Transgender Queer/Questioning (LGBTQ) discourses? To conduct this research, I used a qualitative method in the form of brief and open-ended interviews with five Indigenous people from Kahnawà:ke, whose identities challenge heteronormativity. I aim to understand the extent of their knowledge on this topic and to explore their own experiences in regards to sexual identity based on geographical upbringings and traditional teachings.

The term "Two-Spirited" was coined by Indigenous Peoples who attended the Third Native American/First Nations Gay and Lesbian conference in Winnipeg in 1990 (Cameron, M., 2005, p.203). According to research, traditionally Two-Spirited people were "seen as being neither men nor women, but belonging to genders of their own within cultural systems of multiple genders" (Cameron, M., 2005. p. 201). Many people are drawn to the concept of Two-Spirits because it is seen as a way to reclaim historic gender practices that would otherwise have been forgotten. In some Indigenous cultures, Two-Spirited people could have up to six different genders. Unfortunately, this term is often seen as a subset of other queer categories, instead of seen as culturally specific. For most people who are influenced by Western discourses such as the binary concepts of sexuality, it is very difficult for people to grasp that "the difference

between modern constructs of gay/lesbian/bi is that they are based on sexual orientation, whereas Two-Spiritedness is based on gender orientation […] Gender orientation is not based on physical sex characteristics, but rather on the roles the person chooses to align with" (Cameron, M., 2005, p.201). Consequently, Two-Spiritedness should not be used as simply a synonym for gay or lesbian; there is much more to the concept. Other discourses on sexuality do not meet the needs of Two-Spirited people. As I had previously mentioned, Western binary thinking and Indigenous Ideologies do not mix, because one is an individualistic concept whereas the other is collective. Feminist discourse and other mainstream discourses for example, seek acknowledgement, whereas for Indigenous Two-Spirited people, "the autonomy they experience and seek is the 'non acknowledgement' of their gender and sexuality differences among the possible ways to be a member of the ceremonial complex. By insisting on acknowledgement of differences, one would be seen as individualistic, arrogant or disruptive" (Gilley, B.J., 2009, p.31). I received different feedback from the interviewees in terms of what it means to Two-Spirited. Some people thought it was a synonym for gay/lesbian/trans; others were more informed and knew that there was a difference.

"It often gets confused with gay/lesbian/trans in First Nations (FN) communities, but it means so much more. In FN languages, the concept often translates to "one who is different or special", in that they are not bound by biology, and whose perceptions are not limited by gender. It is the other gender, not just the melding of female and male." (Interviewee #2)

"It's an Indigenous term synonymous with the western term "transgender", and is just as much an umbrella term, as well. I view it as a term reserved for folks of Indigenous descent. From my knowledge, it has roots in several Indigenous cultures, though not necessarily from my own." (Interviewee #4)

"I like the term Two-Spirited, because it defined difference; but feel that many people do not understand the idea behind it. Therefore using the word usually means explaining the meaning. It can be quite tiring. It is an English word that was chosen in an attempt to put the more complex concepts from different Nations together. The English language is not as descriptive as most FN languages. The word often gets confused with other concepts and it continues to use the binary system as a focal point. Not being clear can also be good; as we may be less prone to get stuck in a static frame." (Interviewee #5)

It intrigued me to see such variances in meaning amongst different people - some of the interviewees were Mohawk and from the same community. In much of my research it has become apparent that there is continuing debate over who should be allowed to use this term. Many Indigenous people believe that they hold the exclusive right to use this term because it is culturally specific and acts as vehicle for reclamation of traditional teachings and counter-hegemonic discourse. According to Cameron, "a non-Aboriginal self-labeling as a Two-Spirited person is an example of continuing cultural appropriation by mainstream society. The term has a specific cultural context, and removing it from that context simply because one likes the meaning of it is an act of colonization and must be resisted" (Cameron, M., 2005, p.200). This concept does not fit the dichotomies of the Western World; in fact, it challenges them. To be

Two-Spirited is much too complex to fit into the binary spectrum of neither/nor, either/or. I have seen that the sense of ownership in this term is very strong for the Aboriginal peoples who want to revive this concept, and are very stern when it comes to defending the usage of term. Two-Spiritedness is more than just a modern term of sexuality, it holds power of resistance to colonization for the Indigenous people that use it, and if used by non-aboriginals for mainstream appropriation; then all meaning is lost. I received mixed answers from the interviewees about who should be able to use the term; it seemed that the people who knew more about the historical context of the term were more in favor of limiting it to Indigenous use.

"The concept of the other gender exists beyond Indigenous communities. However, colonizers have appropriated so much of our culture and traditions, that on an emotional level, I reject the idea of non-Indigenous people using the term. This is based on emotions, not rational thought." (Interviewee #2)

"It can be used by everyone, if we all agree it's not a sacred position, which I don't think it is. I think many different kinds of people can be Two-Spirit, if it means simply, having the ability to step away and examine from society and return" (Interviewee #3)

"I do believe this term should only be used by self-identifying indigenous people because it was a term created by us for us. It is relatively new and speaks directly to our worldview." (Interviewee #1)

Even while doing my own research, the documents revealed to be similar to my research, or thought, process. There is very little research on this particular topic, and that may be the reason why this concept is so misunderstood. What is even trickier when researching Indigenous cultures is that most of these Nations, more specifically Mohawks, seldom put cultural and traditional teachings down in written form. This oral tradition forces elders to verbally communicate teachings down to younger generations in the form of stories or legends, but also makes it difficult for scholars like myself to properly cite or give credit when it is due. I found it very interesting that the non-academic documents I was able to find were reproduced knowledge that had originally been passed down verbally, so there was no one to cite. For instance, I had come across a document on gender roles and family that my uncle had given me who happens to be a traditional leader in my community. In the document, there was no mention of Two-Spiritedness anywhere; there were only teachings of men's and women's gender roles and what was expected of each. The fact that Two-Spirited was not mentioned in the document speaks for itself. It is safe to say that historically, with the combination of Christianity, the Residential School System, and colonization, simply excluded much of the teachings of Two-Spiritedness (McCaskill, D., et al. 2011). In the past, there had been many different Indigenous terms for Two-Spirited people, but these terms were lost due to the Christian imposition on many, if not all, Indigenous Nations. Expanding on my findings, "either there is complete silence on the issue, or there is blatant denial and homophobia incorporated in their teachings. This has had the unfortunate effect of generations growing up with no concept of what is historically meant to be Two-Spirited and this has led to the erasure of this history from the collective mindset of the residential school generations, and subsequent generations

thereafter" (Cameron, M., 2005, p.202). Due to the fact that these traditional teachings have not been efficiently passed down and previous generations were were forced to accept Christian ideologies, this Two-Spirited concept is being reintroduced to many Indigenous people as though it is the first time. This may explain why there is much resistance, homophobia, and discrimination associated with feelings of shame and guilt when it comes to Two-Spirited people and others who challenge heteronormativity in Indigenous communities.

One of the main issues when participating in traditional ceremonies and practices is the fact that they usually have very strict gender roles for male and female participants. The following question arises: Where does that leave Two-Spirited people who do not identify with one or the other? When it comes to resisting resistance, Brian Joseph Gilley, a First Nations anthropology professor at Indiana University, discusses the concept of Autonomy when it comes to people who identify as "culturally conservative". He says, "all human beings are animate beings of the universe, therefore every single person is a spirit being where each individual as an autonomous power being has the right to access, partake in, and inform the social community without interference" (Gilley, B.J., 2014, p.19). Cultural conservatives are people who may identify as anything other than heterosexual, yet still want to participate in traditional cultural practices, without really bringing attention to their sexual identity. It seems strange to me that there is discrimination and resistance towards Two-Spirited people and homosexual people in Indigenous cultures where one of the main values present in almost all of these cultures is respect. In his work, Gilley discusses how certain communities are more respectful than others when it comes to acceptance or tolerance of those who challenge heteronormativity, yet it is still a long road of work and patience for those who wish to be fully welcomed into their ceremonial societies. Fortunately, in some places like those of some Arctic and Subarctic communities, human difference is seen as a form of interdependence and "autonomy is expressed by a respect for the individual as a person within a community, as well as a respect for the variability among a community's members" (Gilley, B.J., 2014, p. 21). Historically, most references to Two-Spiritedness were seen as two essences of a person, whether that was male or female, or non-male and non-female; being mixed gender was a form of personhood and was to be respected.

"In an ideal world, gender would not be defined by biology, but rather how you identify. In some nations, there are up to eight different genders identified. I have difficulty with views that see only two genders and only ascribe roles to males and females. I believe that such views are post-colonization" (Interviewee #2)

"These specific "traditional" protocols can be very damaging to transgender and transsexual indigenous people because they are often coming from a cissexist place. For example, saying a "woman" must wear a skirt to enter a sweat lodge but not letting a transman in because he was assigned female at birth is saying that you know what a woman is best. This person may not identify with a skirt. You are not understanding the complexities of gender and examining where these protocols may have originated from that would deny anyone access for not wearing a skirt based on their genitals. Denying access to a person who needs healing because of the gender is violent and colonial." (Interviewee #1)

"I always feel weird in the Longhouse when they encourage women to wear skirts. If I don't feel comfortable doing so in my everyday life, I don't want to 'have to' do it for ceremonial purposes. I still wear pants to every ceremony, because if I cannot feel comfortable going, then I just won't go at all. I can't imagine how much more difficult it would be for someone who is actually transsexual. I think they would feel even more out of sync with the guidelines and expectation that go with the traditional gender roles and expectations in ceremonies." (Interviewee #5)

One of the main topics discussed by Gilley's case study subjects was that the main goals of Culturally Conservative Two-Spirited people were not to reconfigure, disunify, or disrupt ceremonies or social events; the goals of their participation was "continuity, preservation, and cultural commitment" (Gilley, B.J., 2014, p. 28). Gilley had interviewed many Two-Spirited people in terms of ceremonial participation and according to one of them, "certain people at the grounds would object because they would assume that I was working against tradition. But there are people that I know who know me that would support me doing it. Their concern would be that I was doing it the 'right way' and that I knew all of the songs, prayers, traditions […] I'm not called to wear women's clothing, but if a Two-Spirit knew their stuff there are people that would support them no matter what" (Informant Interviewer, Gilley, B.J., 2014, p. 29). Luckily for this person, they dodged potentially prejudicial experience, unlike the story of Rodney "Geeyo" Poucette, who suffered public humiliation at the hands of an elder for wanting to partake in a traditional women's dance (Thompson, B., 2007). Any truly respectful traditional person would agree that for "people or community members to allow sexual ideologies to disrupt the act of being present to one another and of doing the work would act against the principles to which they are committed" (Gilley, B.J., 2014, p. 30). Fortunately, some Nations are more accepting than others and tend to place more emphasis on process over content when it comes to ceremonial participation. Moreover, in the case of an Osage Two-Spirited man who had to get approval from structures of authority to be able to partake in traditional dances, "the process was not meant to approve a male-bodied person to dance as a female, but rather approval comes from a process of ritual and expression of commitment that all dancers, regardless of bodily sex and gender presentation, must go through" (Gilley, B.J., 2014, P.32). Hopefully, other Nations can learn from this situation and allow people to come as they are, as long as they have respect for the ways, and are committed to learning, they should be able to participate.

Indigenous peoples have been subjected to genocide, oppression and other hateful forms of discrimination for the last five hundred years. According to Balestrery, due to this combination, Indigenous peoples, especially Two-Spirited people, have been victims of compounded colonization. This research states that there are three rhetorical strategies to creating an ideological context that supports compounded colonization. Those are Intersecting Logic, Intersecting Labels, and Intersecting Lines (Balestrery, J.E., 2012). These strategies reinforce historical, sexual, racial, and medical logics that are stigmatizing and inferior to the white heterosexual norm. It is stated that "compounded colonization refers to a historical configuration of co-constituting discourses based on cultural and ideological assumptions that invidiously marked a social group with consequential, continuing effects" (Balestrery, J.E., 2012, p.634).

There is an underlying theme that if you do not know or understand your Indigenous traditions and teachings, then you don't understand what it means to be Indigenous; therefore you don't know or understand yourself. This cycle makes it more difficult to resist settler colonization, and creates a push/pull factor, such as leaving small communities and gravitating towards metropolitan areas like Montreal and Toronto, which are more diverse and accepting to those challenging dichotomies. Stigmatization still exists against people who challenge society's gender and sexuaity norms and diverse metropolitan areas are not fully excluded from this. Unfortunately, the product of this cycle results in double discrimination experienced by Two-Spirited people from both their home communities/reserves and from the cities in which they flee to. This lack of understanding and lack of knowledge of traditional teachings from all parties is a huge contributor to the lateral violence, addictions, and mental illness issues that plague Indigenous communities. Examples of intersecting lines and logics are classification systems of socially stratified groups such as "the degenerate savage" and the "pathological homosexual" (Balestrery, J.E., 2012, p.640). These types of intersections promoted by trained world-renowned professionals correlate Two-Spirited Indigenous peoples with "an ideological paradigm of othering, whereby a binary of inferior and superior intersected with abnormal and normal; hence, racial degeneracy intersected with sexual pathology" (Balestrery, J.E., 2012, p.646). Two-Spirited People experience more hardships than others when traditional ways of acceptance have been distorted into homophobia, discrimination, ignorance, and hate due to the feelings of shame, guilt, and wrongfulness associated with the torments of sexual abuse and cultural shaming in Residential Schools.

In conclusion to this research and the interviews conducted, it is fair to say that Two-Spirited is a very complex Indigenous concept that should only be used by and for Indigenous people. In terms of identity, to be Aboriginal and to be Two-Spirited are two inseparable pieces of identity and one cannot exist without the other. There is not one origin-place to which this concept can be accredited to, but it is widely understood that this concept applies to many Indigenous Nations and there are varied meanings and interpretations. Due to the intergenerational trauma that has been inflicted amongst Indigenous peoples through colonization, the Catholic Church, and the Residential School System, Indigenous people have experienced the loss of cultures, loss of traditional teachings, language, and overall loss of identity. As a result of the severe complexities and culturally specific context of the term, no other discourses accurately represent or serve the needs of Two-Spirited people. In order to continue this reclamation of cultural traditions, we must continue to decolonize discourses of race and sexuality, as well as decolonize our educational curriculums. We must continue to challenge Western dichotomies and binary thinking, and educate young people about historical injustices and their detrimental repercussions. We can help the progression of decolonization together by sharing knowledge and histories, and "providing an overview of how some cultures within various Native American nations conceptualize gender and sexuality in ways that differ from Western norms" (Sheppard, M. & Mayo, J.B., 2013, p.260). We must avoid problematic silence on these issues, generate healthy discussion, and create more inclusive community resources and services for Two-Spirited people. By relearning and reclaiming our traditions, we are opening the door to becoming more of who we were, who we are, and who we are supposed to be.

"If we carry inter-generational trauma (and we do), then we also carry inter-generational wisdom. It is in our genes and in our DNA."- Kazu Haga

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The Presence of the Past in the Canadian Museum for Human Rights

Anna Devakos-Hulchanski

A museum media kit can shed light on the museum's own discourse. History, as portrayed by the Canadian Museum for Human Rights (CMHR), is an instrument that can be used to disseminate knowledge about human rights and their importance in the present day. However, there are flaws in the way the CMHR presents the evolution of human rights. In trying to avoid presenting visitors with uncomfortable knowledge that might be disruptive and challenging to their worldview, the CMHR misses an opportunity to use the past to create thought provoking, meaningful learning experiences. [1] The media kit illustrates how the museum renders the past present, but not active, and thus reduces the chances that museum visitors will leave having had a meaningful, educationally enriching time. In doing so, it offers a comfortable – as opposed to a difficult – experience to its guests, which avoids challenging visitors about the connections between the past and present and neutralises the exhibition's impact.

The museum emphasizes its physical location in relation to the past. Its "historical location" is referred to in its mandate, which notes that the museum sits on Treaty One land near the site of the Red River Rebellion. [2] Although the location is considered important enough to warrant repeated references in the media kit and in the mandate, the history of this location is never explained in greater detail and its modern-day relevance is unclear. In emphasizing its location, the museum may be trying to evoke a sense of heritage through location that would link contemporary museum goers to the past in an effective way. The sense that the special surroundings are linked to human rights may be difficult for visitors to discern. [3] The press materials are not helpful, as they do not make clear how the site's past is made present in the new museum.

The museum takes a deterministic approach to the history of human rights. The importance of history is emphasized in the mandate's references to a "human rights inheritance", making it clear that the museum's ideas about the development of "human rights concepts" are rooted in the past, even while human rights are described as "inherent". [4] A constructionist framework guides the historical narrative towards specific themes, in this case progress and the inevitability of human rights. [5] However, this stance ignores the fact that human rights as a discourse is a relatively new and still highly contested idea, with our modern conception of Human Rights forming only after the Second World War. [6] Far from inevitable, human rights are a construction developed in a specific historical context and are inherently political, based in a particular ideology that stemmed from the postwar political collapse. [7] This gives the impression that the museum is itself in some way neutral or natural, above and separate from the historical injustices it seeks to present.

The past is a big part of the CMHR's publicity materials, but it is not portrayed as something that is actively at work in modern life. The Top Ten Reasons to Visit the CMHR notes once again the "historic site" but otherwise focuses on the "unique museum experience", ignoring the link between past and present. [8] The museum is unique in that it is not a museum meant to commemorate atrocities of the past, but rather a museum about human rights in the present day. The word 'memorial' does not appear in the media kit and, as Angela Failler points out, museum executives seem to see memorialization of the past as something backward and regressive, and therefore something that inhibits progress. [9]

The physical presence of memory, usually in the form of objects, is important to the museum, but its presentation is distant and disconnected from the visitor's own lived experiences. The museum refers to the artworks and artefacts as "tangible touchstones that connect visitors to human rights", [10] but Ten Fascinating Objects in the CMHR's listing presents these artefacts using neutral language, with no indication of why they would be important or what they have to say about contemporary human rights. [11] The past is used selectively to teach visitors by emphasizing or omitting specific parts of history to best support the museum's overarching narrative of progress. [12] It is unclear what the museum intends the visitor to learn from the artefacts presented, much less how they are meant to help the visitor take the experiences and memories of others into their own lives. [13] The museum experience is built around this kind of active learning but, at the same time, the information is presented in such a neutral, unemotional way that it is hard to see how visitors would develop connections with the past.

The building itself is a vital part of the experience of a visit to CMHR. Described by the mandate as "architectural symbolism of human rights advancement" leading guests on a "journey", the building is a key part of the museum's promotional materials. [14] In this, it is clear that the museum is not just about human rights but the advancement of human rights. The museum experience is built around the idea of human progress, despite the unpleasantness of the material. Larissa Wodtke links the "spatial aspect" of the building to ideological power in terms of how the building itself shapes the visitors' view of the content presented within. [15] While the building itself may be built to leave visitors feeling like they have been on a journey of advancement, it risks simplifying and generalizing content to the point that is loses its meaning. [16] Wodtke argues that this simplification may be a manifestation of the museum founders' anxiety about attracting tourists to a museum that was initially conceived as a holocaust memorial. [17] The publicity information also omits certain discomforting facts about the building. For example, the serenity pools in the museum's Garden of Contemplation are described as a place to "facilitate peaceful reflection" [18] but these pools use water from Shoal Lake, the creation of which has denied clean drinking water to local indigenous communities. [19] Although this seems like an issue that the CMHR could engage with, it does not; indeed, the media kit contains no reference to Shoal Lake. Addressing this issue would undermine the building's attempt to instill a feeling of hope in visitors, by forcing them to confront the museum's [20] and their own complicity in an ongoing human rights violation.

