



Global Encounters: New Visions

Department of Geography and Planning Journal

Volume 1 | Spring 2021

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Letter from the editors

On behalf of the Editorial Team, we are proud to present you the first volume of *Global Encounters: New Visions (GENV)*- the Undergraduate Geography & Planning Journal managed and edited by Graduate Geography & Planning students. This (new) annual publication will showcase exemplary undergraduate work in the fields of geography and planning at Queen's University.

The 2020-2021 academic year produced remarkable pieces of research and writing across several streams of geography, in spite of a lengthy pandemic. Thank you to the many students who submitted their papers for publications – we were spoilt for choice in just our first year.

GENV is a testament to the incredible, often under-appreciated diversity of topics explored in the field of geography. This volume includes submissions that cover gentrification in Ottawa, analyses of unethical practices in global supply chains, power imbalances across scales during the COVID pandemic, art parallels across history, and much more.

This journal could not have been put together without the collaborative efforts of our dedicated editors and talented authors who graciously offered their time to help make this project a reality. Furthermore, we would like to thank the department of Geography and Planning at Queen's University for promoting our work as we move forward with making GENV an annual publication and our legacy.

We certainly hope you enjoy the first volume of GENV Journal,

Kimberly Hill-Tout (Editor-in-Chief and Managing Editor)

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Contributors

Articles

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The Fiscalization of the Rent Gap: Vacant land, taxation, and urban development in Ottawa's Centretown neighbourhood

Evan Saunders is currently pursuing a Master of Planning (M. PL) degree at Queen's University's School of Urban and Regional Planning (Graduation, 2022). Prior to graduate studies, Evan completed a Bachelor of Arts (Honours) degree in Geography from Carleton University (Graduation, 2020) – in which this thesis was a degree-required research project. During his undergraduate studies, he concentrated on issues relating to urban and economic geography. Evan's work in his graduate studies focuses on the implications of urban morphology and existing urban structures in determining the developmental potential of dead malls in an attempt to combat sprawl.

Joanna Gorska

Art deco and corporate communism: The influence of the American skyscraper on Stalinist architecture

Joanna Gorska is a first year PhD candidate specializing in Eastern European and Russian History. Her research is primarily focused on revolutionary movements in the Russian Empire, and how they coincided with European intellectual trends. Her supervisor is Professor Ana Siljak.

Nicholas Yue

The importance of population density and movement in the 2002-2003 SARS pandemic

I am from Hong Kong and came to Queen's in 2017, currently in 4th year of the undergraduate program majoring in Human Geography. I will be graduating this year and moving on to do a Master of Arts in Health Geography at the University of Toronto in Fall 2021. My research interests centre around modern infectious diseases and the factors that contribute to their spread. In my spare time I enjoy playing badminton both competitively and recreationally.

Katherine Moir

COVID-19 and homelessness in Los Angeles

My name is Katherine (Kate) Moir. I am a fourth year student at Queen's University completing a bachelor of arts honours with a major in Geography and a minor in Global Development Studies. Throughout my undergrad, I have also been working towards a certificate in Geographic Information Science (GIS) and a certificate in Urban Planning Studies (URPS-C-UPS). My interests lie primarily in Health Geography and it is something I am hoping to pursue in a master's degree and my work in the future.

Jonah Baetz

Shock doctrine and disease: Examining COVID-19 in North American cities

I am a graduating fourth year student at Queen's University. I am majoring in geography and focusing specifically on urban planning and political economy. More specifically, my interests are in how privatization and shifting modes of capitalist production affect cityscapes. My fourth year thesis is looking at southeastern Turkey and how racial capitalism is used to justify dispossessive dam projects in predominantly Kurdish regions.

Book reviews

Lindsay Trottier

The strata of society and the peer-review process: How the first geologic map of the United Kingdom braved both

Lindsay Trottier is pursuing a Master of Science degree in Geography and Environmental Studies at Carleton University in Ottawa, Ontario. Her thesis examines the spatial and temporal patterns of algal abundance and community composition in the Rideau Waterway. In her free time, she enjoys spending time near water, biking, and cooking.

Posters

George Hodges-Maley

Socio-economic implications of gentrification in San Francisco

George Hodges-Maley is a first year undergraduate student in the Faculty of Arts and Science at Queen's University, majoring in Human Geography, with a particular interest in urban geography.

Yashriya Lochav

Less is more: H&M's path towards sustainable fashion

Yashriya Lohchav is a first year Commerce student at Queen's University. She is passionate about sustainable business, specifically in the form of impact-based investing. In her free time, she enjoys reading, documentaries and puzzles.

Nicole Robb

Ethical voluntourism: Rethinking orphanage tourism

Nicole Robb is in her second year of studying Liberal Arts online part-time through Queen's University. She holds an Honours Bachelor of Science from the University of Guelph and a Certificate in Creative Writing from the University of Toronto's School of Continuing Studies. She currently works fulltime for the Ontario Public Service and, when she is not busy working or studying, she enjoys travelling throughout the world and has a lifelong dream of visiting every country on the planet.

Olivia DeDecker

ExxonMobil to offset greenhouse gas emissions through wind and solar energy investments

Olivia DeDecker is a first-year student at Queens University in Kingston, Ontario Canada. She is working towards completing her Bachelor of Health Sciences and hopes to one day complete her Masters of Physical Therapy. Though her focus of study is health sciences, Olivia is also passionate about the environment and continues to learn about environmental preservation.

Danielle Pinder

The deadly consequences of fast fashion

Danielle Pinder is a third-year student at Queen's University, pursuing a Bachelor of Science Honours degree with a Life Science major. Danielle has a particular interest in Global and Population Health, as well as health equity and advocacy through the exploration of the social determinants of health. Outside of her schoolwork, she enjoys grabbing coffee with friends, listening to podcasts, and watching Netflix.

Asbah Ahmad

How does Bayer overcome the reputational blow of acquiring Monsanto?

Asbah Ahmad is currently a first year student at Queen's University, in the bachelor of science program. He wishes to pursue a major in biotechnology, but also has a passion for learning more about urban planning and its consequences on the world. His passion for geography comes from the diverse landforms that surround his current hometown of Calgary, Alberta.

Jessica Rawlins

The impact of fulfillment centres on minority groups

Jessica Rawlins is a first-year student studying Health Sciences at Queens University. She is a member of QPID (Queens Project on International Development) and has a keen interest in Geography sparked by her interest in travel and world issues. Jessica is originally from Toronto.

Kailey Boots

Starbucks: Becoming ethically sound and genuinely green

Shékou/Greetings, my name is Kailey Boots and I am a third year Bachelor of Health Sciences student here at Queen's University. After earning my degree, I aspire to continue on to medical school, with hopes of one day becoming a Dermatologist. I am also a proud mother of 3 beautiful children; for them, I put education at the forefront to set an example on how very important education is, and that with hard work and patience, you can persevere and achieve all of your dreams. Like Theodore Roosevelt said, "Nothing in the world is worth having or worth doing unless it means effort, pain, difficulty".

Cover photography

Hilal Kara

Atatürk Boulevard, Ankara, Turkey (2016)

Hilal is a Ph.D. student in the Department of Geography and Planning at Queen's University. Hilal's research interests lie at the intersections of social reproductive labour, work, urbanization, and spatial mobility. Hilal's doctoral project from a feminist political economy perspective looks at how labour and social exclusions have affected young people's livelihoods, mobility, and survival in the city in Turkey. Outside the academic work she is writing short stories based on visual and oral materials and cohosting a multicultural and multigenre radio show called Flâneur at CFRC radio in Kingston.

The fiscalization of the rent gap: Vacant land, taxation, and urban development in Ottawa's Centretown neighbourhood

Evan Saunders

Abstract

Contemporary urban environments are contentious spaces of change that are the result of planning, policy, and investment. Within these dense, complex spaces, years of car-oriented planning has come to infiltrate the city in the form of vacant parcels that exist primarily as surface parking lots; owned by developers and investors, holding and waiting for ideal market conditions to develop or sell the land. Utilizing property assessment data and tax schedules from the City of Ottawa, this paper examines developmental incentivization within a context of municipal tax frameworks. The aim of this study is to understand how Neil Smith's theory of the rent gap, and Renee Tapp's fiscal geographies can be applied to urban vacant land in Ottawa's Centretown neighbourhood, as well as to generate speculative discussions related to how Ottawa's municipal government has used property taxation to constrain or incentivize the development of urban vacant land. The city of the 21st Century must aim for efficient, healthy, and sustainable development, and this paper hopes to continue and inform the discussions within urban and economic geography as to how municipal fiscal mechanisms can influence this process.

Introduction

"We want to invigorate, we want to revitalize downtown, and I think to do that we have to make sure we're sending the right tax signals to do that...[w]e're actually providing a tax benefit, a tax advantage, to surface parking lots and vacant lots" (Osman, 2018). In this quote from former Ottawa City Councillor Tobi Nussbaum, he describes the generations of car-centric planning that has come to plague the urban space. Walking through Ottawa's urban core reveals a mixture of mid-sized, deteriorated office and apartment buildings alongside, what seems to be, vast concrete plains used to cater to the needs of the automobile commuter.