The visit is seen as a "journey from darkness to light", [21] culminating in the final gallery

called “Inspiring Change” and the Tower of Hope, where visitors are lifted literally and figuratively above the past. In having visitors move from a gallery about mass atrocities called “Breaking the Silence” to one called “Actions Count” the museum underscores the idea of human rights as part of an active betterment of humanity, rather than focusing on the events that lead people to be concerned about human rights. [22] However, this narrative contains hidden contradictions. Erica Lehrer argues that the museum embodies the “same teleological narrative of progress and civilization that has underpinned many genocide regimes as well as being a core driver of Western Imperialism.” [23]

In some ways, the museum leads past visitors stories of human rights abuses, allowing them to avoid examining their own relationship or complicities in this history, or how the abuses of the past are still relevant today. [24] The past is detached from the present, preventing it from being used as a way to cast judgement on modern society. Even a new museum like CMHR is inherently conservative, expecting its visitors to want celebratory stories and, as a government funded institution, wanting to present a conventional narrative. [25] This narrative, which is literally built into the museum, does not allow visitors to refashion narratives so that they can connect to them personally. Experiences that introduce the past as a relevant part of visitors’ present-day lives are transformative for some, but they are also often difficult, emotional, or linked to the visitors’ existing political leanings. It is hard to see how this kind of interaction with history would fit with the CMHR’s focus on lovely history and progress.

This failing is clearly seen in the museum’s dealing with indigenous people and their history. The museum is host to a number of exhibits dealing with indigenous issues, but fails to connect them in a way that allows visitors to understand the impact of the past on the present. The problems facing indigenous people in Canada, such as the deaths of indigenous women, are widely presented as the failings of individuals rather than an expression of the colonial past, and the CMHR does little to correct this narrative. [26]

The museum’s narrative of progress and inevitability seems to result in an unwillingness to engage with current human rights issues. For example, the museum’s frequently mentioned location is also a site for protests, which go unmentioned in the media kit. Even when these protests, such as the 2014 protests over the deaths of Tina Fontaine and Faron Hall, relate to museum exhibits – in this case, missing and murdered aboriginal women – they fail to fit within the narrative of non-partisan advancement. [27] The Turning Points for Humanity gallery is billed as interpreting the 2007 United Nations Declaration on the Rights of Indigenous people, but the portion of the press release dedicated to the museum’s work on indigenous issues does not address [28] the fact that Canada has still not ratified, let alone implemented that declaration; it was accepted in 2010, but only as an “aspirational document”. [29]

The upbeat tone of the press materials seems at times to be at odds with the difficult content of the museum. Visitors are supposed to have fun, positive experiences, and to leave feeling “uplifted” rather than depressed. This emphasis means that the museum must provide a way for visitors to avoid feeling implicated in the events shown in the museum. As indicated by the title of one gallery, Protecting Rights in Canada, the museum seeks to emphasize the

role of Canada in upholding human rights rather than the country's troubled history of human rights abuses. [30]

The state is also protected from questioning, as the media materials distributed by the museum attempt to leave politics out of matters that are inherently political. [31] The total absence of references to the relationship between human rights and politics, never mind the museum's own contentious political history, is telling. It masks how the museum itself has been a site for contestation over the content it exhibits as a government institution dependent on government funding. It is notable that Manitoba Premier elect Brian Pallister will be sworn in at the CMHR in May 2016, having chosen the site because its place as a "physical manifestation" of undefined "Manitoba Values." [32]As a national museum, CMHR is awkwardly placed as a government institution intended to explore an ongoing history of human rights in which the government cannot always be presented in a positive light. This is evident in how issues of colonization and genocide are avoided, and how the museum is willing to tell the story of "the struggle for clean water on reserves" but fails to mention that the water in the museum's contemplation pools [33]comes from a reservoir that prevents the residents of the Shoal Lake reserve from having access to clean water. [34]This emphasizes the conservative nature of the museum, which seems designed to celebrate the status quo rather than be a disruptive, thought-provoking experience for visitors. The unwillingness to take risks leads to uncomfortable silences in cases like the treatment of Shoal Lake. [35]

In failing to actively link the personal to the past, the museum fails to effectively convey the unpleasant but important reality of human rights. [36]While the museum is proud of itsextensive use of oral history, [37] Karen Sharma argues that the focus on individual narratives can undermine the potential for a broader structural analysis of human rights phenomena, particularly when these personal stories are presented in ways that delimit their potential for extrapolation. [38] In doing so, the museum can have a mandate to "enhance the public's understanding of human rights" and encourage "critical engagement" [39] while providing a view of history that fits comfortably with visitors existing knowledge. This may be in part due to the fact that a museum of ideas might seem inherently less objective than a natural history museum, and the fact that the material in the media kit directed towards teachers has to state that "the museum strives to become a trusted source of objective information" reinforces this assumption. [40] The desire to portray history as a series of cohesive facts that convey a consistent message may create the aura of authority, [41] in part because the museum confirms acceptable and conventional forms and images of the state. [42] Consequently, the knowledge that a visitor is supposed to learn from the past is unclear, as the atrocities in the museum are shown as events that we have moved beyond rather than situations to actively engage with in the present day. Even when the museum wants to provide multiple perspectives, it retains authority in the relationship, meaning that the museum presents itself to the visitor as authoritative. [43]

The usefulness of the past to the present is questionable within the museum's collection. The museum's failure to make visitors uncomfortable may mean that the knowledge gained is superficial and impersonal. The CMHR's focus on what Monica Patterson calls "good stories" risks having the information within these stories come off as flat and impersonal, having

obscured the individual differences and intricacies of the history exhibited in the museum. [44] By presenting itself as a "collaborative" dialogue, [45] the museum attempts to distance itself from its role as an "arbitrator of knowledge" and absolves itself of responsibility for the content within its own museum. [46] Collaboration with different groups is emphasized, although it is unclear with what groups, but the museum also seems to be an example of the kind of pitfalls that can come with this method. [47] The media kit seems keenly aware of the museum's difficulties with the competitiveness of public history, making sure to mention different groups, like Ukrainian Canadians or indigenous people [48] that are featured in the museum but without including any real information on these groups. [49]

The problem with a museum of human rights is that the process of human rights development is ongoing and non-linear. The museum's attempts to appear to be neutral and nonpartisan limit its ability to participate in this history, regardless of its mandate to "ignite" a global conversation around human rights. [50] By doing so, the museum can invoke the past but it cannot connect with it in a way that is meaningful or useful. Likewise, despite advertising its location as an "ancestral place" for indigenous people, it fails to mention that a memorial to missing and murdered Aboriginal women is located nearby. [51] This lack of engagement misses a key opportunity to tie the work of the museum into ongoing human rights activism as well as to tie the relevance of human rights to the present day. [52]

Ignoring the politicization of the past helps the museum avoid engaging in current politics but prevents it from attaining a core part of its mandate. The CMHR is about ideas, but these ideas fail to help visitors understand the role that they play in the world of human rights in all but a superficial way. [53] Ignoring how the past relates to the present means that the CMHR misses a chance to highlight the complex, ongoing and non-linear struggle for human rights and fails to make connections between the struggles featured in the museum and contemporary issues. Being a museum that was really an advocate for human rights would require CMHR to take more risks and create more discomfort than the current media kit indicates it is willing to do. Fundamentally, the CMHR misses a chance to impress upon visitors that the human rights struggles portrayed in the museum required risks that made people uncomfortable.

Through the media kit distributed by the CMHR, it is clear how the museum's presentation of the past renders it inactive in the present, in order to avoid an encounter with difficult knowledge. Even if it allows the museum's guests to have more positive experiences, gaining useful knowledge from a past that is presented in this way is difficult. The CMHR's strong commitment to a narrative of progress and its attempts to downplay the contentious nature of human rights underscore this tension. However, this also proffers the past as something humanity has moved beyond, rather than using it to actively inform the present. In severing the past from the present, the museum is unable to effectively make history useful to people of both today and tomorrow.

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The Coercive Sterilization of Indigenous Women in Canada: A Study of the Sexual Sterilization Act in Alberta and British Columbia

Manon Fabre & Eleonore Schreiber

Introduction

The beginning of the 1960s was the Sixties Scoop era, when Indigenous children were placed under the care of non-Indigenous families by the Canadian child welfare authorities. These adoptions were part of a larger context in which the white settler nation aimed to regulate indigenous population rates, and acts such as these adoptions were committed to have control over the reproductive rights of Aboriginal women. Between 1929 to 1972, thousands of women were sterilized without their consent under the Sexual Sterilization Act in Alberta and British Columbia. Amongst these patients, Indigenous women were disproportionately represented, forcing us to question the socio-historical context responsible for this racist application of legislation, and the colonial legacies that may be uncovered in these circumstances.

This paper will argue that the coercive sterilization of Aboriginal women in Canada was a result of the continuation of colonial practices and the Canadian government's ambition to suppress Aboriginal peoples and their cultures. We will note that these proceedings have allowed the state to maintain a colonial grip and undermine the health and integrity of native women. Additionally, sterilization removed Indigenous peoples from their homeland and limited the number of individuals able to claim a title and land rights. This therefore enabled the settler state to limit future Aboriginal right litigation and to terminate the transmission of culture and language.

First, this paper will provide a historical overview of the eugenics ideology that motivated the Sexual Sterilization Act. Next, it will discuss the coercive sterilization that took place as a result of this act, and highlight the overwhelming targeting of Aboriginal women.

Third, it will analyse Aboriginal women's condition within the colonial context, drawing on the concepts of assimilation and eradication, as well as these women frequently being the primary targets of colonial violence. Finally, this paper will touch on the devaluation of Aboriginal women's health in today's medical system and identify it as a more recent consequence of colonialism.

Setting the Stage/ Historical Overview

The term “eugenics” was coined in 1883 by British scientist Francis Galton (Grekul, 2008; Kevles, 2016), and refers to the idea that improvements to human biology is possible through the selective reproduction of the fittest members of the human race. Galton, Charles Darwin’s cousin, (Kevles, 2016) believed that human evolution could be influenced and improved in the same way that plants and crops were being manipulated to produce stronger strains (Grekul, 2008; Kevles, 2016). The belief that “not only physical features but mental and moral capacities were inherited” (Kevles, 2016, p. 45) was deeply entrenched in the eugenics ideology, and these ideas propelled a mainstream movement that would encourage the ‘desirable’ or ‘fit’ members of society to reproduce. In parallel, this belief pushed to have the ‘undesirable’ or ‘unfit’- also referred to as ‘feeble-minded’- institutionalized and in some cases sterilized (Grekul, 2008; Kevles, 2016). In a post-industrial revolution capitalistic West, the eugenicists theories and propositions successfully responded to many states’ concern over the “increasingly high rates of poverty, illness and social problems” (Stote, 2012, p. 118), and provided an alternative to the creation of costly public health measures (Stote, 2012).

Some eugenicists’ efforts were geared towards reproduction and the conception of genetically superior offsprings, exemplified by J.B.S Haldane’s “ectogenesis” theory, that can be considered an IVF predecessor (Kevles, 2016). However, the issue of finding women willing to bear these children in a context where ideas of family and motherhood were built around marriage, monogamy and patrilineage, and where single mothers were frowned upon, was an important roadblock (Kevles, 2016).

Inspired by the eugenics movement, governments in several countries of the Western world implemented laws and policies allowing them to sterilize undesirable members of the population. However, eugenics lost its widespread support after World War II, when the extent of the “social engineering” (Grekul, 2008, p. 248) that had been taking place in Germany confronted the world with the danger and moral limitations of such practices (Kevles, 2016).

Canada was one of the countries that was greatly influenced by eugenics throughout the 20th century which resulted in many eugenics-inspired policies being enacted in both official and non-official capacities across the country. Alberta and British Columbia were the only two provinces to adopt legislations enabling the coercive sterilization of “citizens diagnosed as “mentally ill” or “deficient” for the good of society” (Park & Radford, 1998, p.318). Few remains of the Sexual Sterilization Act of British Columbia have survived the passage of time, except for the Essondale Report, a document compiling 64 cases of sterilization sanctioned under the Act (Stote, 2012). Nonetheless, the Sexual Sterilization Act of Alberta is well documented and scholars have produced extensive research on the subject (Grekul, 2008; Park & Radford, 1998; Stote, 2012), allowing us to investigate it further.

In Alberta, during the early 1900s, the eugenics movement gave legitimacy to groups demanding mental health testing prior to marriage licenses being granted. It also emboldened these groups to campaign for the implementation of regulations that would allow the sexual sterilization of the mentally ‘unsound’ (Grekul, 2008). This campaign received thorough support from the Albertan public, much of which came from women and women’s groups such

as the United Farm Women of Alberta whose president, Margaret Dunn, urged the government to act by arguing, in 1924, that "democracy was never intended for the degenerate" (as cited in Grekul, 2008, p. 250). Similarly, Emily Murphy, the first woman magistrate of the British Empire in the Lethbridge Herald, reportedly claimed that "75 percent of the cause of feeble-mindedness is due to heredity. The other 25 percent may be attributed to alcoholism, social diseases, mental overstrain, training children as mediums, drug addiction, cigarettes […]" (as cited in Grekul, 2008, p. 250). Grekul (2008) explains that women's fervor in promoting such governmental stand stems from "their role as protectors of [the] earth and home" (p. 251), and their reluctance to see the feeble-minded "undo all the hard work and accomplishments of the suffragists, child savers and other activists" (p.251) by lowering the standards of society. The Sexual Sterilization Act was passed in March 1928 (Grekul, 2008), despite the British House of Lords' warning on the illegality of the policy (Park & Radford, 1998). Many 'feeble-minded' Albertan citizens were consequently coercively sterilized under the supervision of the Eugenics Board of Alberta, starting in 1929. This board consisted of a four-person committee in charge of reviewing the files of those considered for sterilization. In the event of the Board members' unanimous agreement, the sterilization could proceed with the consent of the patient or of a next of kin in the case of the patient's mental incapacitation (Grekul, 2008). The Act was amended in 1937 to allow sterilizations to take place without the consent of the patients deemed 'mentally defective' (Stote, 2012) by the board, which led to over 2,800 Albertans being sterilized, "many without their consent or knowledge" (Grekul, 2008, p. 248). These practices thus took place under very few restrictions between 1929 and 1972, when the act was finally repealed (Grekul, 2008).

The study of the files presented to the Eugenics Board of Alberta reveals that women were exceedingly more targeted than men in the sterilization efforts, representing 58 percent of the 2,834 recorded sterilization cases (Grekul, 2008). They were also twice as likely as their male counterparts to be presented to the board, although Alberta's mental institution population during the years of the act presented no such disparity between male and female residents (Grekul, 2008). This disparity exposed the gender discriminatory practices during the sterilization hearing's outcome of which women were particularly targeted. It could be explained by their violation of the norms deemed 'proper' feminine behavior and therefore their consideration as potentially unsuitable mothers (Grekul, 2008). The patient information - "diagnosis, family history, sexual history, criminal record, psychometric test scores, education level, economic history and reason for sterilization of patients" (Grekul, 2008, p.251) - contained in the files invited board members to assess sterilization candidates according to normative gendered expectations, and females were more likely than males to be sterilized "for normative violations which made them risky to themselves or society's moral order" (Grekul, 2008, p. 255). The Eugenics board was therefore a patriarchal agent, "particularly concerned with women and their ability to reproduce" (Stote, 2012, p.119). The socially constructed nature of diagnoses (Grekul, 2008) informing the decisions of the Board led to an overrepresentation of "impoverished and marginalized women and their children" (Stote, 2012, p. 119), as well as many Aboriginal peoples. These targeted efforts not only reflected patriarchal values, but also a will to eliminate individuals "blamed for perpetuating social problems in society" (Stote, 2012, p. 250), and representing a "costly burden" to the state (Stote, 2012, p. 250). Since

these individuals stood at the intersection of two highly marginalized groups, Aboriginal women were disproportionately targeted (Stote, 2012), and the number of sterilizations that their group suffered continually rose throughout the years (Stote, 2012). In fact, native women were sterilized at an increasing rate in the years prior to the abolishment of the Sexual Sterilization Act (Stote, 2012). Furthermore, of all the Aboriginal women operated on in Canada after 1937, more than 77 percent were deemed 'mentally defective', hence removing the need for their informed consent to be given before the operation (Stote, 2012).

This paper therefore highlighted Aboriginal women's overrepresentation in the number of individuals sterilized under the Sexual Sterilization Act in Alberta and British Columbia. This paper has claimed that this act and the policies surrounding it were motivated by eugenics ideals, which in part explain the targeting of Aboriginal women: they were seen as threats to the well-being of Canadian society. Nonetheless, to discuss these proceedings, understanding Canada's colonial past as a driving force in its effort to coercively sterilize Aboriginal women (Fisk & Browne, 2006) is fundamental. Next, this paper will demonstrate the close connection between the coercive sterilization of Aboriginal women and Canadian colonial history.

Aboriginal Women within the Colonial Context

Traditionally, Aboriginal women were responsible for the survival of the community: both through reproduction and the passing down of culture (Kuokkanen, 2008). Upon arrival, the colonizer consequently applied himself to distort and undermine the role of Aboriginal women by introducing a racialized and patriarchal system. For instance, First Nation women were sexually objectified by European settlers, thus justifying the violence and subjugation perpetrated (McClintock, 2013). Additionally, Aboriginal men and women were dehumanized to legitimize the violence enacted as attempts to subdue them in the name of 'civilization' (Razack, 2000). Indigeneity and this colonial history, however, were over the years invisibilized and continue to be falsely represented not only to clear the settler guilt (Razack, 2000), but also to enable the continuation of racist and imperialist knowledge and practices (Smith, 1999). This is illustrated in the drafting of the Indian Act 1876, whose sexist role was key in further oppressing Aboriginal women. New legislation interfered in their private lives, hindering their sexuality, marriage, motherhood, and place in the community (Stevenson, 1998). This apparent sexism arose from the settler's need to establish patriarchal values within Aboriginal communities, as violence and imperialism were rooted in patriarchy and were more efficient in patriarchal environments. The areas of the Indian Act regulating Aboriginal women's right to motherhood were especially relevant in our research, demonstrating the white settler's desire to limit the births of Aboriginal children. Women's reproductive and parenting rights were controlled to monitor native populations and turn them into colored minorities. For example, children needed to be born from an 'Indian' father to inherit the 'Indian' status, and thus be able to make land claims and such. The patriarchal system upon which the policies were based made Aboriginal women the property of Aboriginal men through marriage, effectively removing the agency and credibility they possessed within their traditional belief system. This robbed them of their own individual autonomy and was done in order to facilitate the implementation of the settler state.

Eradication – to exterminate at the roots; to 'pull by the roots' - was a central element of the colonial agenda, which explained the thousands of Indigenous deaths or in other cases their geographical removal through relocation to reserves. The Indian Act, in less overt ways, contributed to the eradication of Aboriginal peoples by allowing the government to reduce the number of individuals considered 'Indian'. As previously mentioned, a central issue that made Aboriginal women targets was their sexuality, which was often portrayed as offensive and promiscuous (Weaver, 2009). Due to the European emphasis on racial purity and the desire to impede native reproduction, native women were regulated and criminalized for their sexual conducts (Dhillon, 2015).

Similarly, Aboriginal assimilation – the imposition of a particular way of life and the destruction of the former – was an important objective during the colonial era. The Indian Act, for example, gave the Canadian government more authority over native lives to carry out its goals of containment, civilization, and assimilation. Aboriginal women were often portrayed as unfit mothers and their children were removed from their care – to later be sold, put up for adoption, or sent off to residential schools – in the hopes of disabling the transmission of culture and language through the separation of the child and mother. Stote writes that "the struggle for reproductive rights for Native American women has always been one of not only being able to have children but also being able to keep them in their custody" (Stote, 2015, p. 234), highlighting the difficulty Aboriginal women had to face in their attempts to both birth and raise children that would ensure the succession of native culture.

Furthermore, the myth of the doomed, disappearing Indian (Francis, 2012) was created and upheld in settler art, writing, and history, to conceal the colonial mechanisms that continued to oppress Aboriginal communities and contributed every day to their eradication and assimilation (Llewellyn, 2002).

This section has therefore examined the practices employed during the colonial era, arguing that Aboriginal peoples were subject to attempts of eradication and assimilation, and that Aboriginal women were especially targeted because of the key role they played in the community's well-being. It is now crucial to consider the survival of these practices through the Sexual Sterilization Act, its implementation and the policies resulting from it.

Coercive Sterilization as a Colonial Practice

In Canada, the Indian Act was the colonial tool which institutionalized the domination of white settlers over the First Nations people. Weaver (2009) writes that "[f]ederal policies have touched nearly every aspect of Indigenous life including the education of children, self-governance, and the determination of which forms of spirituality are acceptable" (p.1553). This paper argues that the targeted sterilization of Aboriginal women that took place in Alberta under the Sexual Sterilization Act was part of a string of policies and practices that aimed to disrupt the pre-colonial "traditional way of life of First Nations peoples" (Weaver, 2009, p. 1554), and participated in a "systematic program of ethnic cleansing" (Weaver, 2009, p. 1554). To view

the sterilizations in their larger colonial context is to allow them to participate in the script of policies that have "constricted Indigenous ways of living in crippling and violent ways" (Weaver, 2009, p.1553).