The contemporary urban environment is rich with diversity and investment. In a constant state of change, these spaces are the result of planning, policy, and capital. In the modern Canadian city, scattered throughout the urban core, are tracts of land left relatively desolate and seemingly ignored by the financialized development surrounding them. These plots, referred to as urban vacant land, are lots that exist without any (or very little) capital input. In most cases they exist as surface parking lots that harbour the primary means of transportation within North American cities – the car. In examining the role these vacant lots play in the shaping of urban centres, one must look at their role in the development process and their capability of holding value. In an environment of skyrocketing rental rates and plummeting vacancies (Jones Lang LaSalle, 2019, p. 44), Ottawa's urban

core is shown to be experiencing a lack of efficient, dense development. As tech giants, such as Shopify, come to bring jobs and opportunity to the National Capital Region, urban development has yet to follow suit with the same sense of urgency. With a market that is constrained by regulations and policy, tracts of land within Ottawa's Centretown neighbourhood remain vacant and under-utilized. These vacant plots break up the urban fabric in lieu of less-than-desirable uses and aid in the expansion, or sprawl, of Ottawa's urban area past the greenbelt and beyond.

The process of urban development seeks to extract value and produce goods that benefit and complement the market and the needs of a city and its residents. In analyzing urban development, Neil Smith's (1979) 'rent gap theory' takes an abstract look at the forces determining urban change and gentrification. This theory helps to delineate the push and pull factors incentivising development. With regards to urban vacant land, very little research has examined the implications of Smith's theory as to describing the market behaviour of (re)development of this type of land. The rent gap theory provides a starting point for this research to examine the effects of municipal, fiscal mechanisms encouraging development on a neighbourhood scale. Along with Smith's well-established theory, a recent investigation into the impact of fiscal tools on the geography of cities by Tapp and Kay (2019) can be used to expand upon the rent gap theory and account for the barriers to development and their impact on market incentivization. These researchers within the fields of economic and urban geography have questioned the effectiveness of abstract theories in predicting the stages of development and how they can be applied to specific contexts over the past four decades.

The theory of the rent gap remains a tool used to explain gentrification, as Smith intended, but cannot (due to the availability and complexity of the variables; see Rent Gap section) be quantified or extrapolated across all urban contexts and timelines accurately. It is a theory rather than a formula used to predict gentrification in a "deterministic fashion" (Smith, 1987, p. 464). Taxation as a variable within the creation of the rent gap has yet to undergo the scrutiny of theoretical and empirical testing in the academic literature. Tapp and Kay's investigation into fiscal geographies (2019) identifies how Smith's rent gap failed to account for taxation as a legitimate source of pressure in the creation (or shrinking) of the gap.

This analysis of the fiscal geographies (Tapp & Kay, 2019) of contemporary urban centres speculates as to how Ottawa's municipal government has utilized the power of property taxation in influencing Ottawa's built form over the 15-year study period. It also hopes to determine the applicability of Smith's rent gap theory to the development of urban vacant land. The aim of this study is to both understand how Smith's idea of the rent gap can be applied to urban vacant land in Ottawa's Centretown neighbourhood, and to generate speculative discussions related to how Ottawa's municipal government has used property taxation to constrain or incentivize the development of urban vacant land. Using assessment and property tax data from the City of Ottawa, this research will analyze the changes in assessment values and tax rates of different land uses within the two study sites over a 15-year study period (2002 to 2017). The first section of this paper will examine the extensive literature on urban development, fiscal geographies, property taxation, and vacant land. The second section will describe the site selection and methodology to be used

in the data analysis based off of research by Hammel (1999), Badcock (1989), as well as other economic geographers; followed by a summary of the results in the third section. The fourth section, the Discussion, will discuss how the results of this study can be used to interpret changes in the rent gap as well as discuss the implication of vacant land on the original theories of the rent gap. The Discussion will also bring forward the idea of fiscal geographies and speculate how Ottawa's use of property taxation has been used to influence urban development. The final section of this paper will define the limitations of this study. This paper will attempt to expand upon the discussions within urban geography to encompass the issues found within growing North American cities regarding the stagnation of infill development, using the example of Ottawa.

Literature review

The body of literature that discusses the implication of urban vacant land development is very limited and has yet to be fully explored in the fields of urban and economic geography. In order to develop a base of knowledge in the field, this section will examine the existing literature on fiscal geographies, urban development, the power of property taxation, and defining 'urban vacant land'. With help from authors, such as Smith, Tapp, Kay, Bourassa, Hammel, Teresa, as well as others, an examination of previous accounts of the aforementioned fields will help to contextualize this research into the greater fields of economic and urban geography.

In developing a model to describe the processes of urban vacant land development, a review of relevant literature reveals a rich bed of knowledge ranging from theoretical

ideas behind urban redevelopment (Bentick, 1982; Smith, 1979; Teresa, 2019), to factors explaining the existence of vacant land (Davidson and Dolnick, 2004; Kim, Miller, & Nowak, 2018; Newman et al., 2016), to tax as a developmental incentivization tool (Gihring, 1999; Wyatt, 1994). Reflecting this thematic diversity in the literature, this research paper exists between the bounds of economic geography, urban development, and taxation studies.

2.1 Fiscal Geographies

The topics discussed within this paper reflect the research area popularized by Harvard University urban planner Renee Tapp – fiscal geographies. Her research helps to reveal the power of taxation and the relationships between the state and financial bodies and their influence on the urban built form (Tapp & Kay, 2019). Tapp and Kay's recent paper *Fiscal Geographies* (2019) defines 'fiscalization' as "how a specific state institution – the tax system – plays an outsized, but often overlooked, role in the urban process." (2019, p. 573). Other geographers and urban planners, such as Karen Chapple, have discussed the role fiscalization plays in urban development. Chapple (2018) examines the fiscal geographies of "land use" (2018, p. 295) as revenue generating mechanisms for the local state. These researchers have attempted to define the role the state plays in defining the built environment and the geographies of cities.

Although the concept stems from the field of financialization, fiscalization refers to processes that come to affect geographies through their own, specific means. Both fields operate within similar channels of influence and "are often co-produced" (Tapp & Kay, 2019, p. 573) in the vast array of

private-public interactions and mechanisms upon which (re)development is facilitated. Financialization focuses on the analysis of “financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies” (Sawyer, 2013). Fiscalization has a much more specific focus on the impact of policies and state intervention and influence on incentives related to city developmental activity. This paper will place a greater emphasis on the role tax and planning policies play in the proliferation of these fiscal geographies. Fiscal and financial geographies both play an important role in defining motives behind development but must not be confused or used interchangeably.

2.2 The Rent Gap

This paper also hopes to expand upon Neil Smith’s ‘rent gap theory’ from his 1979 paper, *Toward a theory of gentrification*. Smith’s

paper provided geographers with an abstract interpretation of the land development process and cycle through the use of the rent gap. The rent gap can be described as “the disparity between the potential ground rent level and the actual (or capitalized) ground rent capitalized under the present land use” (1979, p. 545) as a predictor for redevelopment. The actualized ground rent is the revenue generated from a lot at its “current intensity and type of land use” (Clark, 1995, p. 1490). The potential ground rent is the potential revenue that can be generated from a specific lot at its “highest and best use” (Smith, 1979, p. 543). This gap is produced primarily through two mechanisms: capital depreciation (actualized ground rent decrease) and increases in neighbourhood and overall city investment (potential ground rent increase) (see Figure 1) (Smith, 1979; Teresa, 2017). Smith describes the process of capital depreciation and its

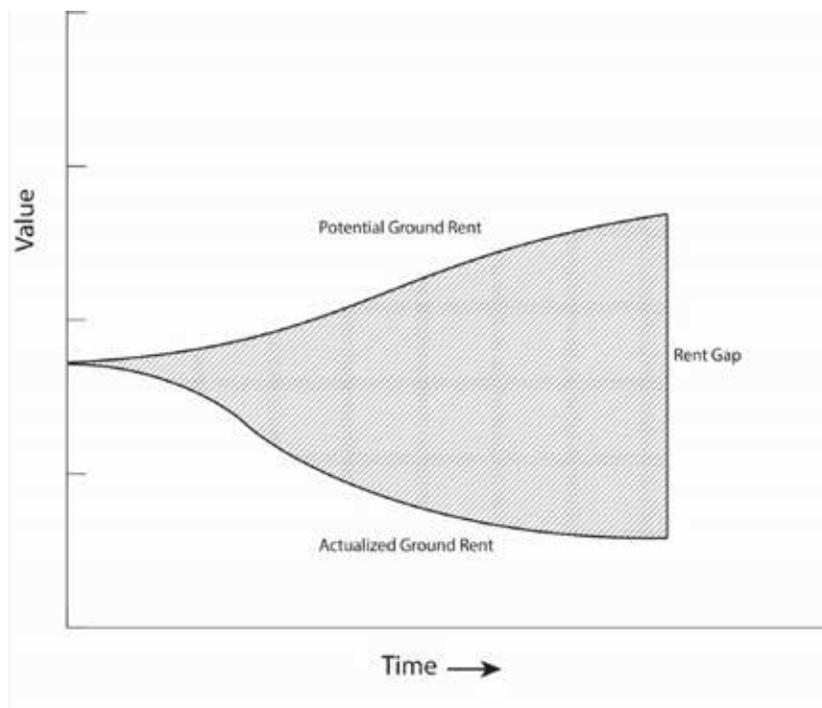


Figure 1. Neil Smith’s rent gap theory (1979).

role in gentrification as producers of the “objective economic conditions that make capital revaluation (gentrification) a rational market response” (1979, p. 545).

Although being instilled in the minds of economic geographers over the last four decades, there have been critiques (Bourassa, 1993) and revitalized interpretations (Clark, 1995; Diappi & Bolchi, 2008; Hammel, 1999) of Smith’s theory and its application to different contemporary urban development processes (Teresa, 2017). Each author(s) has re-examined the rent gap and attempted to empirically determine its usefulness within different municipal contexts. Bourassa’s (1993) critiques lie within the theoretical composition of the rent gap – actualized and potential rent (1993, p. 1731). This critique along with the counter critiques (Clark, 1995) primarily go back and forth over the economic relevance of the variables brought forward by Smith. Other arguments, by authors such as Teresa (2019) debate whether the driver of the rent gap is due to the falling capitalized rent described by Smith or by the increases in potential rent (2019, p. 1400).

Bourassa (1993) in his paper, while ‘debunking’ the rent gap, brings forward a fictitious scenario of a vacant lot in the central business district and how different land uses contribute to the timing of its development. He goes on to describe how, whether left desolate or used as a car parking lot in the interim, the actualized ground rent has little-to-no impact on the timing of the development of the site. Although the site used as a parking lot has a greater-than-zero actualized rent, the timing of development is “solely a function of the site’s potential rent in the new use” (Bourassa, 1993, p. 1735). Bourassa uses this example to illustrate how the potential land rent of a property

or site has a greater significance than the actualized ground rent presently received by the landowner. This concept will be examined further in the discussion on this paper; nevertheless, Bourassa’s theoretical critique should remain as such in discussions of the rent gap – theoretical.

Along with Bourassa’s popular critique of capitalized land rent (1993), other authors have also brought forward complementary alternatives and contemporary interpretations of Smith’s original theory (Clark, 1994; Hammel, 1999; Teresa, 2019) to better suit the increasing understanding of urban dynamics. Teresa’s 2019 paper entitled, *New dynamics of rent gap formation in New York City*, brings forward three important themes related to modern barriers for development within cities; “1) Privatization, including de/regulation of real estate markets, 2) the integration of financial and real estate markets that produces an effect of property value and rent ‘inflation’, as Smith described it, and 3) uneven development, including reinvestment in the built environment” (Teresa, 2019, p. 1401-2). The most relevant of these of these for the purposes of this paper being (1) the state of regulation in development, described by Teresa as “[t]he de/regulation of property markets including tax policy, rent controls, and other land use regulations” (2019, p. 1405).

In applying Smith’s rent gap and Tapp’s fiscal geographies to the context of vacant land development, defining how the curves of the rent gap (Figure 1) are affected by different variables is necessary. The two key fundamentals of the rent gap, as described above, are the potential land rent and the actualized or capitalized land rent. The potential land rent is clearly influenced by the capital potential a plot of land has with regards to any expansion of the existing

development or new developments within this plot of land. Potential land rent can also be described as the opportunity cost of holding land at its current use and intensity. This variable can be represented through the assessment value of a property as it quantifies the market value of the property in the context of the surrounding environment. The actualized land rent is more difficult to visualize and has many contributing factors which is why there have been multiple critiques on the defining and quantifying of actualized land rent (Bourassa, 1993). This variable can be related to the operating income generated by a property at specific capital intensities¹ and operating costs. This is similar to the net-operating income used in commercial real estate analyses². The actualized land rent, the rent income, affects the actualized land rent curve by placing upward pressure on it. This helps to shrink the rent gap. In theoretical terms, by increasing the (net) income-generating capacity of a property at its current developmental state (potentially through changes in the market demand for the good/service offered), the property is thus made less suitable for redevelopment. This remains true as long as the potential land rent does not increase at a greater rate than the actualized land rent. This data is hard to obtain as it is usually kept as private information of the land owner; this is why this paper will not attempt to analyze this variable from an income perspective.

The rent gap theory is a simplistic understanding of redevelopment and the opportunity-cost incentive for redevelopment. The rent gap has been shown to be difficult to empirically evaluate unless expanded onto temporal and spatial scales well beyond the scope of this paper (Hammel, 1999). Nevertheless, Smith's theory, along with the many expansions and critiques, acts as a theoretical basis for explaining the processes of urban development. This paper aims to utilize the research relating to the theory of the rent gap and expand the utility of Smith's original ideas to the development, or lack thereof, of urban vacant land.

2.3 Property Taxation

The geographies of the modern tax state have evolved to accommodate the different scales and needs of the different levels of government. Cameron (2008) takes an in-depth look at the 'spatial imaginaries of the fiscal state', tracking how the fiscal powers of the state have changed since Great Britain's first use of income tax in 1799 (2008, p. 1146). In Canada, municipal governments are limited in their roles due to their exclusion from any constitution. Their power and responsibility are determined by the provincial power within which they reside. Municipalities have very few revenue generating mechanisms; the primary form being property taxation.

Within the defined property taxes of a city,

¹See Vacant Land in Literature Review section for a definition.

²John Francis in his article discusses the complexities of defining NOI. The discussion is much too specific to the needs of commercial real estate appraisers and investors to be used extensively by this paper. One definition he proposes is simple and captures the primary elements; property generated income and property incurred costs; "[t]he actual or anticipated net income that remains after all operating expenses are deducted from effective gross income" (Francis, 1998, p. 57).

the municipality along with the province have influence on specific aspects of the taxation. In Ottawa, the province of Ontario taxes properties a specific percentage as a levy in order to fund public education. Along with the provincially-set education levy (p), the City of Ottawa also divides the remaining tax rate across different essential services such as fire services (f), transit (t), garbage pick-up (g), conservation authority levy (c), police services (η), capital tax levy (k), and finally the city-wide property specific tax rate (w) (City of Ottawa). This is represented using Equation 1.

Annual Property Tax=(Property Assessment Value)*(p+f+t+g+c+η+k+w)

1 - Property Taxation Formula

Equation 1

The equation above shows how the cumulative tax rate, made up of both municipal and provincial levies, is multiplied by the assessed value of the property in question. Assessment values are provided by the City of Ottawa and change every year. Assessment values and their make-up are described in depth in the Methodology section.

Within the study of property taxation, there has been continuous discussions as to the effectiveness of classical, assessment-based property taxation methods (Bourassa, 1990; Gihring, 1999; Gihring & Nelson, 2005; Speirs, 2010; Wyatt, 1994). Critics question the power this system holds with regards to its ability to redistribute as well as to incentivize dense, urban development. The popular alternative proposed by academics is ‘land-value taxation’ (LVT). Land-value taxation, is a two-part taxing method that taxes the land “at a higher rate than improvements” (Wyatt, 1993, p. 1). This system is used to devalue vacant or under-utilized parcels of land and

encourage the development of these spaces. This topic is under great investigation in the fields of urban development and economic geography as a form of incentivized fiscal policy. Although important to the study of property taxation and land development, this paper will not investigate how different taxation methods come to influence incentivization around property investment.

2.4 Vacant Land

“[T]he definition of vacant land is often unclear” (Kim, Miller, & Nowak, 2018). In casual conversation vacant land may seem oddly ambiguous and of little concern to the average individual. Within the greater study of urban geography, experts have defined and redefined the term vacant land to suit the needs of their analysis. This paper will attempt to provide a glimpse into the complexity, that is the study of vacant land, and bring forward a working definition that can be used in this paper as well as any further studies on the topic.

Authors Newman, Bowman, Lee, and Kim have created a taxonomy for the term ‘vacant land’ with definitions ranging from “[l]and uses which are undeveloped and are not underwater” to “[a]n unoccupied structure for 60 or 120 days or longer” (Newman et al., 2016). This broad range of definitions described by different authors reveals how inconsistent the study of these urban obscurities has been. Kim, Miller, and Nowak (2018) derived five definitions of ‘urban vacant land’: “1) remnant parcels often irregular shape or small size; 2) physical unfit for development land due to steep slopes and flood hazards; 3) corporate reserve parcels for future expansion; 4) transitional land for speculations and 5) land in institutional reserve for future development” (2018, p. 145).

Three of these definitions are of use for this study; “corporate reserve parcels for future expansion”³, “transitional land for speculations”⁴, and “land in institutional reserve for future development”⁵(2018, p. 145). This interpretation uses underutilization as a key marker in determining the vacancy of property parcels. The American Planning Association (APA) echoes this sentiment with their second of two definitions⁶ for vacant land: “a lot or parcel of land on which no improvements have been constructed” (Davidson and Dolnick, 2004). Although helping to further specify and differentiate the different types of urban land, this definition still neglects the capital intensity and function of the land.

The use of terms such as ‘capital intensity’ and ‘function of land’ are key fundamentals in understanding the rent gap across the different land uses. In this paper, the term ‘capital intensity’ relates to Neil Smith’s ‘highest and best use’, used to describe the point in which a parcel of land has been developed to the highest or densest extent

that is available (spatially) or efficient in current market conditions. The second term, ‘function of land’, is a qualitative measure of the prescribed use of the land. The ‘function of land’ is similar to the term ‘land use’ which describes the type of structures permitted or capable of being built on the specific parcel (Mori, 2004). This is defined by the zoning classifications for the plots of land. Both of these concepts are clearly relevant to questions of underutilization, yet the APA definition of vacant land fails to take them directly into account.

This study will examine the ability of vacant land, as a physical and potentially developable asset, to play a role in development. In applying Smith’s rent gap to this analysis, the intensity of use of the space in question is a useful characteristic and identifier and must be applied to the definition of vacant land. Newman, Bowman, Lee and Kim in their taxonomical analysis of the term brought forward the definition by Németh and Langhorst; “underutilized parcels or lots that function below their functional or capital-

³ “[Corporate reserve parcels are] land owned usually by locally represented business corporations such as utility companies. The objective in owning such vacant parcels is to provide space for expansion as it becomes needed or for relocation of the business enterprise. In a sense, this is a hedge against rising land costs, especially in core areas where space for business operations is especially desirable...Corporate reserve parcels are less numerous than are remnant parcels or unbuildable parcels...generally they are of large size...and are more centrally located than other types” (Northam, 1971, p. 345).