The Sexual Sterilization Act, as previously described, engendered a relationship dynamic of eradication and assimilation between the Aboriginal peoples and the Canadian state. The benefits of subjugating the Aboriginal populations for the state were economic, social, and territorial. By restricting their autonomy under the threat of sterilization, the Canadian government limited its liability as well as its investment in the reserves and well-being of the Aboriginal population. Maintaining the marginalized status of this group reinforced the "Indian stereotypes" explored earlier, and legitimized the colonizer's actions in the eyes of the country's non-Indigenous inhabitants. Furthermore, restricting reproductive opportunities for Aboriginal women reduced the strength of the future generations of Indigenous peoples communities, and belittled their claims to their ancestral lands.

Although the federal government never adopted measures directly linked to the sterilization legislations taking effect on a provincial level, it did amend the Indian Act in a way that "increased the application of provincial laws to Indians" (Stote, 2012, p. 121). The amendment stated that a "mentally incompetent Indian is to be defined according to the laws of the province in which he resides" (Stote, 2012, p. 121), thus giving Alberta license to coercively sterilize those with mental disabilities, under the Sexual Sterilization Act, without fearing federal remonstrance. The new amendment to the Indian Act also stipulated that an Aboriginal individual would have their land repossessed by either the provincial or federal government once they had been declared mentally disabled, which benefitted Canada's colonial need to control "Aboriginal peoples' land and resources" (Stote, 2012, p,117).

The removal of territory, the establishment of borders, and the limitation of mobility were all colonial tactics employed by the settler state which contributed to the eradication of the Indigenous population and culture in colonized territory. In 1937, the Canadian government, through the Department of Indian Affairs, had voiced the concern that the Sexual Sterilization Act might be viewed as "a conspiracy for the elimination of the race by this means" (Stote, 2012, p.120), recognizing the eradicating character of the high proportion of Aboriginal women in the sterilization procedures. However, the federal government failed to take any formal action to terminate the practices promoted by the Sexual Sterilization Act, effectively failing to uphold the "fiduciary relationship between Canada and Aboriginal people that had been established through treaties and occupation of Aboriginal lands" (Stote, 2012, p.120). By turning a blind eye to the mass sterilization of Aboriginal women, Canada was also ensuring that their fiduciary responsibilities would be reduced over time, as "the break that comes from robbing Aboriginal women of the ability to reproduce cannot be undone, and effectively terminates the legal line of descendants able to claim Aboriginal status" (Stote, 2012, p.139). In terms of eradication practices, sterilization dealt with land rights inherited through the male on the one hand, and with the "control and repression of the sexuality of the female" (Kathleen Jamieson as cited in Stote, 2012, p. 121) on the other. Historical occurrences of violence against women in a context of colonization tell us that the Sexual Sterilization Act was indeed a colonial

practice. An Amnesty International report (2007) stated that "[g]ender-based violence against women by settlers was used in many infamous episodes […] attacks were not random or individual; they were an integral part of conquest and colonization" (as cited in Weaver, 2009, p. 1555).

Assimilating to the British-Canadian society was a way in which Aboriginal women could escape sterilization, as the criteria for the Eugenics Boards was based on a normative and western vision of femininity and motherhood. Aboriginal women had to go against the "sexist and racist notions of womanhood" (Stote, 2012, p.120) perpetuated by the Canadian intellectual elite (Stote, 2012), and accept a subordinate role as an exploited enabler of colonization (Stote, 2012).

Although not all sterilization performed on Aboriginal women under the Sexual Sterilization Act should be assumed to have been performed without the women's permission, unconsenting women were still "[denied] the agency [...] to make choices about their own reproduction and continue[d] the paternalism rampant in past Indian policy" (Stote, 2012, p.138). As long as ancestral rights were not recognized and reparative measures were not put in place by the Canadian government, the Sexual Sterilization Act would remain a form of unspoken colonial violence against Aboriginal peoples (Stote, 2012, p.138).

By combining observations on the historical context of the Sexual Sterilization Act as well as practices of settler violence during the colonial era, this paper has clearly indicated how certain laws and policies of the Canadian state are rooted in colonialism, continuing to support the colonial agenda through attempts to undermine and exterminate Aboriginal populations. As this paper will next examine, this colonial agenda can be uncovered in today's medical system as well.

Devaluation of Aboriginal Women's Health in Today's Medical System

Although the Sexual Sterilization Act was repealed many decades ago, the colonial agenda it promoted still influences Canadian policy making, yielding tangible consequences on Aboriginal women's health. This paper will now explore a few of the struggles Aboriginal women in Canada face when interacting with the current Health Care system, to reveal the power relations and reasons behind the difficulties they are experiencing and expose the pervasive nature of colonialism.

As demonstrated earlier, one of the motives behind the Sexual Sterilization Act was the termination of both Aboriginal peoples and culture in order to prevent too many individuals from making claims of self-determination or claims to the land, which have been proven costly to the Canadian government. Similarly, Indigenous peoples' legal battles with the Canadian government to receive justice from the treatment endured in residential schools, for example, have been costly for the state in compensation fees. Nonetheless, the settler powers in this situation also attempted to avoid these costly legal battles by stalling the plaintiff's payment

and imposing high legal fees (Llewellyn, 2002). In the same way Aboriginal women's health was undermined under the Act because of funding priorities, we can note a continuing discrimination nowadays through the settler state's unwillingness to fund the 'repair' of colonial errors. Similarly, many scholars have highlighted the Canadian public health care system's failure to guarantee efficient care to the Aboriginal populations whose right it is to benefit from it under the 'universal' federal standard (Benoit, Carroll & Chaudhry, 2003). There are severe existing inequalities in health; a clear illustration of this is the current gap in life expectancy between Aboriginal and non-Aboriginal women (Browne & Smye, 2002). This is a manifestation of the complex interplay between political, social, and historical conditions.

Unfortunately, the intersection of Aboriginal women's conditions and its influence on their health issues and access to health care is not discussed or recognized. Not only does the lack of acknowledgment of the impact of Canada's colonial past impede the improvement of First Nation women's health, it also reinforces and conceals neocolonial tendencies in health care (Browne & Smye, 2002).

Furthermore, this leads to the creation of discriminatory discourses that can in turn reinforce negative and colonizing images of native women (Browne & Smye, 2002). For instance, the high occurrence of cervical cancer among Aboriginal women is often explained by their perceived inability to care for their own health by failing to get tested or because of unhealthy 'lifestyles' which supposedly increase their risk of disease (Halseth, 2013). The issue is that describing these women as 'at risk' reasserts colonial ideologies of primitive peoples needing western intervention, and places the blame on the women, once again undermining their roles as mothers and individuals.

In this sense, Aboriginal women are continuously expected to adapt to the mainstream health care system, which can be considered a modern day technique of assimilation. Indeed, although there have been attempts to adapt the dominant system to the needs of Aboriginal communities through targeted programs, the policy continues to be unsuitable and assimilatory. For example, the Vancouver Native Health Society (VNHS) is an Aboriginal administered program focused solely on Aboriginal health. However, patients have raised issues concerning the absence of Aboriginal practitioners, overcrowding (suggesting insufficient funding), and the need for more holistic and traditional healing strategies (Benoit, Carroll & Chaudhry, 2003). These criticisms demonstrate the many concerns that still need to be addressed in building an adapted health care system.

Finally, focusing on the issue of the insufficient number of Indigenous doctors, we can theorize on the harmfulness of the white practitioner and Indigenous patient's relationship. Indeed, the unequal power relations between the Canadian colonial entity and the Aboriginal peoples are well illustrated in this relation, suggesting that nowadays, the context in which reproductive and health options arise, and where Aboriginal women must make choices, continues to be one of colonialism and assimilation, due to the power and influence exerted by the settler doctor as well as all the practical issues aforestated.

In sum, colonial practices can still be seen nowadays in the imposition and inadequateness of the Canadian public health care system in regards to Aboriginal women's needs and the reinforcement of colonial ideologies that stem from this gap, because "the mode of production of Canadian society has been shaped by and depends on a history of colonialism and the control of Indigenous lands and resources by the Canadian state" (Stote, 2015, p. 155).

Conclusion

This paper first examined the history of the eugenics movement, and discussed the crucial role that eugenics ideologies played in the implementation of the Sexual Sterilization Act and its resulting policies. It considered the racial arbitrariness and the consequent overrepresentation of Aboriginal women in the Act's implementation. In hopes of making sense of the oppression to which native women were victim through the Act, this paper looked at Canada's colonial context and observed how women were the principal targets of colonial violence, for example, through techniques of eradication and assimilation. With this in mind, the overrepresentation of Aboriginal women in sterilization practices stems from Canada's colonial heritage. Additionally, the Sexual Sterilization Act benefited the settler state socially, by allowing it to undermine and discredit Aboriginal women and their health, thus maintaining a colonial grip, as well as economically and territorially, by limiting the number of people entitled to 'Indian' status and the application of state-costing special 'Indian' rights. Finally, this paper highlighted the continuation of colonial practices in the current medical system's devaluation of Aboriginal women's health because of funding priorities, a reluctance to recognize the colonial past, the expectation of assimilation and the symbolic and practical relationship between the white practitioner and Aboriginal patient.

To this day, the history of the Sexual Sterilization Act and the systemic abuse faced by Aboriginal women remains difficult to acknowledge for the Canadian state, despite court settlements and public governmental apologies (Grekul, 2008). Indeed, research on these past proceedings is limited because of the lack of access being granted to official records and the overrepresentation of Aboriginal women being omitted from the rare discussions of the Sexual Sterilization Act (Stote, 2015). This showcases a continuous trend in denying the ongoing effects of colonialism, racism, and sexism, by masking the oppression for which the settler state continues to be responsible.

This paper also shed light on the direct link between coercive sterilization and colonial practices, suggesting that colonialism is not a 'thing of the past', but rather continues to be enacted by white settlers on Aboriginal communities. In this way, the Sexual Sterilization Act is merely an example of the multitude of instances in which colonial oppression occurs.

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Moving houses

Paulina Dominguez

In these politically charged times, a story may attempt – as one can only attempt to understand what others have to live through direct experience – to portray a political and social reality, and to provide a new perspective to the events that are taking place. However, in order to best convey humanity through a creative piece, the boundaries that divide it have been erased. For this reason, there is no mention of specific nationalities or ethnic backgrounds throughout the story. Additionally, this piece doesn't draw from a specific event or time in history. What's important is the human experience – real people going through real situations – and the creative perspective used to explore it. As a Mexican trying to find her place in these controversial times, I'm drawn to explore these topics from a distance, focusing on the beauty of human relationships and reality of its struggles without pointing fingers or mentioning specific events that are making a statement in the world today.

The first time my house ran away wasn't so bad. My father had decided to take a walk to the grocery store that afternoon, while my mother got a pedicure and I visited a friend a couple of blocks away. On his way back, a plastic bag hung lazily from his fingers, brimming with groceries for a modest, family dinner, and he was careful not to spill the contents when he halted before a curious empty space between our neighbors' houses. That's where he found me: facing a void, standing on the rim of a house-sized hole. I had come back for a sweater to go with the yellow dress and striped leggings I was wearing and had only found the remnants of the place where my closet had once stood. I was nine.

"It's gone," I said when I saw my father's shadow engulf mine.

The hole reached twenty feet at its deepest and was littered with bricks and chunks of dry cement. Plumbing pipes that had been torn apart protruded from the dirt and made small mud puddles with their useless spitting of water. Window panes had been shattered and the slabs of transparent material that peppered the ground reflected rays of sunlight back at us.

My father grabbed me by the chin and forced me to look up at him. He was three heads taller than me and, as usual, my neck craned awkwardly as I compensated for our height difference. There was a withering sun above us that hurt my eyes and made his facial features stand out as he spoke in a stern voice.

"It'll be okay – you hear me? I'll find it – you understand?"

I blinked hard and nodded. He handed me the groceries before walking back down the road with a strange mix of purpose and idle pursuit. I wasn't the only one to watch him shrink in the distance; neighbors were stopping in the streets and looking out from windows to watch the man with a moving house fetch it again.

When my father came back, the sun had fallen heavy and red on the horizon and I was hiding from it inside the hole. There was a comfortable dry space where I had gathered small evidences of my house's escape – scraps of toilet paper, broken china, stuffed animal limbs, poker cards and an empty pack of cigarettes. I figured I could mention them in the posters I would soon print out by the heaps. Have you seen this house? One kitchen, two bedrooms, three and a half bathrooms. Last seen January 22nd. The following objects were found in the last known whereabouts. Reward offered if found. I was holding what was left of an old photograph of my deceased dog when I felt my father's presence once again. He stuck his hand out, beckoning me closer.

I climbed my way back up and dabbed the dirt off my face with a kitchen towel I had found. "Did you find House?" I asked when I reached the surface.

He nodded. "It's not far from here. I already called your mother."

"What do we do now?"

"We go live in it, of course. Now let's get moving, kiddo – and stay close to me. I've heard things on the news and they aren't pretty."

So I did.

It was my mother that first told me about moving houses. Rumors had been whispered my way before, of course,about the big shingled boxes gone missing when no one was looking. They picked themselves up and changed locations without a brick of decency to leave a note behind saying something along the lines of: To all, just letting you know I'm moving. I'll be right across town, so don't worry. It's closer to work and school –thought you'd appreciate that. Yours truly, your humble House. But rumors could only do so much when stories were being cooked up in my mother's bed. I would lay on the thick duvet next to her – eyes wide and mouth agape – as she spoke between quick sips of coffee from a mug I had given her the previous Christmas. She would stroke my hair with her long, sharp fingernails and talk about people she knew or had heard about crossing oceans to find their houses again.

"Oceans?" I said. "But houses can't really swim, can they?"

"Baby, I've seen houses jumping about the world for as long as I've lived," said my mother. "You'd be surprised what they can do when no one is looking. God knows how they do it, but they do it. You know, I've heard that some of them give out warnings before they leave. People start coming home to find a real mess of things – I'm talking broken dishes and all their stuff spilled on the floor. And that's how they know their house is thinking about running away. But other houses simply (she snapped her fingers) disappear. They're real quiet about it too and from one moment to the next, they're gone off to God knows where. Houses will do whatever pleases them. Did you know they can change sizes? Did you know they can grow an extra

bedroom for a baby brother if they want to?"

"Am I having a baby brother, Mommy?"

She giggled and shrugged her shoulders. "One day – maybe."

It was my mother that first told me about the occasional clues houses left upon departure, small hints here and there for families to follow in the search of the new whereabouts – old family photographs from living rooms strewn over the streets, bread crumbs from kitchens spilled in the woods and countrysides. Sometimes a father would find the runaway house in a newspaper article or a mother would receive a phone call, letting her know it had been found and that she ought to go live in it as soon as possible. It was also my mother that told me about the houses that ran off to places harder to reach, and the crossing of oceans in little orange boats – no, not like the toy ones I used to take a bath with – and the climbing of walls as tall as mountains to get to where they were.

"But walls can't really be as tall as mountains, can they Mommy? Are you just trying to trick me again?"

She laughed. "You think I tell you stories to trick you, baby? Why, you didn't believe me either when I first told you about moving houses! Walls can be as tall as they want to be. If they want to be as tall as mountains, they will be as tall as mountains. Did you know that your auntie had to climb a wall so tall it reached the clouds?"

I turned to the ceiling and tried to picture it. "But didn't auntie know she could fall and die?" I asked.

"Well, of course she knew it was dangerous. But she had to get to the other side, you see. That's where her house had run off to."

I thought about it for a minute. "Hmmm."

"Hmmm what?"

I shrugged. "Oh, I was just thinking about something I heard."

My mother had been leaning against the wooden headboard and a couple of pillows propped up against it, but now she came closer and brought her face inches away from mine. "Uh-huh – what did you hear? Not the news, I hope? I've heard things on the news and they aren't pretty…"

"No, no, just some kids saying that houses are just bricks and cement," I explained, "and

so why bother going to find them?"

"Just bricks and cement, you say?"

I began to shrink under her sharp stare.

"You've been listening a lot to these kids, I see," she went on. "But now you're going to listen to me."

It was my mother that first told me about how she and my father built our house. How they gathered the bricks and poured the cement; how they carpeted the floors, shingled the roofs, dressed up the photo frames, filled up the book shelves, closets and cupboards, and even put a piano in the living room for my father to play. She told me about how they first felt the structure stir under their feet – a small vibration deep in its foundations – and how they knew they had created something, how it too would learn, one day, how to move on its own.

The house did flee a couple of times before I was born, she told me, out of excitement or carefree, young spontaneity. Luckily, it hadn't taken them long to find it again. "Simpler times," she explained, "and we always knew where to look." Then they'd merely fix the splintered wood and replace the shattered windows and go live in it again. Maybe it'll stay this time, they would think to themselves every time. Maybe this is the place. Maybe it'll like it here.

"I thought it liked it here."

I choked on the words as I inhaled smoke. The dirt had been lifted from the ground and now hung in the air around me, turning trees to sand sculptures and buildings in the distance into indistinguishable blurs. I stood in front of the hole in my favorite jeans and a purple shirt. I was eleven.

"I thought it liked it here."

I was alone. Everyone else was probably hiding, choking on their own words and smoke, and begging their houses not to run away like mine had just done. I attempted to find some comfort in thinking: How could it have stayed here? It was obvious my house had been too scared of the sky and the objects heavier than rain that fell down from it, blasting structures one by one in a terrible choreography. I'll take no part of it, it had said, and off it had gone, leaving behind a hole that was slightly bigger than the last, due to the extra bedroom it had grown for the baby boy that would soon pop out of my mother's belly and into the world of strange things that fell from the sky.

My father's piano sheets were strewn on the ground this time. Some of them hovered along an electric breeze that made the hairs on my arms stand on end. I was watching them

dance around with their unheard music when a pair of hands grabbed me by the shoulders and forced me to turn around.

“I thought it liked it here,” I told him.

“Hush now, kiddo,” said my father. He was now only two heads taller than me and the way he leaned closer made me feel I still had a roof over my head. He grabbed me by the arms a little too tight and said: “We better get moving now.”

“It’s gone,” I said.

“I know.”

I looked inside the crater on the ground and caught the sun bouncing off a half-buried, porcelain object. I realized it was a mug I had given my mother for Christmas a couple of years back. When I leaned closer to go and get it, my father pulled me back.

“Not joking,” he said, “we need to go.”

“No.”

“No?”

“I don’t think House likes us anymore, Dad,” I said.

My father was no longer paying attention. At first I thought he had caught sight of his dear music prints wafting away, but then I saw him fumble in his pants pocket for his cellphone.

“Your mother should be here by now.”

“It just left us,” I went on, “and I thought it liked it here.”

“I’ll just call her – see where she is.”

“And sometimes I feel like it’s just –”

“She did say she was coming here.”

“– bricks and cement –”

“God, I hope the baby isn’t coming –”

"– a house, not a home –"

"– not like this, not today –"

"I didn't mean that, I'm sorry!" I cried. It was hard to be heard over the distant booms and thunders that followed, but just as buildings that we couldn't see came crumbling down, my father caught sight of a tear that was falling faster than any of them. He grabbed me by the chin, real hard this time. I didn't have to look up at him because he brought his face to mine.

"Do you want to find House?" he asked.

I nodded.

"Well, we better go look for your mother and get going." He started towards the road and stopped to say one more thing. "It does like it here, kiddo. Just not like this, not right now. It'll want to come back someday, I'm sure of it. But it'll be jumping around for some time."

"I know, Dad."

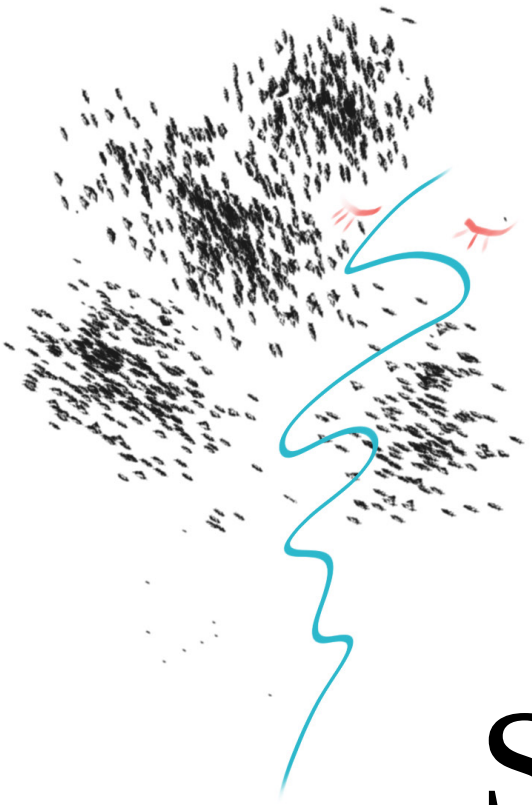
"And who knows how far it ran off this time."

"That's okay, Dad. We'll find it."

The smiles we exchanged were quick and awkward, but they were just what we needed before taking on the road in front of us.

The trip was long. My father led the way and I followed, letting his steps drag mine along. Fun little tunes started coming out of my father's pants pocket and he took out his cellphone to marvel at the voice coming out of it. The silly ringtone was all the music he had needed to hear. As my parents talked over the phone and gave each other instructions on what to do and where to go from there, I lingered behind.

There was a backpack I had picked up from the road that hung from my shoulders. Inside it, I was collecting all the evidences of my house's escape, picking them up as we went along – shattered light bulbs, pillow stuffing, shoes, spoons, and a trail of breadcrumbs. I was also taking some time to acknowledge the lost rag dolls, lamps, and scented candles that bedecked the streets; and the book pages, confetti and Happy Birthday banners that festooned the air. Other houses had run away too and their contents were spilled everywhere. But what caught most of my attention were the posters clipped to every wall, tree and street lamp; posters with bold letters that read "Missing House" and pictures that showed to the world all the fugitives. I would stare at these the longest and wonder how many houses would be found again.



2 | Science of Sleep

Understanding the Bidirectional Relationship of Circadian Rhythms and Cognition: Implications of Cognition as a Zeitgeber

Camille Williams

Introduction

Circadian rhythms influence daily brain arousal and neurocognitive and affective functions in nearly all species on Earth. The suprachiasmatic nucleus (SCN) in the hypothalamus is the master clock and is synchronized by external cues from the environment. These external cues, such as light, which provide endogenous clocks with a sense of time and modulate daily physiological oscillations, are known as zeitgebers (Johnson, Elliott, & Foster, 2003). The SCN controls primary biological factors such as melatonin secretion, body temperature, cortisol, insulin levels, antidiuretic and growth hormones and communicates with peripheral clocks in the brain and other bodily tissues to synchronize endogenous rhythmic activities to the external light-dark cycle (Guilding & Piggins, 2007; Lange, Dimitrov, & Born, 2010; Waterhouse, 2010; Wright, Lowry, & LeBourgeois, 2012). Together, the SCN and peripheral clocks located across body and brain regions, modulate time-of-day effects – daily changes in physiology and behavior (Monk, 1979). The prevalence and location of peripheral clocks, such as the cognitive clock, is of current interest in the circadian literature (Gritton, Stasiak, Sarter, & Lee, 2013). Cognition, which describes underlying mental processes of behavior, shows a systematic link between circadian rhythms and sleep. Further understanding of the relationship between circadian clocks and cognition will disclose the peripheral network responsible for this interaction and the influence it exerts on other aspects of human physiology and behavior.

The relationship between circadian rhythms and cognition is crucial to the understanding of daily cognitive variations across individuals on social and work platforms. Performance on tasks measuring basic cognitive processes - attention, executive functions, and working memory - is correlated to daily circadian oscillations depending on the cognitive demands of the task (Valdez, Ramírez, & García, 2014; Valdez, Ramirez, Garcia, Talamantes, & Cortez, 2010). Circadian influences on cognition are typically analyzed by decomposing processes into their domains and respective components (i.e. attention into sustained attention then task stability, respectively) (Valdez et al., 2005). However, the complexity of the correlations between cognitive performance and circadian rhythmicity, marked by contradictory findings and variations of circadian manifestation between components within domains of specific cognitive processes, have contributed to the difficulty in describing the nature of the relationship between cognition and circadian rhythms. Therefore, the purpose of this review is to provide a thorough overview of the current knowledge on their relationship by considering the complexity and the influence of cognitive and circadian oscillations on behavior. First, underlying models and methods pertinent to the analysis of circadian rhythms and cognition are examined. Second, findings corresponding to the general consensus on the correlation of cognitive processing and circadian

rhythmicity are reviewed. Third, findings supporting the bidirectional nature of this relation and the role of cognition as a zeitgeber are discussed. Finally, neuropsychological and cognitive implications of the interaction of circadian rhythmicity and cognition are considered.

Two-Process Model of Cognition

The "Two-Process Model of Cognition", originally applied to sleep, discloses the driving forces of daily cognitive efficiency (Schmidt, Collette, Cajochen, & Peigneux, 2007). It is composed of the homeostatic drive (HD), which corresponds to sleep pressure (number of hours spent awake), and the circadian drive (CD), which corresponds to daily physiological changes (i.e. core body temperature). While the HD is negatively correlated to overall cognitive performance, the correlation between circadian rhythms and cognitive performance varies across physiological markers. For example, cognitive performance is positively correlated to core body temperature and negatively correlated to cortisol and melatonin levels (Oster et al., 2006; Scheer, Pirovano, Van Someren, & Buijs, 2005). With adequate sleep, the circadian system and the homeostatic drive contribute approximately equally to changes in cognitive performance across the daily cognitive cycle (Monk, 1997).

The cognitive cycle, modulated by CD and HDs, reveals optimal cognitive performance in normal individuals between 7am and 11pm. The cognitive cycle discloses two major peaks of optimal performance between the hours of 11am and 1pm, and 4 and 5 pm, with two suboptimal peaks of performance between 1 and 4pm ('Post-lunch dip'), as well as between 4 and 7am (Äkerstedt & Folkard, 1996). The cause of the post-lunch dip is still unclear; however, although it is greater in magnitude after an individual consumes lunch, it is still present in starved individuals, highlighting its endogenous nature (Smith & Miles, 1986). Although CD and HDs are believed to reinforce their effects at times and counterbalance their effects on cognition at others (Carrier & Monk, 2000), the relationship between the two is still not fully understood and is influenced by external behaviors (i.e. high intensity exercise) and environmental factors (i.e. light cues) (Aschoff, 1979). While daily increases in sleep pressure hinder cognitive efficiency, circadian rhythms stabilize levels of cognition across the day (Dijk & Czeisler, 1995). Therefore, studying the influence of the CD independently from the HD reveals the internal cognitive cycle and elucidates the importance of circadian rhythmicity on cognition.

Methods of Assessing Circadian Variations in Cognition

Methods assessing circadian variations in cognitive performance aid in understanding the influence exerted by the interaction of the two-process model and separate the effects of each drive on cognition. The time-of-day protocol is used to study circadian variations of people in their natural environment, specifically changes in performance on diverse cognitive tests administered throughout the day, which enables the understanding of time-of-day effects on cognitive performance (Kleitman, 1933). However, this method yields contradictory results across studies due to the lack of control for individual and external confounds (Blatter & Cajochen, 2007).

The constant routine protocol controls for external parameters, such as body posture, time awake, food intake, exposure to light, and physical activity, by maintaining them as constants for a period of over 24h in a laboratory. This protocol reveals endogenous circadian rhythms normally embedded within the sleep-wake cycle (Czeisler et al, 1999). Physiological and behavioral measurements (i.e. body temperature) are administered at equidistant intervals. A major limitation of this protocol is the inability to independently measure influences of the HD and the circadian clock (Mills, Minors, & Waterhouse, 1978).

This is accomplished by using a forced-desynchrony protocol, which requires participants to stay in a laboratory for several days where conditions are kept constant and their normal rhythmicity is changed from approximately 24.8h to less than 19 hours or more than 28 hours. This extreme shift in sleep-wake cycle progressively desynchronizes the circadian clock from the HD. Inability to keep track of the extreme sleep-wake cycle imposed, the circadian clock starts to follow its own rhythm (Czeisler et al., 1989). Cognitive tests are administered during the participant's subjective day and performance during the desynchrony protocol is compared to performance during normal rhythmicity (Hanneman, 2001).

The forced desynchrony protocol and the constant routine protocol are the most commonly used methods of studying the relation between cognitive performance and circadian rhythms. Although the latter protocols are often conducted on humans in the circadian literature, human societal obligations (i.e. work or family) make animal models, using rats or mice, more conducive when examining the circadian drive. Physiological changes, external cues, and changes in the light-dark cycle (cycles determined by a 12h period in light and a 12h period in dark) are more readily manipulated in animals compared to humans. This advantage elucidates the correlational and causal nature of internal and external changes on behavioral rhythmicity and vice versa (Birky & Bray, 2014).

Entrainment, the synchronization of the clock to external stimuli, is a key component in understanding circadian modulation by internal and external cues (Duffy & Wright, 2005). Entrainment of the circadian clock of the animal to external cues is reliably measured by variations in activity patterns. Activity is primarily defined by the number of turns completed by a rodent in the running wheel of its cage. Measuring the number of turns performed yields actograms: plots showing activity, manifested by bars, that vary in size depending on the number of executed turns. For example, normal rat actograms reveal activity during the dark phase, which is absent during the light phase (their subjective night) (Valentinuzzi, Menna-Barreto, & Xavier, 2004). Constant light cycles and ablation of the SCN results in arrhythmic activity, peaks of activity evenly distributed across the entire cycle (Eastman, Mistlberger, & Rechtschaf, 1984). Similarly to light, cognitively demanding tasks act as zeitgebers, which entrain endogenous clocks (Gritton, et al., 2013).

Circadian Rhythms and Basic Cognitive Processes

The following section demonstrates how studying circadian rhythmicity in relation to cog-

nition provides further evidence for an interdependent network amongst the previously determined major basic cognitive processes: attention, executive functions, and memory (Cajochen, Blatter, & Wallach, 2004; Schmidt et al., 2007; Valdez et al., 2014; Valdez, Reilly, & Waterhouse, 2008). Attention allows a response to the environment, the selection of specific sensory signals and responses, and the conservation of these responses over time (Cohen, 1993). Executive functions enable initiation, planning, and control of behavior (Godefroy, 2003). Working memory corresponds to the ability of temporarily storing and modifying information for cognitive processing (Baddeley & Hitch, 1974; Valdez et al., 2008; Valdez et al., 2014). Research on the correlation between cognition and circadian rhythmicity in humans is typically studied using constant routine protocols lasting from 28 to 40 hours, with core body temperature as the most prominently used and reliable circadian marker (García, Ramírez, & Valdez, 2016; Ramírez et al., 2006; Scheer et al., 2005).

Circadian Rhythms modulate Cognitive Domains Independently from their Cognitive Process

Circadian rhythms do not exert a generalized effect across processes or domains of a single cognitive process. Although some domains of the basic cognitive processes reveal a parallel between optimal performance and maximal core body temperature, other domains show a phase delay of 1-4 hours (García et al., 2016; Ramírez et al., 2006; Valdez et al., 2010). A phase delay corresponds to a delay in time between optimal cognitive performance and maximal core body temperature or minimal melatonin levels, depending on the circadian marker.

Interestingly, domains across cognitive processes show similar variations, such as cognitive flexibility (executive functions) and phonological storage (working memory), which express one-hour phase delays in relation to core body temperature (García et al., 2016; Ramírez, et al., 2006). These findings suggest that cognitive flexibility and phonological storage may simultaneously be recruited to complete specific cognitively demanding tasks. A meta-analysis of 275 fMRI and PET techniques provides anatomical and functional support for the simultaneous activation of brain regions associated to specific cognitive processes by different cognitive demands (Cabeza, & Nyberg, 2000). Therefore, research on the relationship between circadian rhythms and cognitive processes suggests that cognitive domains within attention, working memory, and executive functions are not unitary domains but are independent from one another.

Different Time-of-Day Effects based on Emotionality of Task

Although time-of-day effects are present in acquisition, performance, and recall, the relationship between circadian rhythms and cognition varies across learning paradigms (Folkard, Knauth, Monk, & Rutenfranz, 1976; Krishnan & Lyons, 2015). Iida and Kast (1987) examined acquisition and error rates in rats, during their normal light-dark cycle, trained on a multiple T-maze placed in water (aversive stimulus). Rats trained during their dark phase compared to their light phase had faster rates of acquisition and made fewer errors. Conversely, Chaud-

hury and Cowell (2002) found that mice trained during their subjective night, with a context fear (foot-shock) conditioning protocol, learned the task faster than mice that acquired the skill during their subjective day, regardless of their light-dark cycle. The discrepancy in time-of-day effects may be explained by the difference in species or by the behavior and learning-paradigms. Although acquisition and performance are usually best during the dark-phase in nocturnal animals, conditioning protocols inducing high rates of fear (i.e. foot-shock) could be more salient during the light-phase, a time of increased susceptibility to stressors. However, rats learn and perform well on the Morris Water Maze task (MWM) (Morris, 1984), regardless of their light-dark cycle. The MWM is an easy and aversive task, requiring the animal be randomly placed in water to find an unmovable platform, which reduces stresses produced by swimming, through the use of environmental cues after repeated attempts (Valentinuzzi, et al., 2004). Therefore, the emotionality and complexity of the behavior associated with the paradigm moderate time-of-day effects on performance. The dependence of time-of-day effects on the behavioral and learning paradigms is concurrent with the identification of distinct neural substrates for different types of memory (Gaffan, 1994; McDonald & White, 1993; Murray & Gaffan, 1994).

Contradicting Findings on Circadian Rhythms and Cognitive Performance

Difficulties in understanding the correlation of circadian rhythms and cognitive cycling arise from contradictory findings reported in studies that use similar methods to isolate the association of circadian rhythms onto a single cognitive domain. For example, worst performance on a computerized Stroop task measuring cognitive inhibition occurred with a one-to-two hour delay in relation to the lowest core body temperature in a twenty-four hour period (four-to-seven am) (García, Ramírez, Martínez, & Valdez, 2012; Ramírez et al., 2012). Conversely, studies also examining cognitive inhibition with computerized Stroop and Simon interference tasks did not report an effect of circadian rhythmicity - inferred by melatonin cycling (Sagaspe et al., 2006), although reaction times showed circadian variations (Bratzke, Steinborn, Rolke & Ulrich, 2012; Cain, Silva, Chang, Ronda, & Duffy, 2011). These contradicting studies employed constant routine protocols of twenty-eight to thirty hours. However, when dissociating CD from HD with a forced-desynchrony protocol, inhibitory control presented a delay of one-to-two hours in relation to lowest core body temperature (Burke, Scheer, Ronda, Czeisler, & Wright, 2015), as inferred by Garcia and colleagues (2012). Although melatonin and core body temperature are reliable markers of circadian rhythmicity (Mills, et al., 1978), some markers may be stronger correlates depending on the cognitive paradigm. Future research should conduct larger constant routine studies and more forced-desynchrony protocols, as well as control for markers used to determine circadian rhythms.

In summary, circadian rhythms reveal connections between cognitive domains independent of their cognitive process. Tasks measuring specific cognitive processes show an overlap in activation across frontal brain regions as they recruit cognitive domains from various cognitive processes pertinent for task completion. Concurrently, metabolic changes are similar across regions simultaneously recruited to conduct a specific task (Cabeza, & Nyberg, 2000). Therefore, circadian modulation of cognition is task-dependent rather than cognitive domain

dependent. Concurrently, studies examining the interactions of emotionally salient memories with circadian rhythms show variations in time-of-day effects depending on the emotional context of the learning paradigm. Therefore, instead of examining circadian rhythms by breaking down cognition into attention, executive functions, and working memory, as done in previous reviews, comparing complex cognitive tasks varying only in a single domain may yield a more representative understanding of the connection between circadian rhythms and cognition. This new approach could promote the examination of daily cognitive tasks contextually relevant to individuals and facilitate the application of findings to real life scenarios.

Bidirectional Relationship of Circadian Rhythmicity and Cognition: Cognition as a Zeitgeber

Extensive research has been conducted to understand correlations between cognitive performances across domains. However, little research has investigated the direction of this relationship. The following section briefly summarizes studies examining the bidirectional influence of cognition and circadian rhythmicity (Gritton, Kantorowski, Sarter, & Lee, 2012; Gritton et al., 2013), and relates their results to concurrent findings in the literature.

Variations in Time-of-Day Effects Across Cognitive Demands

Gritton and colleagues (2012) unraveled the circadian modulation of cognition by comparing acquisition, performance, and recall of rats in their active and inactive periods on two experimental paradigms: the MWM, testing spatial memory, and the sustained attention task (SAT) (McGaughy & Sarter, 1995). The SAT required animals to learn a response (press one of two levers when correct tone or light is on) and to remember its responses (after every four correct responses, the reward switched to the other lever). Since rats were deprived from water until the testing period and for two hours post-testing, water served as a reward. Although training and testing occurred at the same time every day, tasks varied in nature (aversive vs. appetitive), in recruitment of neural networks (hippocampal-dependent vs. associative prefrontal cortex (PFCx) and cholinergic systems), and motivation (escape water vs. obtain reward). Equating the time taken for the acquisition of the SAT and the MWM over 2 weeks controlled for the increased difficulty of the SAT compared to the MWM. Animals trained once a day on the MWM, while SAT animals had several training sessions per day. Acquisition rate and performance were time-of-day insensitive for rats trained on the MWM and sensitive for rats trained on the SAT. These findings support the consensus that time-of-day effects depend on the paradigm and corresponding neural networks (García et al., 2016; Ramírez et al., 2006; Valentinuzzi et al., 2004; Valdez et al., 2010).

Bidirectional Relationship between Cognition and Circadian Rhythmicity

Gritton and colleagues' (2012) findings imply a bidirectional interaction between cognitive performance and circadian processes. After reaching criterion performance during the learning process, MWM and SAT rats showed differing patterns of activity prior to cognitive training. Actograms revealed an increase in activity prior to daily SAT training, absent in MWM

trained rats. Furthermore, SAT rats trained during the day showed a diurnal shift manifested by anticipatory activity associated with a second maximal peak in body temperature absent in MWM rats trained during the day. Anticipatory activity corresponds to the entrainment of the rats' endogenous rhythms to the cognitive task, which occurred regardless of the light or dark phase. Rats that acquired and performed better on the SAT task also showed higher rates of anticipatory activity. Coordinated activity promotes the expression of cognition-entrained rhythms to facilitate daily fixed time learning and cognitive performance (Gritton et al., 2012). Therefore, higher rates of activity associated with better performance unveil the influence of complex cognitive tasks on circadian rhythmicity and in turn, support the bidirectional relationship of circadian rhythms and complex cognition.

The bidirectional nature of circadian rhythmicity on cognition can be challenged by the occurrence of anticipatory activity during restricted water access and daily handling (Mistlberger & Rechtschaffen, 1985). However, Gritton and colleagues (2009) found that there was no effect of restriction of water access, daily social contact, activity associated with operant training, or appetitive behavior between their SAT and control rats, which were exposed to the same handling procedures and restricted water access. The bidirectionality of the association of circadian rhythms and cognition is consistent with the view that circadian abnormalities may contribute to the detriment of human health and cognition across populations (Folkard & Akerstedt, 2004; Lange et al., 2010; Tzourio, Dufouil, Ducimetière, Alpérovitch, & EVA Study Group, 1999). Future studies should replicate this one, with different paradigms varying in context and recruited cognitive domains to uncover the dual relationship of cognition and circadian rhythms, manifested by anticipatory activity.