⁴ “[Transitional land for speculation] are parcels of land held in corporate ownership, in estates, or in single party ownership with the expectation that they will eventually be sold in the market place at which time a profit will be derived” (Northam, 1971, p. 345-6).

⁵ “[Land in institutional reserve for future development]” are the tracts of land owned by a public or a semi-public organization for development as needed for funding” (Northam, 1971, p. 346).

⁶ The other definition of ‘vacant land’ designated by the American Planning Association is: “Lands or buildings that are not actively used for any purpose” (Davidson & Dolnick, 2004). This does not relate to this research as the un-/under-developed lands are in use as surface parking lots.

producing capacity” (Newman et al., 2016). This interpretation helps to bring together the desired features of underutilization, less-than-capable capital productivity, while still existing as useful space. This taxonomic synthesis helps to clarify what is meant by urban vacant land and how this paper will define these contentious spaces moving forward.

Method

3.1 Study Sites

See Figure 2

The selection of the two study sites in this research was influenced both by the availability of data and the characteristics of the built environment. The neighbourhood in which the two sites are located, formally known as Centretown, is part of the southern end of Ottawa’s central business district and is defined by its low-density development.

The neighbourhood consists of residential neighbourhoods and commercial corridors. This research pays particular attention to these areas of commercial, retail, and multi-residential developments as they are more heavily influenced by real estate markets and investment. Both study sites are influenced by interactions with main-street developments (Bank Street) as well as arterial, infill development possibilities.

The two study sites are defined as area of interest (AOI) 1 (the northern-most study site) and AOI 2 (the southern-most study site) (See Figure 2). Each AOI consists of four (AOI 1) and five (AOI 2) city blocks respectively. AOI 1, as can be seen in Figure 2, is spatially defined by Gloucester Street (North), Bank Street (West), Lisgar Street (South), and Metcalfe Street (East). AOI 2 is spatially defined by MacLaren Street

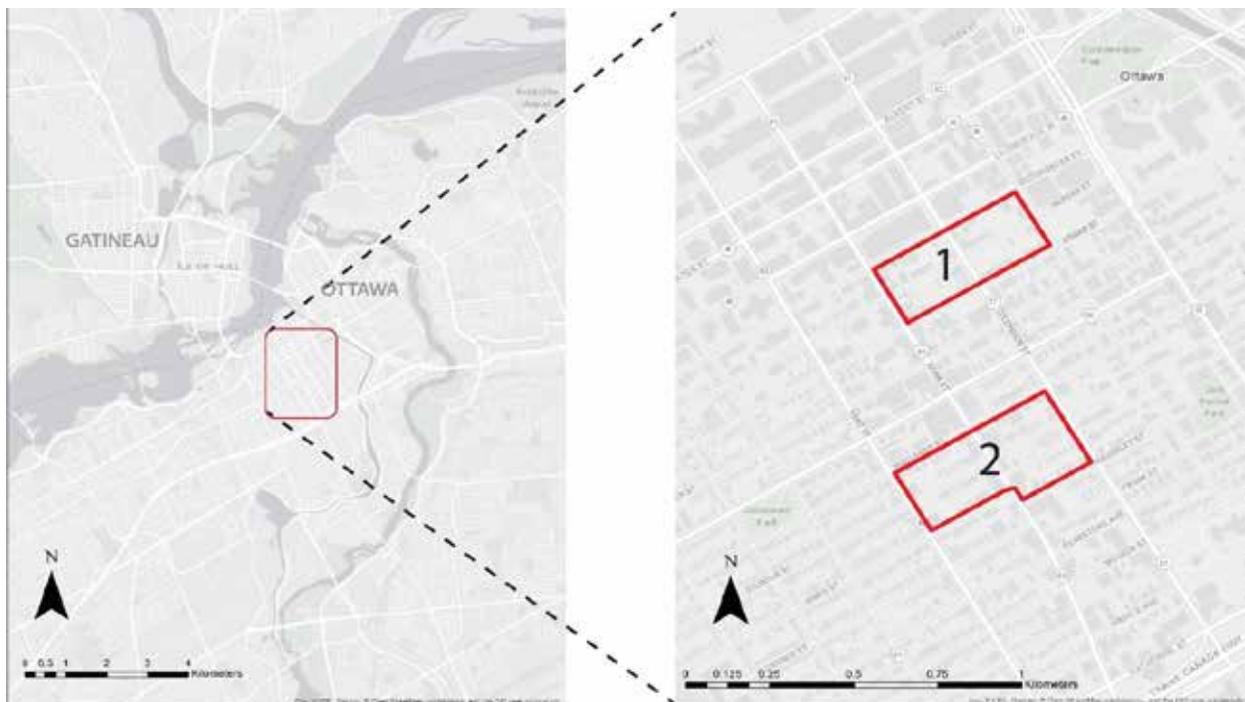


Figure 2. The two selected study sites; AOI (1) and AOI (2).

Tax Class	Property Tax Class Description	Vacant	Vacant-Built⁷	Built
RT	Residential and Farm	X	X	X
RD	Residential and Farm (Legions)			
MT	Multi-Residential		X	X
NT	New Multi Residential			X
CT	Commercial (occupied)	X	X	X
XT	Commercial (Occupied)-New Construction			
CU	Vacant Units and Excess Land			
XU	Vacant Units and Excess Land-New Construction			
CX	Vacant Land	X		
XX	Vacant Land - New Construction			
C1	Commercial Farm Land			
DT	Commercial Office		X	X
YT	Commercial Office-New Construction			
DU	Vacant Units and Excess Land			
YU	Vacant Units and Excess Land-New Construction			
ST	Shopping Centres			
ZT	Shopping Centres-New Construction			
SU	Vacant Units and Excess Land			
ZU	Vacant Units and Excess Land-New Construction			
GT	Parking Lot/Vacant	X	X	X
QT	Professional Sports Facility (TBE)			
IT	Industrial (occupied)			
JT	Industrial (Occupied)-New Construction			
IU	Vacant Units and Excess Land			
JU/KU	Vacant Units and Excess Land-New Construction			
IX	Vacant Land			
JX	Vacant Land-New Construction			
I1	Industrial Farm Land			
LT	Large Industrial			
LU	Vacant Units and Excess Land			
KT	Large Industrial-New Construction			
PT	Pipe Lines			
FT	Farmlands			
TT	Managed Forests			

Table 1. City of Ottawa property tax classes (2017). The “X”s show which Tax Classes were inclusive within each land uses designation within this study.

⁷Many of the land uses have the potential to fall into the ‘Vacant-Built’ category as it is not dependent on the zoning class as much as it is dependent on the user and their desirable developmental intensity.

(North), Kent Street (West), James Street and Waverly Street (South)⁸, and O'Connor Street (East). The study sites were selected because of their similar composition of land uses, zoning characteristics, and proximity to mass transit. This choice was made in order to allow assessment value changes over the study period to be reflected in a similar way within each study site by each study site without external influences negatively or positively influencing one site exclusively.

3.2 Data Collection

In order to analyze how the rent gap can be applied to urban vacant land, as well as how property taxation has come to define Ottawa's urban core, three (3) select variables were collected from the properties within the two study sites: (1) property tax class, (2) assessment values for the years 2002 and 2017, and (3) year-specific land use type (or class). Tax classes and assessment values are made publicly available every year by the city of Ottawa⁹ while the land use types were derived from aerial photos on GeoOttawa, which are updated when the photos are made publicly available through the platform.

3.2.1 Property Tax Class

The city of Ottawa classifies properties based on a pre-determined set of tax classes that

are determined by the designated zoning characteristics of the requisite parcel. These tax classes are used to assign specific tax rates to different land uses. Table 1 provides a breakdown of the tax classes defined by the city of Ottawa¹⁰. Some tax classifications did change across years but did not accurately represent the land use changes because some parcels are classified according to their use with regards to adjoining parcels. For example, a parking lot, occupying a separate lot, being used by an apartment or commercial office building may share the tax class of the building rather than being classed as a parking lot. This is potentially due to minimum parking requirements or agreements between land owners and the municipality. Within the classification of vacant land, for tax purposes, there are different types depending on the separate zoning requirements (e.g. Industrial land versus residential land). Table 1 displays in the 3 last columns which tax classes, within this study, were included in each land uses designation. As can be seen, many of the tax classes documented in the study were used to designate lands of more than one type of land use. This displays the need for a qualitative analysis of land use types across the study period (see Land Use section below).

⁸James Street and Waverly Street are offsetting streets that are bound by Bank Street; as can be seen on the southern-most border of AOI 2 in Figure 2.

⁹The information for each property is kept at the City Hall in Ottawa for 8 years, then it is moved to the municipal archives which can be accessed upon request.

¹⁰Table 1 shows the tax classes used for the year 2017. The tax classes change from year-to-year due to decisions made by the Ottawa city council in order to properly represent the changing diversity of real estate land uses. From 2002 to 2017, the number of tax classes increased from 21 to 38; these changes were mainly seen in the areas of specialty and industrial land uses. None of the changes from 2002 to 2017 impacted any of the properties used in this study and is thus irrelevant to this study.

3.2.2 Assessment Values

All properties within the province of Ontario are assessed by the Municipality Property Assessment Corporation (MPAC) annually for tax purposes (MPAC). MPAC is a not-for-profit enterprise which operates in-parallel but separate from the Ontario government. Three approaches are used in the evaluation of a property's assessed value as mentioned on MPAC's website (MPAC): Direct Comparison¹¹, Income¹², and Cost¹³. The data was collected alongside the tax classes at the City of Ottawa City Hall and is public information.