Cognitive Performance as a Zeitgeber: Cholinergic Cognitive Model

Gritton and colleagues (2012; 2013) identified changes in circadian architecture for tasks requiring attentional effort previously associated with cholinergic signaling and basal forebrain activation (SAT) (McGaughy, Kaiser, & Sarter, 1996). Cholinergic connections are present between the SCN and the basal forebrain neurons involved in cognition, such as the medial septum, nucleus basalis, diagonal band, and the substantia innominata. These connections could explain peaks of acetylcholine levels associated with task performance, which become anticipatory and time-locked when training occurs at the same time every day (Paolone, Lee, & Sarter, 2012). Following the removal of basal forebrain cholinergic projections to the SCN, anticipatory activity promoted by cognitive training and accuracy is attenuated (Gritton et al., 2013). These findings support the bidirectional relationship of circadian rhythms and cognitive performance and suggest that the SCN-mediated light cycle entrainment overrides activity mediated by the peripheral cognitive clock.

Although the SCN overrides diurnal behavior and entrainment of cognition in the absence of basal forebrain cholinergic projections, cognitive entrainment can occur independently from the SCN. Ablation of the SCN in SAT trained rats revealed similar synchronous activity produced by cognitive training compared to non-lesioned rats. Therefore, in vivo cholinergic signaling, modulated by cognitive demand, entrains non-SCN oscillators and promotes diurnal

activity through interactions of cholinergic-peripheral clocks . However, the presence of cognitive training is crucial to the entrainment of the peripheral clock, as anticipatory activity ends several days after the absence of cognitive training. Although optimal cognitive performance and task acquisition is observed when the SCN and the cognitive peripheral clock regions are undamaged, sufficiently cognitively demanding tasks could serve as efficient zeitgebers controlling endogenous rhythmicity independently from the major clock (Gritton et al., 2013). Future studies should be conducted to uncover how the presence and strength of cognition as a zeitgeber varies depending on task demands and context.

Conclusion

The purpose of this review was to elucidate the bidirectional relationship of circadian rhythms and cognition. The task-dependence of this interaction suggests that future studies similar to Gritton and colleagues' (2012; 2013) must be conducted with tasks varying in cognitive complexity and context (i.e. positive and negative emotions) to understand how different paradigms relevant to daily cognitive functioning influence and are influenced by circadian rhythmicity. These studies will provide insight on the underlying cholinergic neural network in basal forebrain and frontal areas affected in shift-work, aging, and neuropsychiatric illnesses populations (Folkard & Akerstedt, 2004; Haus & Smolensky, 2006; Lange et al., 2010; Choi et al., 2012).

Understanding the bidirectional relationship between circadian rhythms and cognition and the role of cognitively demanding tasks as zeitgebers could reduce long-term risks of circadian disorganization (Haus & Smolensky, 2006). Desynchronization of the clock due to abnormal working hours and jet lag have been associated with higher risks of hypertension (Karlsson, Knutsson, & Lindahl, 2001), cardiovascular diseases, and death (Kawachi et al., 1995; Tenkanen, Sjöblom, Kalimo, Alikoski, & Härmä, 1997) as well as changes in blood pressure, insulin resistance, pituitary-adrenal and growth axis, melatonin secretion, and lipid and carbohydrate metabolism (Al-Naimi, Hampton, Richard, Tzung, & Morgan, 2004; Ekstrand, Boström, Arborelius, Nilsson, & Lindell, 1996). These physiological changes correlate with variations in overall cognitive performance (Folkard & Akerstedt, 2004; Hajjar et al., 2011; Lack, Bailey, Lovato, & Wright, 2009; Lange et al., 2010). Understanding the underlying acetylcholinergic network of circadian rhythms and cognition will aid the development of drugs counteracting physiological changes associated with circadian deregulation and decreases in cognitive performance. Furthermore, prospective cognitive therapies could minimize the negative effects of circadian disruptions. Performing daily cognitively demanding tasks could enhance the synchronization of the cognitive peripheral clock to the SCN or compensate for SCN deregulation.

Cognitive entrainment therapies have the potential to improve the social and work life of individuals suffering from circadian desynchrony. Specifically, cognitive entrainment could counter severe sleep disturbances, diminished sensitivity to environmental cues, slowed SCN resynchronization, and weakened internal coupling of peripheral oscillators observed in parallel to the cognitive decline of the aging population (Van Someren, 2000). Cognitive entrainment could also increase cognitive performance, emotional regulation, and self-control

in evening-types: people who show a phase delay of two-to-three hours in relation to societal demands (Lack et al., 2009) and who are exposed to self-control taxing stimuli during their low-energy times (Digdon & Howell, 2008; Takeuchi et al., 2001). Furthermore, cognitive therapies could reduce dysphoria (Healy & Waterhouse, 1995; Healy & Williams, 1989) or emotional deregulation (Jones, 2001) associated with circadian rhythms disruptions in depressed and manic patients. Therapies targeting synchronization amongst brain clocks, could alleviate cognitive and emotional impairments in psychiatric disorders, as well as Parkinson's and Alzheimer's disease (Ancoli-Israel et al., 2003; Choi et al., 2012; Grothe, et al., 2010). Future research must uncover the influence of context on the interaction of circadian rhythmicity and cognition to elucidate the underlying neural mechanism of this relationship and to model potential therapies aimed at reducing circadian deregulation and corresponding negative cognitive symptoms. Understanding the role of cognition as a zeitgeber across future research will address whether or not the influence of cognitive entrainment can be generalized to all aspects of behavior typically modulated by circadian rhythms.

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Analysis of MBCT as a Plausible Treatment Option for Psychophysiological Insomnia

Léa Homer

Prevalence studies have shown that between 6 and 13.4% of Canadian adults met DSM IV criteria (a classification system which distinguishes and describes mental disorders) for insomnia, and that over 40.2% presented at least one symptom of insomnia (Morin, Leblanc, Daley, Gregoire & Mérette, 2006; Morin, Leblanc, Belanger, Ivers, Mérette & Savard, 2011). Sleep has an essential role in maintaining cognitive functions and proper emotional regulation; sleep deprivation, on the other hand, has been shown to cause a myriad of issues of a psychological and physiological nature (Frenda & Fenn, 2016; Palmer & Alfano, 2017; Colten H.R & Altevogt, 2006). Insomnia is a sleep disorder which can be summarized as a persistent difficulty to fall or stay asleep, resulting in a complaint concerning the amount or quality of sleeping episodes. The disorder is divided into two main subtypes: primary insomnia, which assumes that the source of the problem originates independently of any mental, physiological or substance-related issues, and secondary insomnia, in which another mental or medical condition is found to be the main cause or maintenance factor of the symptoms. Psychophysiological Insomnia (PPI), or Conditioned Insomnia, is defined by the International Classification of Sleep Disorders Manual as "(...) a disorder of somatized tension and learned sleep-preventing associations that results in a complaint of insomnia and associated decreased functioning during wakefulness." (American Academy of Sleep Medicine, 2001). It is a type of primary insomnia wherein tendencies to ruminate and worry during pre-sleep periods have been shown to be main reinforcements to an issue of conditioned hyperarousal (Marques, Gomes, Clemente, Moutinho dos Santos & Castelo-Branco, 2015). Most types of insomnia share similar causal patterns, following the three P's model (Spielman, 1986). In this model, psychological traits or genetic backgrounds (called predisposing factors) already vulnerable to insomnia generate acute insomnia when met with a life stressor (or precipitating factor). However, when it comes to certain primary insomnia types such as PPI, chronic insomnia develops itself within a patient when they start cultivating maladaptive cognitive and behavioral patterns (perpetuating factors) in reference to their sleep habits (AASM, 2001). As the initial impact of a precipitating factor will wear off, newly acquired perpetuating factors will keep symptoms present. MBCT was originally conceived by Segal and colleagues as a therapeutic measure for depression relapse prevention, observing that one of the factors that made depression a particularly problematic disorder was the high relapse rate it presented (Segal, Williams, & Teasdale, 2002). Their inspiration partly came from a review of Jon Kabatt-Zin's work with the Mindfulness Based Stress Reduction (MBSR) program (Kabat-Zinn, Lipworth, & Burney, 1985), which showed a decrease in certain depressive symptoms known to play a role in relapse activation (Campbell, 2012). MBCT also originated from CBT

(Cognitive Behavioral Therapy), as both share a concern for the restructuring of a person's cognitive and behavioral patterns. However, they differ on how that goal is attained; while CBT concentrates on actively changing cognitive patterns, a mindfulness based approach does the same by observing, and accepting, thoughts and mental phenomenon. This allows for a change of perspective to occur between personal patterns and the self, and for the possibility of a more flexible response to what can be perceived as a threat (Wells, 2002). The use of non-judgmental metacognition processes is relatively new within insomnia treatments, but it has shown promise in treatments for anxiety and mood disorders for close to a decade (Klainin-Yobas, Oo, Yew, & Lau, 2015; Piet & Hougaard, 2011; Evans et al., 2008). Some studies even claim that CBT and MBCT share similar results towards reducing anxiety or depression (Abdolghadery, Kafee, Saberi, & Aryapouran, 2014).

Considering that certain cognitive and affective processes found within major depression or anxiety disorders have shown to also be perpetuating factors in PPI, this paper will explore the idea that MBCT could be considered as a plausible treatment option for cognitive and affective aspects of PPI.

Literature review

Emotional reactivity to stimuli

The relationship between emotional reactivity to sleep stimuli and primary insomnia is well researched. Although some studies show that participants with PI had no greater reactivity than control groups when administered a mild electric shock (Gehrman et al., 2016), others showed that reactivity was significantly different between PPI and control groups when responding to sleep stimuli. A study by Baglioni et al. (2010), showed that participants with PPI showed greater inhibitory response to positive sleep stimuli, and rated negative sleep stimuli as more arousing and unpleasant than control group participants. In addition, Baglioni et al. (2014). also found that fMRI (functional MRI) results showed that participants with insomnia had heightened activity in the amygdala, a region of the brain associated with primary stress response, when presented with insomnia-related stimuli. Mindfulness techniques, on the other hand, have been shown to reduce emotional reactivity. A study by Lutz et al. (2016), where they subjected different types of positive or negative stimuli to either long-term meditators (LTM) or naive meditators, compared self-report rates and fMRI scans to find lower levels of emotional reactivity to both kinds of stimuli in the LTM group. Another study tested participants with partially remitted depression, since negative reactivity to internal as well as external stimuli is often a perpetuating factor in depression. Results indicated that MBCT was associated with a decrease of emotional reactivity to social stress (Britton, Shahar & Jacobs, 2012).

Sleep-specific rumination

Rumination describes the repetitive thought processes that tend to focus on a current source of distress. As expressed by Nolen-Hoeksema, Wiso and Lyubomirsky (2008), there is "(...) evidence that rumination exacerbates depression, enhances negative thinking, impairs problem solving, interferes with instrumental behavior, and erodes social support''. Many studies have shown that MBCT is effective towards reducing rumination patterns related to states of depression and anxiety (Matthew, Whitford, Kenny, & Denson, 2010; Piet & Hou-

gaard, 2011; Kaviani, Javaheri, & Hatami, 2011; Lovas & Barski, 2010). MBCT has also been shown to reduce rumination in people with high levels of neuroticism, a personality trait associated to an overall vulnerability towards psychopathology (Armstrong & Rimes, 2016). According to Harvey's Cognitive Model of Insomnia, insomnia is generally characterized by heightened cognitive activity and a greater attentional bias to distressful sleep related issues, such as not being able to fall asleep or the consequences that sleep deprivation might have the next day. This pushes individuals into an even more anxious and hyperaroused state (Harvey, Tang, & Browning, 2005). Another study by Palagini and Moretto supported this model by showing that sleep-related rumination was indeed associated with not only pre-sleep state arousal, but also cognitive and somatic arousal, demonstrating the different, complex levels of arousal people suffering from insomnia are faced with. In sum, through a pattern identical to that observed with emotional reactivity, insomnia is positively correlated with insomnia-specific rumination, but not other types of rumination such as depression specific rumination (Carney, Harris, Falco, & Edinger, 2013).

Conditioned hyperarousal

As previously mentioned, rumination patterns often sustain hyperarousal in PPI in as repetitive focus over a source of distress, making it difficult to attain or maintain sleep and perpetuating an even greater state of arousal. Because an agreement on the precise definition of hyperarousal in insomnia has not yet been determined, the interpretation of Marques, Gomes, Clemente, Santos, and Castelo-Branco (2015) will be used. They define it as "any significantly pronounced activity in neurobiological, cognitive and/or emotional systems, either self-reported or objectively observed by different methods, and which differs from the average of a group without major sleep problems or disorders.'' The hyperarousal hypothesis assumes that sleep is hard to achieve during an insomniac episode because various systems are in a state of twenty-four hour hyperarousal (Riemann et al., 2010). In the case of PPI, this is maintained through different maladaptive coping strategies such as rumination (Perlis, Giles, Mendelson, Bootzin, & Wyatt, 1997). Different studies support the hyperarousal hypothesis in PPI, such as one conducted by Bastien, St-Jean, Morin, Turcotte, and Carrier (2008), where greater cortical arousal was found in people with PPI during sleep onset and morning awakening then in their control counterparts. Conversely, the amount of time practicing mindfulness meditation has already been shown to be negatively correlated with trait hyperarousal in people suffering from PI, implying that an increase in mindfulness practice may be associated with decreased hyperarousal activity (Ong, Shapiro, & Manber, 2009). Mindfulness-based interventions have also shown to reduce symptoms of hyperarousal in people with variable stress and mood disorders, such as PTSD and depression (Kearney, McDermott, Malte, Martinez, & Simpson, 2012; Kalill, Treanor, & Roemer, 2014; Desrosiers, Vine, Klemanski, & Nolen-Hoeksema, 2013). Lastly, relaxation techniques, an essential component of mindfulness-based interventions, has also been shown to reduce hyperarousal activity (Taylor et al., 2003).

Discussion

Overall, this paper suggests that MBCT may be a plausible treatment option for psychophysiological insomnia, as it addresses

various cognitive and affective aspects that insomnia appears to share with other disorders. Previous research established that MBCT is a relatively versatile therapy which manages to target multiple variations of the same processes. Although studies relating MBCT directly to PPI are still scarce, it is possible that therapeutic techniques already shown to combat certain processes in other disorders may be able to address the same processes in insomnia. For example, because MBCT has had effects on multiple specific types of rumination, it may also affect insomnia related rumination as well. Additionally, CBT-i (CBT-insomnia) is known to be one of the most effective treatment methods against primary insomnia (Edinger et al., 2009), as it has been documented that it is deeply rooted in certain principles of mindfulness-based interventions, such as acceptance. According to patients who undertook CBT-i treatment, these principles were found to be some of the most helpful components of the procedure (Manbers, Hydes, & Kuo, 2004). However, multiple limitations are present in this literature review. First, although MBCT is the key treatment throughout this paper, it is important to note that other similar mindfulness-based therapies such as ACT (Acceptance and Commitment Therapy) or DBT (Dialectic Behavioral Therapy) could also be considered as plausible treatments for primary insomnia, as most share a similar basic structure (Parfy, 2012). These could, according to Ong's Meta Cognitive Model of Insomnia, be part of the Metacognitive therapies for Insomnia (MCTI) (Ong, Ulmer & Manber, 2012). Secondly, though this paper essentially focuses on potential treatment for PPI, it may also be applicable to other types of primary insomnia. However, using primary insomnia as the main focus of debate would not have been ideal due to overgeneralization; many other types of primary insomnia, such a Paradoxical Insomnia, do not share the same criteria as PPI (Edinger et al., 2004). Lastly, this paper does not densely analyse all affective and cognitive processes that insomnia and MBCT may have in common. It also has not taken into consideration any behavioral aspects that may be found in PPI. Still, this preliminary research may be considered as a support study on which future, more thorough analyses may elaborate on, by pursuing more in-depth evaluations of the potential benefits MCTI may offer to different types of primary insomnia.

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3 | Dispersement in National Identity

Chernobyl: A Riveting Toxic Experience

Clara Cariou

Since the initial fallout on April 26, 1986, representations of Chernobyl have changed dramatically. The legacy of past nuclear accidents combined with the unknown and unreliable nature of information about Chernobyl caused a strong pushback against nuclear energy. As time passed, however, representations of Chernobyl changed from an image of disaster and human failure to that of accepted popular culture. The advent of Chernobyl tourism and the shift in popular representation point to a changing attitude towards disasters themselves and the human fascination with tragic events. By combining popular representations of Chernobyl and Chernobyl as a site of memory and hardship, we hope to show how society deals with such disasters and what this means for those still affected by the accident.

The presence of Chernobyl in popular culture is seen in several ways. Not only has Chernobyl been the subject of various novels in the past thirty years, several movies have also focused on the accident or investigated how another society would have reacted to such an incident. The existence of the S.T.A.L.K.E.R. Chernobyl video game and a cameo in Transformers: Dark of the Moon further highlight how an accident that once led to fear and confusion has now become an accepted part of popular culture. These specific representations of Chernobyl play a crucial role in influencing how the event will be perceived by younger generations. For those who lived through the accident itself, Chernobyl will likely forever be associated with the initial panic, but for those who have only seen it represented in movies and video games, Chernobyl takes on a very different meaning.

In the years since 1986, the disaster has faded from the public memory of many Westerners. However, as Stone says, “for the region’s people, it will never be out of mind, as a slow-motion catastrophe continues to unfold”. [1] Stone argues that Chernobyl’s “most insidious legacy may be the psychological wounds borne by those who fled blighted homes,” which are perhaps best represented in the primary accounts found in Svetlana Alexievich’s Voices From Chernobyl. [2] The interviews in this book come from a variety of people who were affected by Chernobyl, ranging from liquidators and children to the wives of plant workers. The sources are difficult to read as they provide graphic descriptions of the ravages of radiation sickness, but they offer readers a glimpse into the mindset of ‘Chernobyl victims’. The sudden designation as a ‘Chernobyl person’ was difficult for many people and arises in several interviews. As one individual describes it: “you’re suddenly turned into a Chernobyl person. Into an animal, something that everyone’s interested in, and that no one knows anything about”. [3] For these people, Chernobyl was more than the loss of a home; it was, as one interviewee says, the loss “of our whole lives”. [4] The silence surrounding the accident in the years that followed was also particularly hard for those affected, as one said: “my daughter died from Chernobyl. And they want[ed] us to forget about it”. [5] This would obviously have caused long-lasting psychological problems. In the period immediately following the accident, the combined

impact of the disaster and its aftereffects (i.e. the difficulty in finding a new home and the initial prejudice against them) led some people to move back into the Chernobyl Exclusion Zone. As one of the returnees describes, “We turned off the radio right away. We don’t know any of the news, but life is peaceful. We don’t get upset. People come, they tell us the stories”. [6]

Marples also discusses the hardships faced by the evacuees after they left their homes and how this led some seniors to decide to return and “take dosimetric readings in the area,” which “had an important psychological effect on those who doubted that the area around the reactor was safe”. [7] Lochard argues that the public was “generally ignorant about the potential effect of radiation, [and] rather suspicious with regard to any official information,” which he describes as the result of the Western media’s “strong propensity to spread alarmist news,” combined with the lack of official information and prevalence of misinformation in the Soviet coverage. [8] Marples also discusses the decision to delay the evacuation of the city, and highlights the idea that evacuees would “risk exposure to radioactive particles” if they were evacuated immediately. [9] This is not to say that Marples agrees with this idea as he immediately points to the fact that “inhabitants of Pripyat were exposed to the radioactive fallout…simply because they were unaware of what happened”. [10] In other words, though the idea of a delayed evacuation was an attempt to ensure the safety of the Pripyat residents, the evidence clearly points to the failure of this system. The decision to move forward with the annual May-Day parade in Kiev is another example of the state’s failure to protect its citizens. Though this choice helped maintain a degree of normality, preventing widespread panic, it also exposed the parade’s participants to the radioactive fallout. [11] Marples highlights the increasing radiophobia of the population and how this influenced the Soviet decision to conclude that Chernobyl “[would] not be quite as bad as originally suspected”. [12] Lochard, on the other hand, is critical of this idea and describes radiophobia as “a convenient explanation for the fears noticed by many individuals inside the population”. [13] Instead, Lochard points to the loss of trust the public had in the “scientific, medical, and political authorities” which, combined with the lack of transparency in the immediate aftermath, led to “a general feeling of loss of control” which reinforced “the climate of social distrust”. [14] This distrust further added to the confusion regarding the accident and, in the years that followed, indelibly impacted how Chernobyl was viewed by those affected. As Hryhorczuk puts it, “the danger posed from radiation did not end when Chernobyl ceased to burn,” which echoes Lochard’s idea of widespread social distrust. [14] After all, thousands of children were put at risk as a result of the radioactive iodine being “deposited in pastures, eaten by cows, and concentrated in drinking milk”. [15] It is therefore unsurprising that, as Hryhorczuk points out, “in addition to radiophobia and post-traumatic stress disorders, residents [...] suffered the effects of being ‘environmental refugees’”. [16] Indeed, not only were they forced out of their homes by an accident with severe ecological implications, Pripyat residents also faced discrimination on account of the radioactive danger of the disaster.

Julia Voznesenskaya’s The Star Chernobyl is another novel that aims to capture the immediate reaction to the disaster. The novel tells the story of three sisters, Anastasia, Anna, and Alenka, and chronicles Anastasia’s quest to discover the fate of Pripyat residents, including Alenka and her family. Anastasia goes through a dramatic change as the book progresses, and her unquestioning party loyalty is quickly overridden by her desire to find her sister. The

extent of her disillusionment with the Party is largely due to the deliberate misinformation the state undertook in the immediate aftermath of Chernobyl. As The Star Chernobyl was originally published in 1987, it serves as an obvious starting point for capturing the feeling of the time. This is shown throughout the novel in the inclusion of a collection of reports at the end of many of the chapters. These reports come from official state sources, such as Radio Kiev and Pravda and serve to emphasize the scale of the manipulation of information the state undertook. For example, despite the obvious misinformation that occurred at the time and that Anastasia herself is portrayed as discovering, official sources such as APN state: "We're not covering anything up…we publish our information openly and share it with foreign specialists". [17] Not only is this an outright lie, the lack of information available regarding Chernobyl continued for years after the accident occurred, and the APN statement serves to highlight the disparity and therefore helps Voznesenskaya make her point regarding the Soviet system and its lack of public responsibility.

Another strategy employed by the state in the reports Voznesenskaya includes was to blame any rumors that are present on the West. As the Moscow Komsomolets reports on 22 May 1986, "The worst thing is not the reactor in Block 4 of the Chernobyl power-station, it is the rumors which have fueled the fantasies put about by our enemies". [18] Though the prevalence of rumors regarding the accident was most likely due to the lack of available information, this was yet another way that the state tried to minimize the situation and, by blaming the West, falling back on Cold War discourse. The inclusion of these reports in The Star Chernobyl highlights the growing disparity between the reality of the situation and the official narrative that followed the accident. This purposefully demonstrates the weakness of the state, as Anastasia quickly loses faith in the Party once she realizes the deliberate misinformation the state uses in order to remain in control.

In the years since the accident, the government response has varied depending on a variety of factors. Unsurprisingly, how the accident is discussed is closely intertwined with the contemporary state narrative. Textbooks are an important way in which information about Chernobyl is disseminated to the next generation and provide a clear idea of how the state aims construct Belarusian collective memory. [19] In Belarus, Chernobyl was both an ecological and political disaster, as seen in the reality of the contaminated land and in ideas of political responsibility. This duality makes Chernobyl particularly important within Belarusian collective memory, but also makes it hard for textbooks to properly contextualize the incident. The textbooks Dudchik analyzes present Chernobyl as part of the larger narrative of Belarusian history, so while it is unsurprising that one event is not given primacy, by representing it as "a single event, rather than a prolonged tragedy," the information is clearly being manipulated. [20] Therefore, this manipulation of information, or rather the decision to portray the accident as a single, discrete moment greatly influences how the current generation of young Belarusians are perceive an accident that clearly had serious implications for their country.

In her dissertation, Kuchinskaya investigates the knowledge production practices regarding Chernobyl in the years since 1986. Specifically, she discusses the "production of invisibility and its consequences: practices that displace radiation and its health effects as an object of

public attention and scientific research, and make them unobservable". [21] The relationship between the media and the official discourse about Chernobyl is particularly important, as it is through the media that people get their information. In this sense, anything that influences the media in turn influences the general population's perception of the accident. In the years since the accident, the media's framing of Chernobyl changed greatly. From the initial Soviet policy of making "the accident and its aftermath as invisible as possible" to the "economic reframing of Chernobyl in the mid-1990s," the media's role in reporting on the accident was crucial in how society viewed the disaster. [22] As society accepted the reality of long-term contamination, the discourse surrounding Chernobyl changed to reflect a greater "emphasis on rehabilitation and normalization of life on the affected territories". [23] In other words, there was a significant attempt to minimize the reality of the continued danger, as Kuchinskaya says, "Chernobyl consequences have been shrinking for years now…the affected area in Belarus has shrunk and is roughly equivalent to the size of an airport". [24] By regularly changing the press coverage so that it reflected the official state discourse, the media played a role in changing how the disaster was viewed, both by those who lived on the land itself but also by those who, while not directly affected by the aftereffects of Chernobyl, were nonetheless involved in the disaster as it affected their country as a whole.

The issue of commemoration is an important one to consider when discussing how Chernobyl is represented in our modern culture. Commemorations are meant to be a way to remember a past event, but as Grandazzi asks, "How does one commemorate a catastrophe that is still unfolding?". [26] While the accident itself happened on April 26, 1986, the aftereffects continue to linger well into the present, for those immediately affected as well as for those who continue to live on contaminated land and who feel abandoned by their government. In many accounts, a clear comparison is made to World War II; the aftermath of Chernobyl is framed as yet another heroic triumph over an enemy, though in this case, the enemy is radiation. This comparison appears in both official commemorations of the accident as well as personal reports. Many of the survivor accounts in Alexievich's book draw on this framework, often referring to their grandparents' childhood being taken away by war and theirs' being taken away by Chernobyl. [27] Kasperski argues that the prevalence of this comparison in personal retellings and official discourse is "because of the importance of the war's memory for many Belarusians". [28] This discussion allows the government to "frame the Chernobyl disaster as another battlefront for the Belarusian nation, which will unavoidably come out victorious, united and regenerated" and which "can be solved by the heroic, self-sacrificing commitment of the best of people". [29] The parallel drawn between these two major events allowed the state to frame the accident in a familiar narrative with a distinct conclusion to assuage the public's panic. However, as Zink states, "the notion of war…[does] not fit the nuclear accident". [30] While there is the common aspect of suffering and evacuations, the comparison serves only to create more confusion and fear, as the events are too different to be properly compared: to attempt to do so leads to the manipulation of the reality of both narratives. [31]

Tied into this discussion of commemoration is whether or not Chernobyl should be considered a World Heritage Site. The distinction of Chernobyl as a heritage site is something Hryhorczuk strongly supports, mentioning precedents of Hiroshima and Auschwitz. He argues

that “the international recognition of Chernobyl’s universal heritage would transform its current global perception from that of a nuclear wasteland into an important lesson for mankind and a site that is worth visiting”. [32] In other words, he believes that transforming the site from an unofficial dark tourism destination into a properly organized, official World Heritage Site would drastically change the way modern society views, and consequently, represents Chernobyl.

Svetlana Bodrunova was a child when the Chernobyl accident occurred and thereby became a ‘Chernobyl child’. Her article “Chernobyl in the eyes” investigates the mythology surrounding Chernobyl children and what this meant for those living in Chernobyl-affected areas. She describes how it felt to be associated with the accident, stating that she was often met with “90% pure sympathy and 10% strange interest, as if we were exotic animals”. [33] Bodrunova also describes the lack of information that she remembers seeing or hearing as a child in regards to what should or should not be eaten. For example, she says, “I never saw a written recommendation or heard one myself on radio or TV. Instead there were pictures of mutations in the newspapers, and I saw several strange-looking dandelions myself”. [34] In addition to the general lack of information available to those living in affected regions, Bodrunova points to the absence of an organized information campaign as a significant issue, [35] saying “we were just told this or that, with no clear explanation”. [36] As Dudchik and others discuss regarding Chernobyl commemorations and how the accident is taught in textbooks, Bodrunova states, “Chernobyl was perceived by ever-patient Belarusians as just one more shared misfortune”. [37]

As Voznesenskaya’s novel alludes, rumors were rampant in both the immediate period after the fallout and in the years after Chernobyl, as the lack of information from an official source led those affected to invent increasingly fantastical stories. These rumors ranged, as Bodrunova describes, from stories of giant mosquitoes, to “the state of the station’s ‘sarcophagus’, allegedly very poorly constructed and just having a bunch of logs as a roof”. [38] Some also surmised that it was somehow an act of Western sabotage, as one interviewee says, “Someone set it up. All the guys think so”. [39] An example of the lack of information regarding Chernobyl is the speculation “that the plant was actually created to produce plutonium for the USSR’s nuclear weapons program,” supported by the fact that it was the only plant in the USSR to use graphite. [40] Unsurprisingly, the lack of available information also led to widespread panic as many thought they were “all going to die in two or three months,” which was supported by the fact that it was told to ‘Chernobylites’ by the State. [41] Rather than preventing public outcry and fear as the Soviets hoped, these theories demonstrate how the lack of official information led to widespread speculation and increased public panic.

As Bodrunova says, this atmosphere of fear was impossible to live with; for this reason Chernobyl was introduced into folk humour. While some were simply jokes - “How is radiation similar to prostitution? – Neither officially exists in the USSR,” - other representations of Chernobyl moved more towards Chernobyl in film and, later, in video games. [42] The creation of Chernobyl video games, such as S.T.A.L.K.E.R. is, according to Bodrunova, the result of such mythologization and “many of the users born after the catastrophe learnt of Chernobyl from the game”. [43] This is, however, as Bodrunova states, “a double-edged sword: [though]

informing about Chernobyl may seem [...] positive for raising awareness of nuclear dangers," the reality is that players are more interested in mutations, abandoned and dead cities, stalkerism, and the 'romanticism' of the place where time stopped. [44] As she says, "tragic aspects of the disaster do not seem to be of much interest for today's gamers". [45]

Marples describes Chernobyl as "first and foremost a media event" that was full of sensationalized accounts put forward by the Western media. [46] He denotes the presence of over sixty foreign journalists in Chernobyl in the summer of 1987 and provides a detailed analysis of several of the initial representations of the accident in film. Films like Sarcophagus by Vladimire Gubarev, Kolokol Chernobylya (The Chernobyl Warning Bell) by V. Sinelnikov and R. Sergienko, and Chernobyl: khronika trudovkh nedel (Chernobyl: A Chronicle of Difficult Weeks) by Volodymyr Shevchenk all deal with the incident differently. Sarcophagus is meant to be a message about the "horrors of nuclear war," while Kolokol Chernobylya focuses on the "human side of Chernobyl". [47] Chernobyl: khornikia trudovkh nedel, a film about the cleanup workers and "those who welcomed the evacuees into their homes" is most famous for the death of its director Volodymyr Shevchenko due to radiation sickness soon after the film was completed. [48] This differs greatly from the official discourse, which aimed to downplay the radiation danger in Chernobyl at the time. All of these films were meant to "tell their compatriots 'the truth'" of Chernobyl and together they "captured the essence of the situation of Chernobyl in the first weeks and months after the tragedy," thereby providing a clear contrast to the state narrative of the time. [49]

In the years since the disaster, Chernobyl has appeared in popular culture in various ways. Dobraszczyk investigates several different ways in which Chernobyl (and by extension Pripyat) is represented through film. Specifically, the idea of a ruined city - the urban apocalypse - and "how the ruins of Chernobyl and Pripyat have been aestheticized and appropriated for use in widely different contexts". [50] He describes how, as dark tourism has increased in popularity, representations of Chernobyl have become increasingly associated with photographs. Consequently, the enduring image of Chernobyl is one of decay and destruction, a city frozen in time. This interpretation does not reflect the reality of those still affected by the disaster, but as Dobraszczyk admits, the individuals in the photographs "intruded on any purely aesthetic reading of Pripyat's spaces" and thereby interfered with the creation of a particular, inaccurate, kind of narrative. [51]

Dobraszczyk also mentions the film Return of the Living Dead: Necropolis (2004), which was "universally derided on its release," featured "a colony of zombies introduced to Chernobyl's zone, battled by human visitors". [52] The video games, S.T.A.L.K.E.R.: Shadow of Chernobyl (2007), Clear Sky (2008), and Call of Pripyat (2009) were met with a greater degree of popularity. They were set in the Exclusion Zone and featured a "landscape of 'wonder and death' in which the game player battles with mutant zombies and other monsters before the final confrontation with something more fatal and threatening at the centre of the zone". [53] In part because there is a more tangible sense of engagement when playing video games more so than the films, they "demonstrate the blurring of the actual and the virtual". [54] As Dobraszczyk states, Pripyat, "although constructed from real photographs, function[s] as a kind

of stage set, subjugated to an atmosphere of eerie mystery and constant danger". [55] Despite the fact that the game is set in Pripyat itself, it attaches "zero value to the human consequences" of the disaster and instead positions the town as "a playground for dreams of escape". [56] Considering the fact that many players were first introduced to Chernobyl through these games, the effect this game could have upon someone's impression of the disaster quickly becomes apparent, thereby demonstrating how representations of Chernobyl influence its perception within different age groups in modern society. In other words, those who are largely unaffected by the disaster, whether they live in a different part of the world or had not been born at the time, can determine the way in which they frame the disaster and consequently, how the disaster is viewed by the larger society as a whole. As MacCallum-Stewart states, "history exists in many places within digital games as a motif, but is not really historical as a result". [57] Though certain aspects of history are used in the game, they are selectively chosen and therefore only offer a very skewed representation. For example, as Johnson says, in the S.T.A.L.K.E.R. game "you can reduce your accumulation and avoid getting radiation sickness by drinking virtual Russian vodka". [58] While the increased consumption of vodka in an effort to combat the effects of radiation is rooted in reality, its presence in the S.T.A.L.K.E.R. video game demonstrates the extent to which the dangerous nature of the disaster has been banalized in popular culture.

In the years since the accident, Chernobyl tourism has become increasingly popular, with some tour companies bringing "approximately 10,000 tourists there each year". [59] In his investigation of Chernobyl as a ruin, Paul Dobraszczyk explores Pripyat. He describes the visit as an "opportunity to discover a secret world in ruins, one that might challenge existing certainties and provide liberating alternatives". [60] However, as he moves through the irradiated city, he admits to an "uncomfortable sense of being a voyeur onto an ongoing catastrophe" which changes his "pleasurable excitement" to a feeling of "being overwhelmed". [61] The disconnect between the visitors and their location makes Dobraszczyk aware of the "immediate human presence in an otherwise empty space," emphasizing "the human impact of the ruin". [62] This awareness of human presence breaks the illusion of a romanticized ruin and highlights the "problematic nature of representing ruins". [63]

In recent years, the touristification of Chernobyl has become increasingly apparent. Stone discusses how Chernobyl "has become entrenched in popular culture," indicating the S.T.A.L.K.E.R. games, the Chernobyl Diaries film, and the novel Chernobyl Murders. Such instances of Chernobyl pop culture influence the preconceived notions many tourists have of Chernobyl prior to arrival. Though they do not necessarily assume that Chernobyl is secretly a land of mutants and zombies, they enter into the Zone with particular expectations which influence the type of tour they receive and, consequently, their opinion of the Zone upon departure. As Yankovska describes, Chernobyl tourism, which began in the "mid-1990s, after the level of radiation had significantly fallen," was "especially popular among foreign tourists from the United States and Western Europe". [64] The formal categorization of Chernobyl as a tourist destination, placing it firmly under government control, as Yankovska argues, was "a sign that the authorities recognized the site's potential and the role it [could] play in the region's social and economic development". [65] In the decade before 2011, when the Ukrainian government

officially sanctioned the tours, “thousands of people [...]undert[ook] illegal so-called ‘Cherno-tours’,” where tourists could, “for a fee,…[embark] on a ‘riveting toxic adventure’,” “meet these dead zone residents and explore how they live in the world’s most radioactive ecosystem”. [66] The tours were “complete with a ‘Stalker’ guide and dinner at the Chernobyl canteen,” thus demonstrating how popular culture representations of the accident had become entrenched in the accident itself. [67] However, as Stone points out, the danger in Chernobyl was still very much present; in addition to wearing protective clothing and radiation badges, tourists “still [had] to sign official waiver forms to relinquish any claim against ill health”. [68] These forms are obviously at odds with the so-called ‘harmless’ nature of the tours, suggesting, as Stone says, that the visits are “safe, but don’t blame [them] if you get cancer”. [69]

Davies also goes on a tour of Chernobyl, speaking to inhabitants and analyzing several memorials. He mentions that “the way we remember is influenced by the image we see,” and that “photographs act as ways of remembering but also producing memory” - two particularly poignant points with regards to Chernobyl, as the images dispersed vary greatly depending on their propagative context. [70] Davies also touches on the idea of ‘ruin porn’, admitting that it is a somewhat guilt-inducing process to create one’s own photographic collection. [71] He describes the dangers of such photography and dark tourism as a whole, stating that they “dramatiz[e] spaces but never see[k] out the people that inhabit and transform [them]”. [72] This is particularly important to Chernobyl; those who engage in dark tourism and take photos of a city frozen in time are a clear example of urban decay, gawking at what is, to the many who still live in the Exclusion Zone, an ongoing tragedy.

Johnson describes how the idea of nuclear tourism in the aftermath of Fukushima “along with the wonder of seeing towns and a whole city… left to the devices of nature” attracted him to Chernobyl. [73] He also mentions the cavalier attitude that he and the other tourists in his group had towards radiation by the end of the trip, describing how, when they reached a radioactive hotspot, they “stepped down holding [their] meters – they were frantically beeping – in a friendly competition to see who could detect the highest amount”. [74] This showcases how easily the accident was trivialized by those visiting Chernobyl for a brief time, as they could easily remove themselves from the area and they did not have deal with the repercussions of Chernobyl. This is also demonstrated in Blackwell’s account of his visit, as he ends by saying “early the next morning…I awoke to the symptoms of acute radiation poisoning…it wasn’t radiation sickness. What I had was a bad hangover and a bit of a sunburn. But I didn’t see much difference”. [75]

The role of tour guides in the zone is particularly important in regards to how visitors experience the zone and therefore how they view Chernobyl as a whole. The ages of the visitors to the zone is a significant point of discussion as this often greatly influences both why they are visiting as well as the type of tour they receive. As Yankovska says, 18 to 28 year olds “seem to be more interested in the excitement and adrenaline of the location, while those above the age of 28 usually visited “in remembrance of the tragedy”. [76] Unsurprisingly, the different reasons for visiting Pripyat influence how the tours are conducted, as the guides themselves say, “the tours provided to younger people usually have a different programme and different

tour guides". [77] Significantly, the route of the tour is also modified for the younger tourists with more specific visits to places mentioned in the S.T.A.L.K.E.R. video game (empty buildings, the car graveyard and the Chernobyl power plant itself). [78] This demonstrates the direct connection between perceptions of Chernobyl in popular culture and experiences of the physical location, showing how this colours the players' views of the reality of Chernobyl. By shaping the tour to match the way in which Pripyat is depicted in-game, the tourist experience of these visitors further supports the narrative created around the accident.

Regarding how one's home country affects their response to the visit, one of the tour guides interviewed states: "tourists from Ukraine, Russia, and Belarus who are directly or indirectly related to Chernobyl have a more emotional experience due to their personal connections with the place". [79] This reinforces the idea that those with any degree of connection to the accident would have a very different preconceived notion than those from other countries, who are, as the guides described, more interested in the "fun, fear, and thrill" that brings their Chernobyl to life. [80] As Blackwell describes, "it was the standard itinerary, allowing visitors to inhabit their preconceptions of Chernobyl as a scene of disaster and fear". [81] The move to present Chernobyl as similar to its depiction in S.T.A.L.K.E.R. also influences the seasons during which tourism is most popular, as tour guide B notes "autumn and winter are the best seasons for dark tourism when 'everything is grey, empty and frightening'". [82] The tour guides themselves play a crucial role in influencing how Chernobyl visitors experience the zone. As Yankovska says, they are "cultural brokers" who "select sights, offer information and interpretations to tourists [...]. [T]heir mediation may slant towards the tour guide's own professional training or personal preferences". [83] Though this obviously affects visitors' perceptions of Chernobyl, it is important to note that the relationship between tour guide and visitor is cyclical. Many tourists who visit Chernobyl expect it to correspond with the images they have previously associated it with, and the tour guides aim to fulfill these expectations. At the same time, however, the tour guides themselves have their own biases, several of which are tied into their own relationship with the Zone and their family's experiences. In other words, the factors that influence how a tour is conducted are multifaceted and clearly play a role in how visitors view Chernobyl once they leave.