3.2.3 Land Use

A primary indicator of land use of specific properties was aerial photographs provided by the City of Ottawa through their online GIS platform 'GeoOttawa'¹⁴. This tool allows the user to access municipal geographic information related to property parcels, zoning information, and other data. For use in this paper, the PINs (Property

Identification Number) was used to identify specific property parcels across time (used for tax purposes). GeoOttawa provided aerial photography of areas of the Ottawa region at specific points in time. The availability of photographs for the two AOIs was an important factor in determining which years would be used in this analysis. Since the aerial photographs of the entire city of Ottawa are not taken or uploaded at regular intervals, there were only nine years since 1999 in which the land uses could be analyzed using the photographs. As will be described in the Market-Driven Property Cycles section, a significant amount of time was needed for the observable period in order to properly represent market fluctuations.

For the years 2002 and 2017, each parcel within each AOI was examined as to its level of development. A three-tiered qualitative scale was used, defining parcels as 'built'¹⁵, 'vacant-built'¹⁶, and 'vacant'¹⁷. This scale was used to identify changes in the development

¹¹The direct comparison approach uses the recent sale of comparable properties as an indicator of current value (MPAC). This method is common in the commercial real estate industry, known informally as 'sales comparables'. This method derives the most market-accurate value.

¹²The income approach directly ties a property's ability to generate revenue to its value. This is done both for the property in question as well as comparable properties. In its calculation, the NOI is used alongside the income generated to calculate the capitalization rate; a common metric used in commercial real estate investment. This method is more common for industrial, commercial, retail, and specialty land uses than residential and multi-residential (MPAC).

¹³The cost approach is used for 'unique' properties that have longer-than-normal sales cycles. MPAC then uses replacement costs and depreciation to determine a value buyers would be willing to pay for the property (MPAC).

¹⁴URL for GeoOttawa: <http://maps.ottawa.ca/geoOttawa/>

¹⁵'Built' parcels were seen as fully developed to its spatial capacity.

¹⁶'Vacant-built' parcels were seen as a significant portion of the property was left un/under-developed.

¹⁷'Vacant' parcels were seen as un-developed parcels with little-to-no capital improvements; as described in the literature.

of specific properties. Figures 3, 4, 5, and 6 display the GeoOttawa tool being used for AOI 1 and 2 with respect to both years of study. Along with the year-specific land use, information relating to the size of each parcel was gathered using GIS tools in order to divide the assessment values per square meter (m²); which will be addressed in the Analysis section.

3.3 Market-Driven Property Cycles

The choice of the study period was highly dependent on the availability of aerial photography of the AOIs from GeoOttawa, but another ancillary reasoning for the selection of this period is to take into account the time horizon of the real estate property cycle. Weber (2016) discusses in his paper the relationship between property cycles and the business cycle, concluding through the analysis of past research and his own research that real estate markets' peaks and troughs lag behind the business cycle. In the analysis of real estate development research, one must ensure that relationships are temporally mapped across full business cycles in order to account for natural fluctuations in the market and economy. This helps to establish more reliable relationships and data comparisons. Weber (2016) along with Case, Goetzmann, and Rouwenhorst (2000) have shown that a time period of 9-12 years or greater is enough time to encapsulate the natural cycling of assessment values across the business cycle. In the case of this study, the study period, being 15 years in duration, begins a short time after the 2000 Tech Bubble Crash and, most importantly, surrounds the 2008 Great Recession. The 2008 financial crisis and the years that follow acts as an indication of a peak, trough, and recovery of the business cycle and most importantly, due to its direct relationship to real estate and capital markets, of the property cycle.

3.4 Analysis

Through the analysis of the assessment values on a per m² basis, this paper will examine how the different land uses change in value over the study period, contributing to the creation of the rent gap. These results will be used to address the aim proposed in the introduction of this paper: understand how Smith's idea of the rent gap can be applied to urban vacant land in Ottawa's Centretown neighbourhood. Through quantitative analysis, this paper will look at the data collected on the properties from the two study sites in Ottawa's Centretown neighbourhood and examine and compare how the assessment values of the different land uses have changed across the 15-year study period.

In order to answer the research question posed by this paper, the variables must be manipulated in four (4) ways: (1) calculating the property-specific tax rates, (2) price inflation adjustments, (3) the division of assessment values per m², and (4) identifying the average changes in assessment values and tax rates, across the study period.

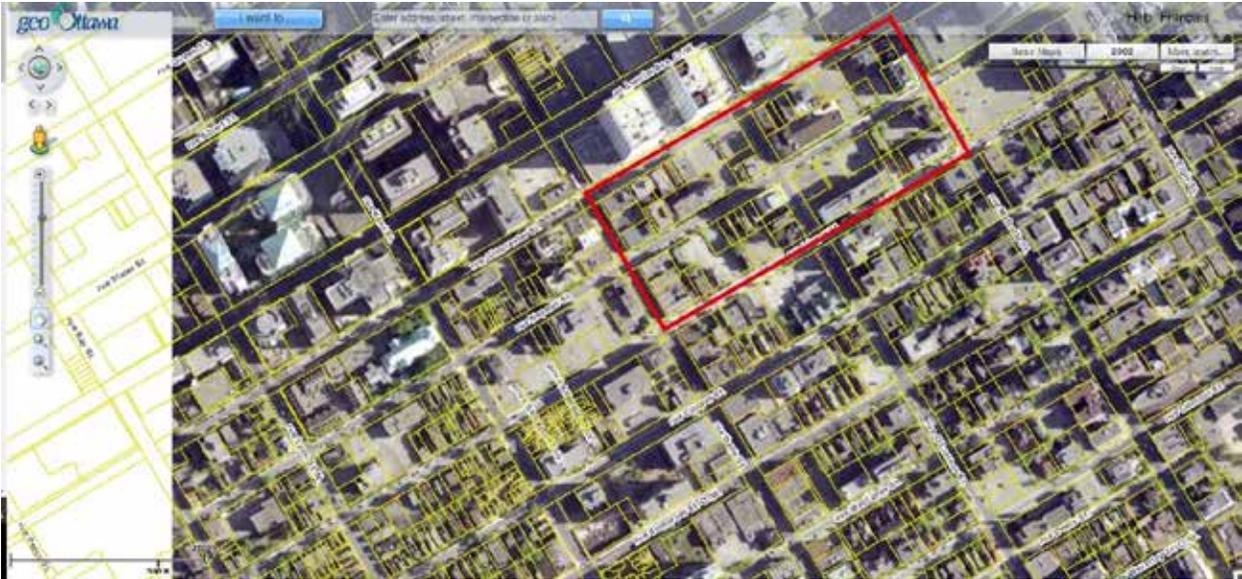


Figure 3. AOI 1 aerial photograph from the year 2002 (GeoOttawa).

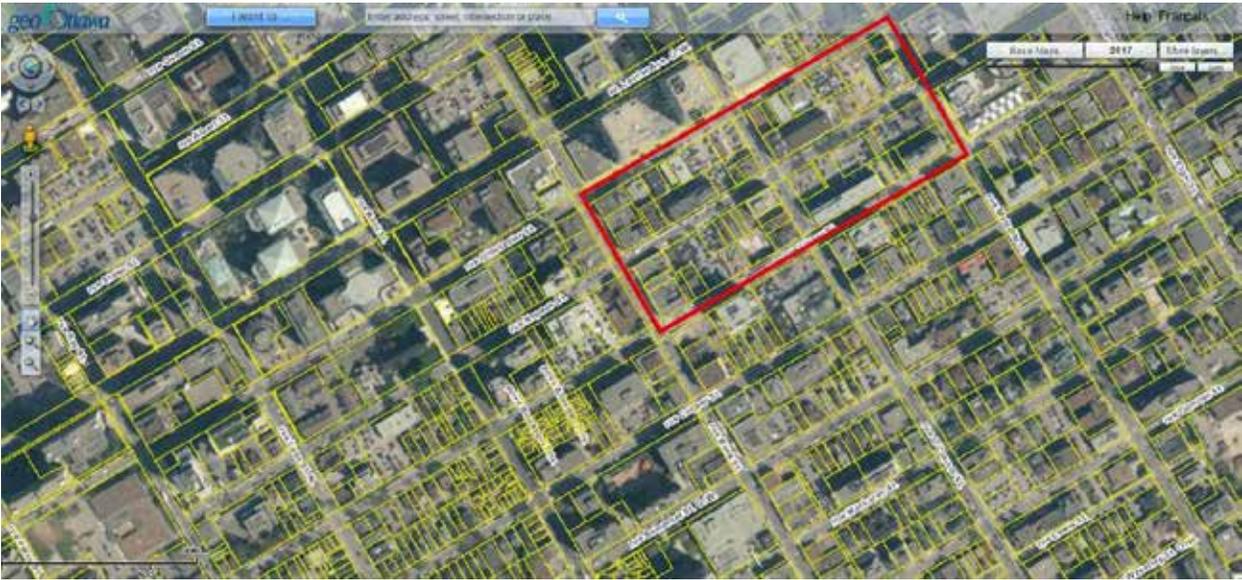


Figure 4. AOI 1 aerial photograph from the year 2017 (GeoOttawa).