Since 1986, Chernobyl has become associated with a conflicting combination of fear, confusion, the danger of nuclear energy, mutants, zombies, and video games. Though Chernobyl is often associated with the feelings of fear and confusion that characterized the early days of the accident, the existence of Chernobyl movies, novels, and video games ensure that, for the many generations who do not remember the accident, a very different connection is made. Perceptions of Chernobyl are even more divergent for those who were and are directly affected by the disaster. Not only is the official narrative closely tied in with state interests, the initial misinformation continued for years and left an indelible impression on the affected population. The memorialization of Chernobyl is therefore particularly complicated, as the aftereffects are still being felt by both those immediately affected as well as individuals who continue to live on contaminated land, told by the state that they can 'reclaim' said land by framing Chernobyl as a battle against radiation which can surely be won. The existence of the Chernobyl tourism industry is another example of how representations of the accident have changed over

the years. Though visitors to the Zone have a variety of reasons for attending and displaying an assortment of attitudes towards the incident, the fact that tours can be tailored to fit the 'S.T.A.L.K.E.R. experience' demonstrates just how entrenched pop culture representations have become in the reality of the accident. This is due in large part to the age group that comprises the majority of the Chernobyl tourism industry: individuals aged 18-28, who were too young to experience the disaster first-hand and therefore maintain conceptions that are both coloured by popular representations and often at odds with the experiences of those who are directly affected by the disaster, demonstrating the extent to which popular culture representations of Chernobyl can influence perceptions.

End Notes

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The Great Irish Potato Famine: A Geo-Sociological Analysis Through a Historical, Sociological and Economic and Demographic Perspective.

Jose Antonio Alatorre

Introduction

The Great Hunger is a most crucial point in Ireland's history, radically transforming Irish society from the mid-nineteenth century to today. One million deaths and almost two million migrants and exiles were the result of this catastrophe. Furthermore, an understanding of modern Ireland would be impossible without the study of the Great Famine and its influence on society and politics. This work analyses the historical causes and consequences of the famine from an economic, demographic, historical, and sociological perspective. First, from an economic and demographic point of view, the Great Hunger was provoked by three conditions: the heavy dependence on the potato, the population increase, and the high poverty rate. The sum of these factors provoked a scene of instability which was extremely sensitive to any imbalance in crops. Second, from a sociological perspective, the Great Famine was a consequence of a struggle between a ruling elite, made up of the landlords and the British Government, and a subordinated group that consisted of the tenant farmers, smallholders, agrarian laborers, and a petty middle class. Each group aimed to acquire or preserve power, prestige, and wealth. Both the dominant elite and the subordinated groups created a "discourse" that interpreted reality according to their interests in order to justify the struggle for resources, political power, and prestige. Moreover, the consequences of the Great Hunger completely transformed Ireland. For instance, the Irish experienced a decrease in population that modern Ireland has yet to recover from. However, the famine also had positive impacts on the economy, such as increase in the demand for the Irish livestock, the creation of financial entities, and the spread of railway throughout all of Ireland. Furthermore, the famine worked as a social catalyst, allowing the tenant farmers and extreme nationalist groups to fight together against the ruling elite. The fusion of the tenant farmers and the petty bourgeoisie was possible through the creation of a new nationalist discourse that took interests of both groups into account. Thus the dominating group could acquire more power, wealth, and prestige.

Economic and Demographic Factors

The Irish Potato Famine was caused by three different geographic factors. First, the dependence on the potato; second, the enormous widespread poverty across Ireland; and finally, the dramatic increase in Irish population. These factors combined engendered the conditions of Ireland's collapse.

The Hegemony of the Potato

Though all potatoes belong to one species, solanum tuberosum, there are about 235 types of potatoes widely distributed from the southwestern United States to northwest Argentina. [1] Because of the potato's wide distribution, it can adapt excellently to almost all kinds of climates. This root was brought to Europe after the discovery of America by Spanish conquerors. By 1586, potatoes arrived in Ireland, transforming the diet of all Europeans because of its nutritive value and adaptability. Soon, all levels of Irish society incorporated the potato in their diets. However, potatoes became the principal meal of laborers and cottiers. In 1845, the potato was the dominant source of food for 4.7 million people, half of Ireland's total population. [2] Of that 4.7 million, 3.3 million had a diet consisting exclusively of potatoes with some milk or buttermilk. [3] Nevertheless, the potato's adaptability and nourishing properties were not the main reasons for its culture in Ireland. Indeed, two parliamentary measures contributed to the potato's omnipresence. First, the Reclaiming of Unprofitable Bogs Act allowed the lower class to reclaim unprofitable bogs and convert them into arable or pasture lands, where they could only plant potatoes.[4] Second, the Catholic Relief Act of 1793 enabled Catholic landlords to lease bits of marginal lands to people desperate for acreage [5] Again, these despairing people could only plant potatoes in low quality farmland. Consequently, 14 lb. of potatoes were consumed everyday by adult males of the laborer class before 1845. [6] All the other types of food were luxury items in the diet of the 3.3 million who depended heavily on potatoes - a food choice reserved for holy days for 1.1 million people more. However, the main weakness of the potato dependence in Ireland before 1845 was the lack of variety in potato crops. Even though England grew a wide array of potatoes types once the root had arrived in Europe, Ireland only grew three varieties: Black Potato, Red Cup and Lumper, though the former comprised 90% of all potatoes produced, as this variety was suitable for poor soils. [7] However, Lumper is also very vulnerable to blight; consequently, in 1845 and 1846, the majority of potato harvests were lost to a blight epidemic, affecting the main food source of 4.7 million people.

II. Poverty in Pre-Famine Ireland.

Before the end of the Napoleonic wars, Ireland was experiencing a long period of economic expansion. The country's economic success was a result of the increase in demand of Irish products by France and England and the restriction of imports from continental Europe. However, in 1815, Ireland's economy declined due to the lack of demand for food by British and French colonies in the West Indies, and the new agricultural expansion of Great Britain. As a result, the rural class was deeply affected by the economic crisis. [8] Furthermore, the increased demand for farmland between 1790 and 1815 forced Irish tenants to pay higher rents, affecting both big farmers and landless laborers. Consequently, cottiers and laborers were forced to hire lands to grow potatoes seasonally. Moreover, the average income of the rural class was reduced due to the increased population in pre-famine Ireland [9] and the distribution of resources produced by small plots between large families. According to the poor inquiry commission of Irish laborers, "the average annual income was barely £13 of that time," [10] which had to be divided between six or seven relatives. However, even though the country's economy was predominantly based on agriculture, Ireland had a certain level of industrialization before the post-Napoleonic wars crisis. The cotton and wool industries were the most important industries before 1815. [11] Nevertheless, in 1820, these two industries collapsed,

for three reasons. First, the Act of Union created a free trade area between Scotland, England, Ireland and Gales. Second, Scottish and English industrial technology was considered superior. Finally, the Currency Act caused a severe recession, closing the industrial points in Ireland, as over 60 English banks were forced to suspend payments to Irish companies. [12] As a result, Ireland developed a process of deindustrialization; it based its economy on poor agriculture, which was surpassed by modern and industrialized Scottish and English agriculture, and dependent on Scottish and English imports of wood and cotton, which had been produced in Ireland before the Act of Union.

III. Population Explosion in pre-famine Ireland.

The fast and disorganized population growth and the lack of economic expansion in pre-famine Ireland contributed to the high mortality rate of the disaster. Before 1815 and after the Great Hunger, Ireland witnessed a low population growth; however, from the end of the Napoleonic wars (1815) to 1845, Ireland experienced a period of rapid population expansion. [13] According to the census of 1810, there were 6.8 million people in Ireland. The population grew from 6.8 million people in 1821 to 7.8 million people by 1831, and in 1841, the island had 8.175 million people. Finally, Ireland's population reached 8.5 million in 1845. [14] This fast growth rate depressed the welfare of the cottiers and landless agricultural laborers, who comprised the majority of the population, as their work was paid with a part of the harvest, a small plot, and a cabin to live in. The Reclaiming of Unprofitable Bogs Act and the Catholic Relief Act of 1793 also allowed many poor families to buy, inhabit, and harvest low quality farmlands. As it became easier to establish new families on small plots and marginal lands, the age of marriage decreased, contributing to the explosion of the Irish population in the 19th century. [15] Thus, the lower class had to share these scarce resources between a multitude of offspring. This phenomenon is at the root of the agrarian problem in pre-famine Ireland due to fragmentation of holdings. In 1844, 135,000 holdings had less than 1 acre. 770,000 holdings did not have more than 10 acre, while 250,000 had between 10 to 20 acres. As a consequence, the productivity of Irish agriculture was in deficit. [16]

The culmination of these economic and demographic factors led to Ireland's nationwide famine. The constant growth of the population and the dependence on potatoes as a main food source created an environment where any changes in potato harvests had a direct impact on the population. Furthermore, the Act of Union and the free market economy with Great Britain led to unfair competition and the exportation of factories. This caused the de-industrialization of Ireland, exacerbating the feudal economy's landlordism. As poverty increased and the country's economy deteriorated, Ireland found that it lacked the economic resources to import food from abroad and feed its population, which in turn contributing to the high mortality rate which occurred as a result of the famine.

Social Conditions: The Agrarian Conflict

The political conflicts between the different social groups during the Great Hunger have

their roots in the Act of Union of 1801 and in the landlord system imposed in Ireland by Queen Elizabeth I. The famine itself also contributed to the intensifying tensions between such groups. On one side was the subordinated class, made up of tenant farmers, agricultural and landless laborers, smallholders, and cottiers who demanded fairer tenant rights and security tenure, as well as a petty bourgeois middle class (journalists, doctors, notaries, and lawyers) who were fighting for Ireland's independence. Due to their diverging interests, the different factions of the dominated class could never organize themselves properly during the famine. On the other side was the ruling class, comprised of landlords and British high officials. This group made the most crucial decisions in Ireland, maintaining its power through the feudal system, the Act of Union and the parliament in London.

Landlords had both the monopoly of land and absolute political power in Ireland. Their main source of income was the rent from the farmers and tenants who leased their lands, but some landlords would end up bankrupt when their tenants could no longer pay. This was due to poor harvests during the Famine. [17] Many landed proprietors lived in Britain and were members of the Westminster Parliament. For example, between 1832 and 1859, landowners made up 17% of the parliament members that represented Ireland.[18] The Irish dominant class was represented by the Conservative party and the Liberal party. On the one hand, the Conservative party, which was a defender of the established order in church and state, was the political party of the landed class. The Liberal party however, was supported by small groups of Irish aristocrats, and a section of the Protestant middle class. [19] These social groups were in conflict against the tenants for their non-payment of the rents of the farms as a consequence of the Famine. Both the Conservative party and the Liberal party demanded the strict compliance of the laissez-faire economic law in order to avoid any governmental attempts to distribute the lands. This was done to create a co-ownership relation among the landlords and the tenants, giving an extension to the tenants' unpaid rents. The laissez-faire law argued that economy was controlled and ordered by "an invisible hand", which was the result of the natural behavior of the market when the government did not intervene in the economy. In the exceptional situations nonetheless, like the Irish Famine, the laissez-faire approach could only maintain the status quo by avoiding any form of social restructuring that could benefit the dominant class. For example, the parliament opposed the importation of the cheap 'Indian meal" to help individuals dependent on the potato because the purchasing of maize by the government could interfere with the economy. Their main argument was that the food producers or landlords could not fairly compete against the low prices of the imported Indian corn. [20] Thus, the parliament changed their strategy to deal with the Famine after Peel's government in 1846.

The tenants and the professional middle class were represented by one political party, the Repeal party, and by the Young Ireland, a political activist group. The professional middle class did not have much representation in the parliament. between 1832 and 1859, as the Irish middle class was represented by 15% of the Irish constituencies. [21] The main goal of the Repeal party, led by Daniel O'Connell, was to repeal the Act of Union, and to restore the Irish parliament. [22] This political party was made up by different segments of the Catholic middle and lower classes. For the Catholic middle class, the repeal of the Act of Union was a way to

regain the control of Irish affairs by the Irish people, as well as a reorganization of the Irish economy. Nonetheless, to the Catholic lower class, the Repeal Party represented a symbol of the renovation of the social and political order. [23] However, the Repeal Party struggled to repeal the Act of Union and to secure the rights of tenants, who demanded security of tenure. The Repeal Party recognized private property as the basis of the social system; however, it repudiated the absolute ownership of land. It also claimed that the community deserved ownership rights over the land it harvested, proposing co-ownership with the landlords who were away from their lands and Ireland. When Daniel O'Connell died in 1847, the Repeal Party lost its political influence in the parliament. This was when the Young Ireland, a more extreme activist political group, proposed Ireland's independence from the UK, and the restoration of the Irish parliament in Dublin. The desire of O'Connell to associate repeal with the Catholic interests was criticized by The Young Ireland [24] whose secession from the Repeal party took place when they denied the use of violence as a means for the repeal. Fintan Lalor, the leader of the Young Ireland, proposed the redistribution of farmlands among the cottiers and smallholders, as well as the rights of landlords over their lands to be subordinated to the common good.[25] The Young Ireland activist group was more popular with the lower class than the Repeal Party as they pushed for the right of the smallholders, and quested a union of classes in favor of a popular rising. Thus, on 29 July 1848, inspired by the rebellion in Paris to overthrow King Louis Philippe, the Young Irelanders took up arms against the government. Nationalism was a tool they used to create a feeling of common identity among the majority of Irish people who lacked representation in parliament. They were living in poor conditions as a result of the economic and political problems of Ireland. The Young Ireland expected to arouse the masses to join them in a rebellion against the United Kingdom through their feeling of collective consciousness. In doing so, Ireland would be able to make its own decisions, and as such they could import food without having to respect the laissez-faire. Also, the possible independence could have reactivated the Irish industrialization, which ceased due to the English and Scottish cotton and wool industries after the Act of Union of 1801. This excluded Ireland from a free trade zone between Scotland, Wales and England. By reactivating the industrialization, the principal Irish means of production would not be agriculture, but rather industry. Thus a new social class could displace the old social order of the landlords as the dominant class.

The lower class, consisting of cottiers, agrarian labourers, landless and small holders, primarily suffered the ravages of the famine. However, there was an insufficient representation in parliament because their work did not generate profit or capital gain. Instead of receiving a wage, they were compensated with the necessities to survive: food, housing, and a small plot. As such, peasants were not considered a social class in and of themselves, thus deteriorating their ability to form class consciousness. This was further deprived by their recognition of common inequalities between members of the same social strata against the social groups who dominate them. [26] Peasants therefore did not develop a collective identity related to their social position, neither did they organize themselves in a group to struggle for a fairer distribution of the farmlands as a means to improve quality of life and to avoid starvation. The peasant had to grow oats and wheat for the tenants and landlords, in exchange for small plots to harvest potatoes. Thus the agrarian laborers could harvest hundreds of tons of oats and

wheat while they were starving due to the blight. During the famine, Ireland exported a lot of food to England and others countries. [27] Therefore, the Irish economy was a sort of feudal system in which the peasants were part of the land itself.

Finally, the rebellion of 1848 and the Repeal Party were manifestations of the struggle between the different social groups for the resources and power during the famine in Ireland. The conflicts between tenant farmers and landlords was not caused by the famine itself, but by the Act of Union and the land system established by England. Furthermore, the division between tenant farmers and the Young Ireland was a consequence of the lack of a common identity based on nationalism among the different elements of the subordinated class.

Consequences

Social Consequence: Power Struggle

From 1850 to 1881, the Irish Potato Famine provoked a set of socio-economic transformations which radically transformed Ireland. This included the bankruptcy of many landowners, a fairer redistribution of land among landlords and tenant farmers; the foundation and alliance between the tenant farmers and the nationalist brotherhoods; the Land War; and finally, the creation of new bills that empowered the Irish middle class. These reforms were the outcome of the struggle among four different social groups which resulted in alliances among themselves, according to their interests. On the one hand, the tenant farmers struggled for the recognition of their rights, fair rents and security of tenure, while nationalist organizations fought for the independence of Ireland. The alliance between these two different groups was made possible due to the creation of a new nationalism based on the recognition of the importance of the land question as the first step to develop national autonomy. On the other hand, the British government and the Irish landlords helped one another, through unfair clauses in land bills in order to maintain the status quo.

The tenant farmers were empowered by new opportunities that clearance had brought with itself. Both the bankruptcy of the landlords as well as the death and emigration of cottiers and smallholders had allowed tenant farmers to acquire the farmland of their neighbours. However, due to the death of Daniel O'Connell in 1847, the Repeal Party began to weaken, along with the political representation for Irish tenants in the parliament. Then, in 1851, the Irish Tenant League was created in order to come up with a solution to the growing tensions between landlords and tenants farmers. This organization demanded three basic tenant rights: (1)" tenants should be assured of a fair rent, fixed by an impartial valuation; (2) they should have security of tenure as long as they paid their rents; and (3) they should be able to sell their interest in their holdings at best price they could obtain". [28] In 1852, the tenant's representation in the parliament became a serious threat to the landlord's counterpart and the British government in Ireland. However, the tenant farmers were not a radical group. As the Repeal Party they wished for the gradual peaceful transformation of Ireland. Nevertheless, the frustration caused by the Land Act of 1870, which did not encourage landlords to sell their land,

forced them to make an alliance with the extreme nationalist movement in order to achieve a real change in the redistribution of land and the recognition of the tenant rights. Moreover, after the failure of the 1848 war and the exile of the Young Irelanders, Ireland continued to witness nationalist movements, including The Fenian and the Irish Republican Brotherhood. Their aim was to overthrow British rule in order to establish an Irish Democratic Republic and an Irish parliament in Dublin. Both groups were highly supported by Irish-Americans who were forced to immigrate to the United States as a consequence of the Great Famine. While abroad, these Irishmen sent money to their families and political movements. Many American newspapers similarly harshly criticised the British government's treatment of Ireland. [29] The Fenian Brotherhood was founded in 1858 by Michael Doheny and John O'Mahony, who had been members of the Young Ireland. [30] The Fenians were one of the most popular nationalist organizations because they directly negotiated constitutional reforms in order to achieve their objectives. However, the Fenians were very different than the old Repeal party, which aimed for a peaceful and legal transformation of Ireland. In 1867, the Fenians organized a rebellion against the British government, but that rebellion was as unsuccessful as the revolution undertaken by the Young Ireland in 1848. [31]

In February 1868, the Fenians unsuccessfully battled with the police in Cork. Both organization were bourgeois movements that fought for the modernization of Ireland through "establishment of a republic based on the universal suffrage, which shall secure to all intrinsic value of their labour, the absolute liberty of conscience, and the complete separation of Church and State". [32] Although the Fenians and the IRB were bourgeois political organizations, they were organizations made up of several social sectors. Their recruitments were constituted mainly by agricultural labourers, building workers, shop clerks, and rural immigrants who could not integrate properly into the new urban environment. [33] This mosaic of social groups was also an illustration of the item to democratize Ireland by channeling the energies of the cottiers and agricultural labourers into a national organization. Moreover, on March 17 1858, the Irish Republican Brotherhood was founded by a group of extreme Irish nationalists. At the same time, many members of the Fenian Brotherhood were also members of the Irish Republican Brotherhood. The IRB had the same goals and characteristics of the Fenians, even though the IRB was more successful and better organized. In 1879, the tenant farmers and the IRB made an alliance to reform the country's landlord system. Again, Ireland lived a period of rebellion and war, this time however, both tenant farmers and nationalists were successful. The final result of the Land War was the Act of 1881, reducing the inequalities between landlords and tenants. This act embodied the tenants' demands for the three Fs, "fair rents, fixity of tenure and free sale". [34] It allowed the Land court to set judicial rent upon application by a landlord or a tenant, which usually would be a re-fixed rent for 15 years. However, landlords and tenants could agree on a voluntary rent which would as well be fixed for 15 years. With this act, the landlord could only receive their rents by establishing a system of dual ownership of the land. Consequently, landlords were more flexible to sell their lands at fair prices. [35]

The outcome of the fusion between tenant farmers and nationalists helped in establishing a strong Irish national identity, one created through the struggle against landlords and the British domination. The Great Potato Famine worked as a catalyst to transcend the differences

among tenants and extreme nationalists, since farmers realized that only the 3 Fs would bring them security and protection against possible future famines. However, the Irish nationalist groups also realized that the mobilization of the tenant farmers could only be possible by settling the land question as the first step in achieving national independence. Over time both social groups understood the importance and deep connection of the landlordism system in relation to the British domination in Ireland.