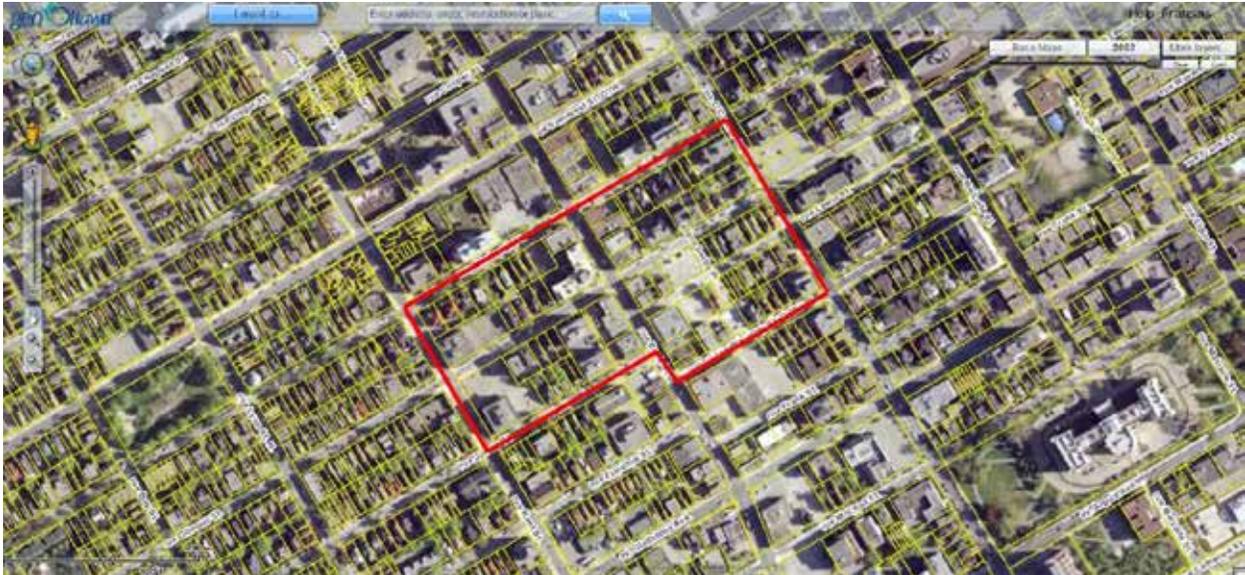


Figure 5. AOI 2 aerial photograph from the year 2002 (GeoOttawa).

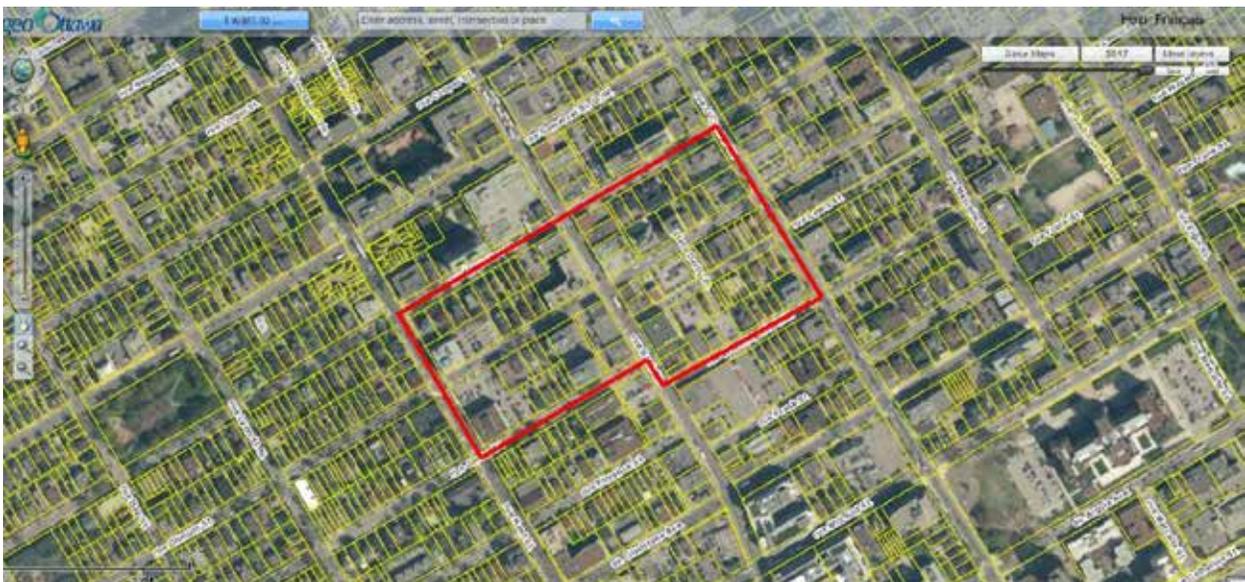


Figure 6. AOI 2 aerial photograph from the year 2017 (GeoOttawa).

3.4.1 Tax Rates

The City of Ottawa defines each property with a tax rate corresponding to the use of the property. This leads to properties with multiple tax class designations, defined by the percentage of each property under each specific land use¹⁸. The tax rates were calculated separately from the land use designations due to the lack of relations between the two variables. Therefore, the tax rates were calculated as such for each period (see Equation 2); the property is divided into its different land uses by percentage¹⁹; the corresponding Tax Class X Tax Rates are multiplied by the Percentage of the Property at Tax Class X; this process is repeated for all the tax classes associated with each property.

$$\text{Tax Rate} = ((\text{Tax Rate of Tax Class X}) * (\text{Percentage of Property at Tax Class X})) + [\dots]$$

Equation 2

3.4.2 Inflation Adjustments

The two years under analysis are 15 years apart meaning inflation has the potential to cause large disparities in the results if not taken into account. In order to manipulate the data to ensure it represents a constant, real value, the consumer price index (CPI) was used to adjust for inflation. The CPI was taken from January of 2002 (97.6) and January of 2017 (129.5) in order to compare the real changes in the assessed value of the properties.

3.4.3 Per Divisible Area

In creating an analysis that took into consideration the element of space, the assessment values were divided by the area of the property parcel. This derived a value of '\$XX.xx' per m2. This helped to eliminate the weighting of changes solely based on the size of a property and rather, equally represented changes across different sized lots.

3.4.4 Average Changes

Finally, as a secondary form of analysis, the average percentage change in the measured variables across the study period was calculated. These results help to numerically show how changes in the assessment values and tax rates in each land use compared to the average change seen across the entire dataset. Equation 3 displays the method used for calculating a weighted percentage change in the two variables; where ψ represents the average percentage change in each variable,

$\sum_{i=1}^n X_{i2}$ is the sum of the 2017 values, and $\sum_{i=1}^n X_{i1}$ is the sum of the 2002 values.

$$\psi = \left(\left(\sum_{i=1}^n X_{i2} - \sum_{i=1}^n X_{i1} \right) \div \sum_{i=1}^n X_{i1} \right)$$

Equation 3

Equation 3 was used to generate the values represented in Table 6.

¹⁸For example: If a property is designated 75% commercial and 25% retail, 75% of the property value is taxed at the 'Commercial Rate' while the remaining 25% is taxed at the 'Retail Rate'.

¹⁹ Properties that were designated by only one tax class, the Percentage of Property at Land Use X (see Equation 2) would be 100%.

3.5 Data Selection

The study sites consisted of 131 parcels in total (n = 131) (AOI 1: 51 properties; AOI 2: 80 properties). Of these 131 parcels, six were seen to change land uses over the time period; 5 in AOI 1 and one in AOI 2. Seeing as six properties changed land use, this was not enough change to consider any analysis of these parcels useful. In order to accurately reflect how the rent gap is impacted by taxation on specific land uses, these properties were excluded from the analysis; leaving n = 125 (AOI 1: n=46; AOI 2: n=79). This decision was made in order to more specifically analyze the changes to the rent gap of specific land uses across the study period. To analyze such changes, only those properties that remained the same land use were used; this helped to ensure that the changes in the assessment values was purely market driven as opposed to developmentally driven through physical additions to a property. Table 2 summarizes the data as an aggregate while Tables 3 and 4 provide AOI-specific summaries. Table 5 provides summaries of the different land uses from both AOIs. Table 5 included both AOIs because the number of vacant parcels, although only having n=11, was less than four in AOI 2.

After the manipulation of the available data, the goal of the analysis is to examine how the assessment values of the different land uses change across the study period. As will be discussed further in the Results and Discussion sections, the limited number of vacant properties (n=11) within the study prevents the use of statistical techniques to test the significance of the results, but the trends seen between the land use classes can be used to interpret changes in the rent gap.

Results

This section will discuss the results from the quantitative analysis. The primary sources of analysis for this study are Table 6. Table 6 displays the average changes seen in assessment values, and tax rates across the different land uses as well as over the entire dataset. The average change in each variable for the entire dataset is used to compare how the changes across land uses compares to the dataset as an aggregate. As previously mentioned, and as will be discussed in the Limitations section, the results from this study cannot be tested for statistically significant results due to the small sample size and must be interpreted as such.

The goal of this quantitative analysis is to display how the rent gap can be used to describe the developmental process of urban vacant land. As described in the Literature Review section, the actualized or capitalized ground rent cannot be accurately analyzed within this paper and thus, this study will only look at the potential land rent, represented by the assessment values. As can be seen in Table 6, the vacant properties' assessment values increased by an average of 296% while the vacant-built and built properties' assessment values increased at an average of 185% and 152% respectively. These results show that the value of vacant lots increased at a greater rate than more developed lots over the course of the 15-year study period. This can be interpreted as the vacant lots having a greater opportunity cost of remaining in their current state as compared to the other land uses. With regards to the rent gap, this represents greater upward pressure on the potential land rent of vacant lots compared to more developed properties. Explanations for this increased upward pressure can only be speculated upon in this study and will be examined in the

Total summary (n = 125)

	2002	2017
	Assessment value (per m³)	Assessment value (per m³)
Mean	\$1,377	\$3,615
Median	\$1,078	\$2,701
Max	\$6,290	\$21,941
Min	\$70	\$149
Q1	\$784	\$1,874
Q3	\$1,699	\$4,090

Table 2. Summary table of entire dataset (in 2017 constant dollars).

AOI 1 (n = 46)

	2002	2017
	Assessment value (per m³)	Assessment value (per m³)
Mean	\$1,753	\$4,703
Median	\$1,303	\$3,090
Max	\$6,290	\$21,941
Min	\$428	\$1,003
Q1	\$812	\$2,073
Q3	\$2,579	\$5,754

Table 3. Summary table of AOI 1 data (in 2017 constant dollars).

AOI 2 (n = 76)

	2002	2017
	Assessment value (per m³)	Assessment value (per m³)
Mean	\$1,158	\$2,982
Median	\$985	\$2,307
Max	\$4,277	\$15,003
Min	\$70	\$149
Q1	\$758	\$1,818
Q3	\$1,262	\$3,256

Table 4. Summary table of AOI 2 data (in 2017 constant dollars).

Total summary (n = 125)

Land use		2002		2017	
		Assessment value (per m ³)	Taxes paid (per m ³)	Assessment value (per m ³)	Taxes paid (per m ³)
Vacant (n = 11)	Mean	\$472	\$14	\$1,869	\$37
	Median	\$429	\$14	\$1,554	\$35
	Max	\$1,268	\$22	\$3,493	\$100
	Min	\$272	\$6	\$604	\$13
	Q1	\$379	\$10	\$1,461	\$19
	Q3	\$429	\$18	\$2,180	\$49
Vacant-built (n = 19)	Mean	\$1,728	\$64	\$4,927	\$105
	Median	\$1,114	\$45	\$3,168	\$61
	Max	\$4,4674	\$252	\$13,671	\$441
	Min	\$190	\$0	\$1,003	\$0
	Q1	\$841	\$21	\$1,843	\$41
	Q3	\$2,421	\$78	\$7,675	\$106
Built (n = 95)	Mean	\$1,411	\$48	\$3,555	\$66
	Median	\$1,124	\$39	\$2,753	\$45
	Max	\$6,290	\$305	\$21,941	\$626
	Min	\$70	\$0	\$149	\$0
	Q1	\$808	\$20	\$2,003	\$26
	Q3	\$1,709	\$57	\$4,121	\$69

Table 5. Summary table of entire dataset by land use (in 2017 constant dollars).

Average variable change: 2002-2017

	n	Assessment value percentage change	Tax rate percentage change
Vacant	11	296%	-42%
Vacant-built	19	185%	-43%
Built	95	152%	-45%
Total	125	163%	-44%

Table 6. Average changes in key variables across study period (2002-2017).

Discussion section.

The secondary goal of this paper is to speculate on the rationale of City of Ottawa in employing their specific property taxation strategy on urban vacant land seen over the study period (see Discussion section). In order to properly discuss the implications of property taxation it is important to understand how the tax rates have changed across the studied land uses. Table 6 displays that the tax rates of the different land uses changed at relatively similar rates; differing by only one to two percent from the average change seen across the entire dataset. All land uses saw an average decrease of 44% over the study period which signifies a drastic change in the property taxation strategy, which will be discussed in depth in the Discussion section.

Discussion

The aim of this paper was to both identify how the creation of a rent gap for vacant properties as opposed to other land uses occurs, and to speculate on the property taxation strategy implemented by the City of Ottawa over the course of the 15-year study period.

5.1 Comments on the Rent Gap

Smith's original idea of the rent gap was formulated on the assumption of simultaneous pressures on both the potential land rent curve and the actualized land rent curve due to depreciation. What this paper

hopes to reveal is that urban vacant land primarily faces pressures from the increase in the potential land rent curve in the creation of the rent gap. This comment on the rent gap is meant to speculate, using the results generated in this study, how the creation of the rent gap differs across levels of development. The study of the rent gap has neglected to incorporate the often misunderstood nature of vacant land and how it is able to increase in value compared to other types of land uses in a neighbourhood context. In order to understand the abnormal nature of urban vacant land's, or in Ottawa's context, surface parking lots', ability to increase in value, two fundamental topics will be discussed: the scarcity of vacant land in the urban core, and the demand for parking.

Unlike other land uses in urban areas, the number of vacant lots are seen to be decreasing across time. This contributes to the scarcity of urban vacant land, and most importantly, surface parking lots. As vacant plots in the urban area become developed and change land use²⁰, vacant lots that remain as surface parking lots, or their less-than 'highest and best use', become more valuable due to the shrinking supply of relatively bare developable land. Vacant plots have a true advantage over vacant-built and built lots; they are more suitable for development because they are likely cheaper to develop due to fewer site preparation costs (e.g. demolition). This scarcity can be assumed to attribute to the greater increase in assessment values of vacant lots, and in relation to the rent gap, the greater upward pressure on the potential land rent curve.

²⁰In aggregate, this study saw 40.9% of vacant land change land use over the course of the study. But due to the small sample size of vacant properties in this study, it cannot be extrapolated beyond the scope of the neighbourhood under study.

A second factor related to the phenomena of vacant lots that has not been extensively addressed in the literature is the demand for parking and its effect on the rent gap. As described above, as vacant land used as parking lots comes to be developed, the supply of parking spaces decreases in the urban core. Although these lots that become developed are required to build a specific number of spaces based on the minimum parking requirements of a municipality, these spaces are usually reserved for the users of the building or, when made public, charge higher rates than pre-existing surface parking. Therefore, these additional spaces do not accommodate the commuters from outside the city centre. The supply of surface parking spaces for these long-commute drivers thus shrinks and allows for the rates of parking to increase and potentially follow the market demand. This speculation can be used to infer that the profitability of parking lots could possibly have increased from 2002 to 2017 despite the increase in taxes paid, and the actualized ground rent curve for vacant lots may have had a positive slope over the study period. Moreover, if the profitability of owning a parking lot has increased, due to decreased supply or increased demand for parking, the return on investment (ROI) from charging parking rates cannot (theoretically) be as high on a per metre cubed (m³) basis (taking into account urban air rights) as if the land was to be developed to its highest and best use²¹.

Using both of these assumption, it can be speculated that vacant lots may experience a

growing rent gap as long as the slope of the potential ground rent curve is increasing at a greater rate than the actualized land rent. This topic requires greater quantitative analysis, but the main discussion brought forward by this paper is that the rent gap for vacant lots may be created even if the actualized land rent curve has a positive slope. The rent gap for vacant land may be more appropriately visualized by comparing the slopes of both curves rather than looking at it as a spreading between the curves (see Figure 9). As opposed to Smith's original depiction of the rent gap (Figure 1), which emphasizes the process of capital depreciation in the creation of the gap, this discussion brings forward the idea that for urban vacant land, the creation of a gap is more dependent on the potential ground rent curve having a greater positive slope than the actualized land rent curve. In other words, capital depreciation is not necessarily a precondition for a rent gap to form, as previously proposed by Smith.

²¹This is assuming the assessment values of the properties bear a relationship to the market value (the price an investor is willing to pay) and this value is correct in assuming the demand for high(er)-rent usages.

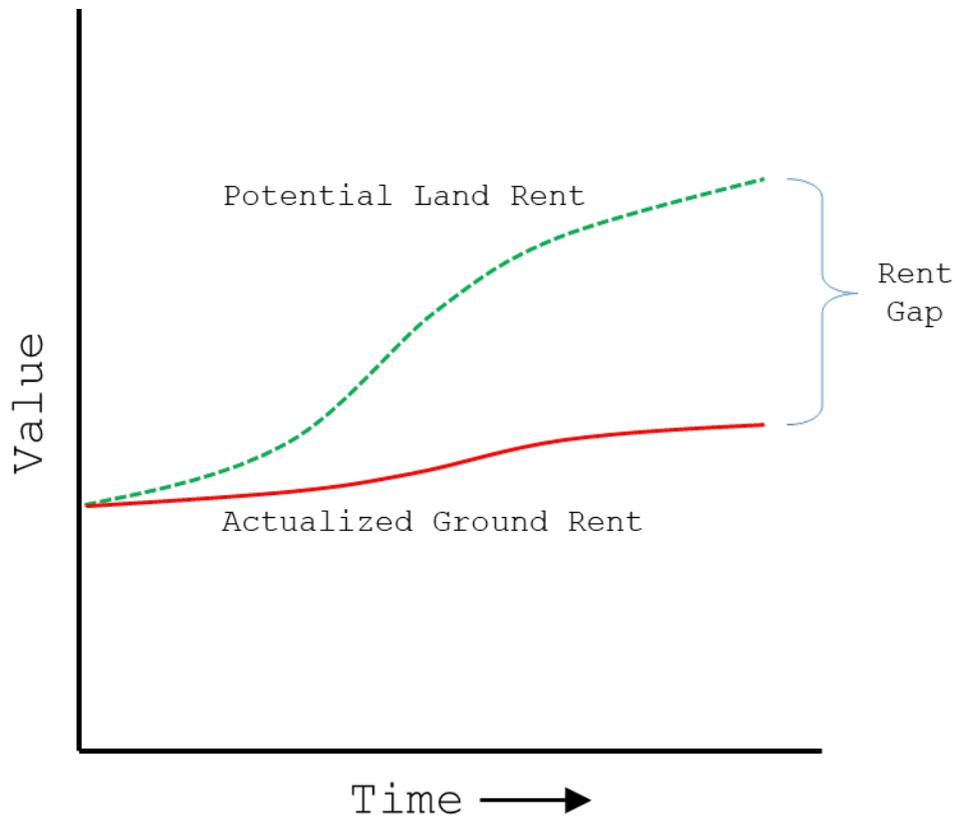


Figure 7. A re-imagined depiction of Smith's (1979) rent gap to fit the development of urban vacant land.