Landlords were ruined economically by the Famine. This bankruptcy was caused by three main reasons. First, the incapacity of tenant farmers to pay their rents. Second, the fiscal duty to relieve the Famine; and finally, the sale of their land as a measure imposed by the Encumbered Estates Court to pay their debts. In 1847, the government ended its assistance for starving victims of the famine. The parliament transferred the government's responsibility of the Poor Law to taxpayers, who were mainly the landlords. Now the taxpayers had to provide assistance for more than one million people. Nevertheless, they went through economic problems due to their reduced income from unpaid rents. [36] As a result, the landowners fell into debt as they needed to finance their activities and pay taxes themselves while famine played a role too. Nevertheless, landowners were unable to sell their properties, pay their debts because the land was entailed, it being their main source of income. Consequently, in 1849, the British government created the Encumbered Estates Court in order to sell off insolvent estates. [37] As a consequence of the Encumbered Estates Court, "the landlord class was too prostrated and poor to buy land on offer at bargain prices, and their place was taken by grasping businessmen and lawyers" [38] the old tenants farmers could not buy the lands because they were in financial problems too. However, there were a high elite of proprietors that continued to have more lands than before the Famine. That elite was made up of the landlords who were free of debt before 1845.

This group of landowners were in a good position to buy off the properties of bankrupt landlords. Thus landlordism managed to maintain the status quos, and now more lands were in the hands of fewer people. This was in spite of the new acquisitions of land by the professional middle class, living in urban centers, and pertaining to those who did not have enough money to buy long extensions of land. Moreover, the tension between tenant farmers and landowners kept growing after the Famine. As a result, the Land Act of 1870 was created as a measure to solve this problem. The Land Act of 1870 legalized the old "Ulster Custom", which provided "tenants farmers the informal right to security of tenure so long as rent was fully paid, and the freedom to sell the right of occupancy to another, thereby affording the tenants some equity in the holding and serving as an incentive to improve it". [39] Also, this act included the "Bright Clause" that "allowed for the sale of land to tenant, with the government making loans available for up to three-quarters of the purchase price". [40] Nevertheless, few tenants benefited by the clause because it did not encourage landlords to sell their lands. Even though the Land Bill brought some benefits to tenant farmers, it did not provide security of tenure. The land reform did not improve the situation of Irish farmers because it did not incorporate fixity of tenure at fair rents. Thus the landowners pretended to squid the tenant farmer, and to maintain their status quo at the same time.

Finally, before the famine, the Irish society had been experiencing a conflict among four different social groups for the control of land and political power. However, the Great Hunger worked as a sort of social catalyst so that similar groups could make alliances according to their interests. The alliance among the tenant farmers and the Fenian and Irish Republican Brotherhood was possible due to the creation of a new common nationalism based on the recognition of the importance of the land. This question was the first step in order to develop a national autonomy. Furthermore, the understanding of the relationship between British rule and the Irish landlordism was the main cause of the famine. On the other hand, the British government affected the Irish landlords by selling their lands as a consequence of their bankruptcy due to the famine. Nevertheless, both dominant groups protected each other in order to maintain their status quo over Ireland.

II. Power, Prestige, and Wealth

The Great Hunger was a turbulent period of political instability between Ireland and Britain. From 1840 to 1880, the tenant farmers and the extreme nationalists created a new socio-political discourse challenging the British hegemony. The main goal of this new nationalist discourse was the acquisition of power, wealth, and prestige by the Irish subordinated class. However, the British rule attempted to maintain its status quo through the Weberian notion of authority, consent and coercion.

According to Max Weber, "authority makes subordinates consider the domination by their leaders to be legitimate. Thus subordinates accept, obey and support their domination and view it as preferable to any alternative". [41] The British rule controlled Ireland through traditional authority, rational-legal authority, and charismatic authority. The Weberian notion of traditional authority states that the power of this type of authority is legitimized through well-established respect and obedience of the traditions and classic conventional cultural patterns. [42] Irish landlordism was established in the 16th century by the Queen Elizabeth I in order to subdue Ireland and attempt to abolish the Catholic Church. [43] This became the custom during British domination, and over time the majority of the Irish population accepted the authority of the English and Scottish landlords without protesting their abuse. Furthermore, the parliament in London illustrated the rational-legal authority. According to Weber's concept of rational-legal authority, legal laws, rules and regulations, which are established by individuals and their ideologies, are a tool to legitimize the control of a given authority. [44] This was demonstrably in effect at the time, as the British parliament was mostly made up of Scottish and English representatives, and the 70% of the Irish representatives were landlords. [45] In addition, concept of charismatic authority[46] was represented in Queen Victoria who had a very important influence among parliament and the landlords, who belonged to the British aristocracy and had sworn allegiance to the Queen like all citizens of the UK. Moreover, the 'British disciplinary power' systematized and transmitted social control among the UK through a capitalist discourse which organized both the country's economy and society. Due to the high unemployment rate in Ireland, the British parliament introduced a Poor Law in 1834. However, "the condition[s] of relief provision in Ireland were made harsher than in Britain, and relief could be provided only in workhouses". [47] Because of this laissez-faire discourse,

the government could not contribute to the upkeep of the workhouses. Therefore, the rent payers, many of whom were bankrupt because of the bad harvest, were responsible for providing relief for an enormous number of people during the famine. Furthermore, the British's capitalist discourse did not allow for the Irish Prime Minister to import provisions to relieve the famine, since the British parliament argued that the state must not intervene in the economy. The parliament believed that "Adam Smith's idea of "the invisible hand of the free-market" [48] could fairly control the supply of food in Ireland. However, this measure only promoted profiteering by English merchants; thus, the British discourse of capitalism controlled the Irish economy. Finally, the British rule maintained its hegemony over Ireland through the Land Act of 1870. This act provided "tenant farmers the informal right to security of tenure so long as rent was fully paid," whereas the 'Bright Clause' "allowed for the sale of land to tenant, with the government making loans available for up to three-quarters of the purchase price". [49] The outcome of the act did not encourage landlords to sell their lands. Therefore, the Land Act of 1870 reflected a negotiation between the English landlords and the tenant farmers, benefiting the tenant farmers in order to help them accept the inequalities between landlords and their renters. [50] Furthermore, the British domination was maintained through coercion when the rebellion of 1848, the Fenian and IRB movements, and the Land war were violently suppressed by the British army and police.

The subordinated Irish people aspired to have more power, prestige, and wealth, as these were mainly concentrated in British stations. These desires manifested in various forms. First, the struggle for power was reflected in the Repeal Party, which proposed the repeal of the Act of Union and the establishment of the Irish parliament in Dublin as a measure to reduce the poverty in Ireland and control the famine. Second, the struggle for prestige was illustrated in the Young Ireland, the Fenian, and the Irish Republican Brotherhood groups. These nationalists factions fought for the absolute independence of Ireland from the UK. The recognition of Ireland as an independent and sovereign country would present itself as a prestigious nation worldwide. Thus, the Irish immigrants in the U.S would be treated more respectfully by the racist American society of the 19th century. Third, the struggle for wealth, led by the Tenant League, endeavoured for a fairer redistribution of land and tenure security. This effort was resulted in the Land War of 1879, as well as the Land Acts of 1870 and 1880, in which tenant farmers could negotiate the price of rent with the landlords and establish tenure security. The ongoing struggle to see these demands met was the outcome of a process of counter-hegemony, caused by the creation of a new discourse which united two different ideologies. On the one hand, the tenant farmers tended to favor moderate land reforms, and believed that only land ownership would bring them security. On the other hand, nationalists wanted complete separation from Britain. [51] The new nationalist discourse allowed extreme nationalist groups to recognize the importance of the land as the first step to achieving autonomy, of understanding the connection between the land tenure system and the political domination of the British, which tenant farmers further viewed as accountable for the system that brought famine and economic crises to Ireland in the first place. [52] Thus, many social sectors of Irish society were united under a common discourse that challenged the British status quo, and aspired to benefit all Irishmen.

In this sense, both the subordinated Irish people and the ruling British elite aspired to maintain or acquire power, property and prestige. In order to keep its privileged position, the English rule exercised its power through a Weberian authority and the use of consent and coercion. On the other hand, the subordinated group of Irishmen created a new nationalist discourse that united all social factions of Irish society as a counterhegemonic measure to achieve their goals.

Demographic and Economic Consequences:

The famine in Ireland had three important consequences. Firstly it increased immigration rates significantly, reduced the size of the Irish population, and resulted in a significant decline within the economy.

Mass Emigration

Emigration was an alternative to escape the catastrophe in Ireland. Between 1845 and 1855, [53] about 2.1 million people immigrated to different countries. 1, 500, 000 left for the U.S.A, 340,000 for Canada, 300, 000 for Britain, and finally, approximately 50, 000 for Australia and New Zealand. [54] A majority of Irish immigrants chose to immigrate to the US as they did not want to move to another British Commonwealth territory. Even those who immigrated to Canada chose to move from there to the US. [55] However, the Irish experienced horrible conditions while sailing, a tenth of those embarked to the U.S, and about a third destined to go to Canada died on the ships. This was some days after debarkation, from the confinement, infection, disease, and lack of food during the trip. [56] Moreover, the Irish emigration contributed strongly to the industrial development of the U.S. by providing an enormous amount of labourers. [57] Irish women similarly provided cheap domestic assistance and were part of a cheap labour force in factories. [58] Many of these women encountered discrimination in American society. Firstly, as a result of the severe malnutrition caused by the famine, many Irish immigrants were unable to fend for themselves, and plenty also suffered from physical and mental disabilities. Second, the majority of immigrants were Catholic, and despite contributing to the spread of Catholicism in the country, the mainly Protestant, American society firmly rejected the Catholic Irish immigrants due to perceived cultural differences. Finally, 50% of the immigrants spoke Gaelic, and were not familiar with English. The difference between the languages also provoked conflicts between the Americans and the new arrivals. [59]

II. Population

Due to the famine, Ireland experienced a strong decline in population. In 1845, Ireland had its highest population of approximately 8.5 million. However, the census of 1851 recorded a population of 6.65 million.[60] In only six years, the Irish population decreased by 1.85 million due to high mortality, the exodus towards America, and the low birth rate. Ireland has yet to reach the same level of population as that in 1845; indeed, in 2015 Ireland only had a population of around 5 million. [61] From 1846 to 1851, a quarter of a million people died from starva-

tion. [62] Other deaths were caused by infections or diseases linked to a lack of nutritive food, such as scurvy, cholera, dysentery, fever, etc. Due to the famine, Irish society experienced a change in its socio-demographic paradigms. There was a rise in the average age at marriage for both men and women, as well as a decrease in offspring. The immigration from countryside to urban centers also altered rural customs, and people went from having big families, which helped with agrarian work, to small families, which were more suitable for urban life.

III. Economy

The economy in post-famine Ireland had many positive changes, such as the increase of live animal exportation, the improvement of work conditions, and the increase of banking facilities. In 1865, English cattle was severely affected by the rinderpest, "the cattle plague". [63] However, the Irish livestock was not affected by the plague, thereby increasing its demand. Some years before the Great Famine, Ireland had replaced native breeds such as the Irish Longhorn, and introduced new and better livestock breeds, [64] like the Berkshire, Large White pigs, and Leicester sheep. The improvement of the Irish livestock and the large demand that the English livestock crisis provoked caused an increase in the export trade in live animals.

Average Annual Exports of Live Animals from Ireland[65]

Period	Cattle	Sheep	Pigs
1801-05	27,994	-	-
1821-25	46,724	-	-
1850-54	194,673	213,260	133,762
1855-59	295,293	490,840	316,027
1860-64	373,058	450,754	356,443
1865-69	409,364	623,367	348,608
1870-74	557,960	634,615	420,554

Furthermore, there was an improvement in the labor conditions as a consequence of the reduced population by the heavy immigration and the famine, between 1841 and 1880, as farm labourers fell from 1,320,239 to 473,070. [66] This improvement of the economic situation was the output of the continuing demand for labour combined with the decline in the number of labourers. Consequently, the wages of the agrarian workers witnessed a significant increase. [67] The new rural prosperity demanded better transportation systems, whereby the railway had a very important native investment. In 1853, of the 1000 miles under construction, 900 had been built by native constructors. This number contrasts with only 65 miles being built by Irish investors in 1845, and the 183 miles in 1849. [68] Moreover, before the famine, the main impediment to the development of Ireland's agriculture was a shortage of capital as a consequence of the unequal distribution of income between landlords and tenant farmers. [69] After the Potato Famine, Irish agriculture had an increase of banking facilities. There were two sources of credits for farmers, the first one being the joint stock banks, moneylenders,

loan fund societies, co-operative credit societies and the state. [70] These financial sources replaced local usurers that collected very high and unfair interests to tenant farmers and smallholders, and created better investment conditions as a result.

Finally, the Irish Potato Famine radically transformed the demography in Ireland through the mass emigration that took place and the reduced population size. However, the Great Hunger not only brought death, pain and desolation, but also more opportunities and important changes in Ireland. As a consequence of the depopulation, wages of the labourers were higher, and the economic conditions in the countryside were better.

Conclusion:

The Great Irish Potato Famine was the worst catastrophe in Ireland's history. This disaster was an outcome of the British imperialism in Ireland. The three demographic and economic conditions that provoked the famine - the poverty, the heavy dependence on potatoes, and the population explosion - were caused by the Act of Union of 1801, impeding the industrial development of Ireland. Consequently, the majority of the Irish people worked for the British landlords as part of cheap agrarian workforce. Furthermore, the socio-economic inequalities caused a struggle between the British ruling elites and the Irish tenant farmers and middle class for acquiring or minting more power, wealth and prestige. Nevertheless, the Great Hunger brought many positive benefits to the Irish society. First, from a demographic and economic perspective, Ireland improved its economy through the increase in its exportation of livestock, the expansion of the railway, and the foundation of new financial entities. Second, from a social perspective, the dominated groups acquired more properties through the Land Act of 1880 that promoted a fairer redistribution of farmlands between tenant farmers and landlords. In this manner, the famine allowed for the creation of a new nationalist discourse between tenant farmers and the urban middle class. This new nationalist discourse established the basis for the independence of Ireland in 1921, and thus the social groups controlled by the British elites could acquire power and prestige.

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Biographies

Editor-in-Chief

Rachel Rammal

Rachel is enrolled in her fourth year in the Honours B.A Psychology program. Aside from being an avid reader, her curiosity and bubbly personality fuel all her adventures including embarking on this journey as Editor-in-Chief of the second edition of Between Arts & Science. She aspires to travel the world, teach, write, pursue a doctorate degree in Industrial & Organizational Psychology and open her consulting firm. Her research interests include women in leadership and power and she is hopeful that she will contribute to reducing gender inequality in the workplace and beyond.

Editorial Board | Department Editors

Creative Writing

Daliah Farajat

Daliah Farajat is the Department Editor for Creative Writing with the ASFA Academic Journal. She is in her second semester within the Biochemistry program, while working at the Center for NanoScience Research at Loyola Campus. Her involvement with the school community extends to the Concordia Undergraduate Biochemistry, Chemistry and Physics Society (CUBCAPS) as well, where she holds the position of VP Academic. Daliah had a great experience networking and collaborating with her peers while working to put together the journal.

Social Sciences

Heloise Martorell

Heloise is in her last semester at Concordia University, studying in Political Science and Human Rights. She is interested in American domestic and foreign policy, comparative politics, and international relations. She uncovered her passion for editing through in-class peer reviews and enjoyed the opportunity to give constructive criticism. Editing is a medium that allowed her to improve her writing and expand her knowledge on the different dimensions of social sciences. By next year, Heloise hopes to be pursuing a masters in American politics in the United Kingdom.

Humanities

Christopher Stephens

Christopher Stephens is the Departmental Editor for the Humanities with the 2017 Arts and Science Federation of Associations' Interdisciplinary Academic Journal. He is an Honours student in the Classics department, with a research focus on the presentations of female identity, gender relations, and gendered violence in Roman love elegy. His scholarship has been presented or published both at Concordia and elsewhere. His experience with the journal has greatly refined the editorial skills he had acquired while serving as a teaching assistant over the past three years.

Humanities

Christopher Stephens

Christina Massaro is in her last semester at Concordia University, completing her Bachelor's degree in Behavioral Neuroscience. She currently volunteers in three different laboratories at Concordia in various fields, such as schizophrenia, health and stress, and memory. Her science oriented background makes her the perfect choice for the position of the departmental editor for the sciences portion of the Arts and Sciences Federation of Associations' Academic Journal. She hopes you enjoy all the scientific papers chosen as much as she enjoyed selecting them.

Editorial Board | Copy Editors

Julie Brown

Julie Brown is an Art History and Studio Arts undergraduate student with a passion for academia. Her work as a Copy Editor with the ASFA Academic Journal this semester has inspired her to pursue a minor in Professional Writing, starting in Fall 2017. She hopes that readers will appreciate the hard work of both the authors and the publication's team, and is deeply grateful to have worked with such brilliant and dedicated individuals.

Leah Sarah Peer

Leah Sarah Peer is a second year student, specialising in Biology and pursuing a minor in Human Rights at Concordia University. Leah loves reading and writing, and thus is delighted to have been a Copy Editor for the ASFA Interdisciplinary Academic Journal. To have collaborated with so many talented individuals on the Editorial Board, she has learnt so much and expanded her understanding of other disciplines. This experience will forever be cherished and bring a smile to her face for years to come.

Steven Warsh

Steven Warsh is a fourth year student enrolled in the Athletic Therapy (Exercise Science) Program. The journal has been a great opportunity to enhance his editing and written skills and broaden my understanding of various disciplines. Between Arts and Sciences is a truly unique interdisciplinary journal that brings together many areas of study that would not normally be grouped in the same category. He feels very fortunate to have been selected among his colleagues and is very proud of the product that the team was able to put forward for the community.

Editorial Board | Proofreaders

Tyra Baltram

Tyra Baltram is a fourth-year Concordia Student, graduating in June with a degree in English Literature and Professional Writing. Tyra hopes to pursue a career in the publishing world. She currently works as the Social Media Editor at Soliloquies Anthology and as a Proofreader at the ASFA Interdisciplinary Journal. Tyra is a passionate writer herself and often wastes away the weekend working on her original creative writing. She gained invaluable experience on the team and made a lot of great friends in the process.

Talia Ritondo

Talia Ritondo is a proofreader for the ASFA Interdisciplinary Academic Journal. She is in her second year Specializing in Leisure Sciences and minoring in Education. Her involvement with the journal has helped improve her writing skills and critical eye, which she values as a teaching assistant and personal tutor. She will take the above experiences with her as she furthers her studies in Leisure Sciences, focusing mainly on leisure and gender differences at the Master's and hopefully Doctorate level.

Steven Tutino

Steven Tutino is currently an undergraduate at Concordia University close to completing a double major in Honours English Literature with an additional major in Theological Studies. The experience of working on the journal has been fulfilling as he learned about the creative process and has met a variety of great people. Steven is also a writer, painter and poet and will be starting Graduate Studies as of Fall 2017 in Theological Studies.

Creative Board |

Veronica Garner

Born and raised in Montreal, Veronica is finishing her third year in Sociology. Veronica is a big animal lover and enjoys getting involved in her community whenever she gets the chance. What she enjoyed most about being able to be a part of the journal was the exposure and experience it gave her to work in the field of promotions and advertisement with a great group of creative individuals.

Welton Jones

Welton is a first year Psychology major from San Diego, CA. His passion for photography and interest in working with a team of like-minded individuals is what brought him onto the team. The academic journal has been a valuable learning experience and helped him adjust to his new environment, pushing him to explore Montreal and collaborate with people outside of his department. He thoroughly enjoyed his time with the team and hopes to participate in similar projects in the future

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