5.2 Fiscalization of Urban Vacant Land

The second part of this discussion returns to the first quote of this paper by former Ottawa City Councillor Nussbaum, and his concern with taxes inequitably favouring surface parking lots, or urban vacant land and helping them remain as such in lieu of more efficient, dense developments. This will be a speculative review of why the City of Ottawa decreased taxes across all land uses by over 40% from 2002 to 2017. The question this section poses is, what reason would the city have for lowering the taxes on vacant lots in the urban core? While this paper does not extensively review and analyze the tax policy associated with these changes, the theories of economic and urban geography will be used to attempt to explain why, from both the perspective

of the city as well as the developers why this would be advantageous for their specific agendas.

Tapp's fiscal geographies, as described in the Literature Review section, mentions the power of fiscal mechanisms in contributing to the built form of a city; in this case, through property taxation. In a city of over one million people, with approximately 68% of Ottawa residents commuting using a car (Ottawa Neighbourhood Study, 2011), the demands for parking are a key concern for city officials. One potential explanation for the decrease in property taxation is the need for surface parking lots downtown. By lowering the tax rates for all land uses, including vacant lots, this lowers the costs of holding

onto a vacant plot as a surface parking lot. Although quantifying the actualized land rent was not the goal of this study, a decrease in the operating costs, seen by decreases in tax rates, can be interpreted as upward pressure on the actualized rent curve shrinking the rent gap²². This policy-driven tax break would theoretically make it more advantageous for land owners to hold their assets in their current land use in search of optimal market conditions in the future. The City of Ottawa must maintain a level of parking that supports the commuter culture of the city. In order to do so, the city must incentivize investors to keep these parking lots functioning as the key staples of the urban space they have come to embody. This policy may also help to prevent strain on developments to include excess parking spaces to accommodate for the parking lost in the process. In a more forward-looking interpretation, this decision could help to ensure that plots that do become developed are done so in a way that maximizes usable square footage of the new buildings. Overall, the city may have chosen to control the urban parking lot market by controlling supply through tax-rate tax breaks. Another perspective that must be considered is that of the development industry. Amidst campaign donation violation allegations from the last municipal election, all “with ties to the development industry”²³ (Porter, 2019), questions relating to lobbying efforts by developers to manipulate policy to fit their agendas can be applied to the changes seen

in property taxation. In the context of urban centres, developers obviously would prefer for vacant land to be in “no-tax zones” (Tapp & Kay, 2019), but in order to lobby city council they would have to develop a case in which this would benefit the city. From a developmental standpoint, vacant lots must be developed incrementally in order to prevent massive surges in building vacancies which would negatively impact both the city and investors. This potential increase in excess supply of square footage would not create a fertile market for investment, which Ottawa is looking to grow in the coming decades (Jones Lang LaSalle, 2019). Instead, these developers may prefer to have taxes lowered on these vacant lots in order for them to wait and find the prime market conditions in which they would be able to develop quality assets that would have guaranteed tenancy. Holding these assets as parking lots has an opportunity cost for developers as they would have a greater ROI as a developed asset, but allowing development to follow market patterns is more ideal for them to generate the highest ROI possible.

These discussions related to urban vacant land remain as speculation based on the existing literature, previous theories, and the information analyzed in this study. This study is meant to generate further discussion in the areas of economic and urban geography, and investigate these vacant tracts of urban land and the mechanisms that have come to define

²²As previously mentioned, this paper does not attempt to measure the actualized land rent as the information is not easily obtained. By assuming that a decrease in tax rate places upward pressure on the actualized land rent curve does not assume any level of change in the slope of the curve, but rather only indicates how changes in the taxes paid potentially impacts the rent gap.

²³The companies were not formally prosecuted because it was apparently not in the “public interest” (Porter). Although it cannot be confirmed whether these allegations were valid, this does reveal the hidden nature of relations between developers and city officials in the form of lobbying.

their unique developmental characteristics in order for future cities and planners to better understand how they operate between the realms of fiscalization and financialization.

Limitations

This paper explores the rent gap theory through an in-depth quantitative study, but in doing so it must be said that this study had many limitations and thus should not be considered an exhaustive or significant conclusion made about the impacts of taxation on vacant land development. Over the course of this study, three main limitations have made this study less than thoroughgoing in its ability to measure the statistical significance of results that future conclusions may be drawn upon or extrapolated upon. The three limitations to be discussed are the small sample size, the long developmental cycles, and the simplistic definition of actualized land rent.

6.1 Small Sample Size

This study surveyed the assessment values and tax rates of 131 properties, of which only a small number were vacant lots. As described in the methodology, only those properties that maintained a constant land use were analyzed which reduced the number of vacant lots to 11. This sample of vacant lots prevents us from making generalizable conclusions from this analysis. Due to the size of the study, a limited amount of data was collected limiting the ability to produce generalizable results. In order to create a generalizable analysis, a greater number of properties across a range of urban environments must be considered, and would need to be selected with the help of appropriate random sampling techniques

6.2 Long Developmental Cycles

The development and redevelopment of land is a lengthy process that is difficult to encapsulate in a single study. Due to the lack of available data beyond 15 years, this study was unable to encapsulate the full extent of developmental cycles which can last decades. In future research, a longer term study could help to display how land develops in the long term, helping to further develop theories regarding the practicalities of the rent gap. The rent gap relies on the idea of redevelopment, and measuring the physical redevelopment of land parcels requires examining the development cycles many times over and identifying trends and patterns; this is a consideration that requires a longer time frame than this current study.

6.3 Actualized Land Rent

Within this study, the term actualized rent was defined as the 'operating income generated by a property at specific capital intensities'. This term although true, could not be fully explored in this study due to a lack of information. Built and vacant-built properties collect rent from tenants and generate income based on their activities as do vacant properties. This income is what makes up the actualized land rent. This information is help privately by the land owners and cannot be accounted for. This lack of availability in the data hinders how the actualized land rent can be visualized and interpreted across land uses.

Conclusion

The urban landscape that defines Ottawa is littered with surface parking lots and a lack of density in its urban core. In urban development discourse, Neil Smith's rent gap is seen as the quintessential theory describing how land comes to be developed.

In discussions explaining the forces behind these shifts in investment, one such area, fiscalization, had yet to be applied to the theory of the rent gap. This paper explored how assessment values across different land uses in Ottawa's Centretown neighbourhood changed over the course of 15 years (2002 to 2017) in an attempt to understand how the rent gap can be applied to urban vacant land. This study also examined how the tax rates of different land uses have changed over the study period in hopes of generating a greater discussion as to how property taxation comes to influence the development of urban vacant land in the context of Ottawa. Through quantitative analysis, it was shown, though not statistically significantly, that the assessment values of vacant properties increased at a greater rate than the more developed properties. This was used to comment on Smith's original theory of the rent gap to more specifically fit the processes of vacant land development. This discussion of an urban vacant land-specific rent gap placed a greater emphasis on the slope of the increasing potential ground rent curve as it was speculated that the actualized land rent curve may very well have a positive slope due to the scarcity of these plots of land in the urban core. It also speculates that capital depreciation is not necessarily a precondition for a rent gap to form, as once originally thought.

The second major discussion stemming from this paper is how property taxation can be used to manipulate the development process of urban vacant land. This paper was unable, similar to the comments on a re-imagined rent gap, to statistically prove how changes in property taxation impacted the rent gap, but it was able to show how tax rates had changed over the course of the study period. Seeing that tax rates across all land uses

class decreased by an average of 44%, this discussion was able to speculate as to why the City of Ottawa enacted these changes from both the perspective of the city as well as from developers. The paper brings forward the idea that the city is trying to control the shrinking supply of parking in the urban core while developers would potentially want to ensure the timing of vacant land development follows market-driven cues.

As the world becomes increasingly urban, our cities must come to support the growing number of residents and workers that populate these regions. Urban development literature has discussed the implications of the rent gap theory in multiple contexts but has yet to fully investigate the implications of urban vacant land and the different forces involved in its development. This paper acts as a catalyst to begin further discussions relating to the fiscal geographies of urban vacant land in hopes that cities can more effectively shape fiscal tools to cater to the effective, sustainable development of the future. The urban space and its processes will be under constant examination and scrutiny, and this research study, although only skimming the surface of the available information and knowledge, hopefully opens up an important discourse surrounding the capacity of municipal governments to positively impact the city.

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Art deco and corporate communism: The influence of the American skyscraper on Stalinist architecture

Joanna Gorska

Abstract

This essay compares American Art Deco skyscrapers against Soviet architecture, using the urabanscapes of New York and Moscow as a case study. Despite the antithetical relationship between capitalism and communism, these two cities espouse striking architectural similarities vis-à-vis their historical skyscrapers. To explore this phenomenon, this paper will analyze how both American and Soviet elites considered themselves to be the final product of a Hegelian historical evolution, self-consciously fashioning their political regimes as the final stage of history. With Enlightenment rationality being at the center of Hegelian thought, both communism and capitalism endeavored to usurp religious authority, establishing their own divine rule as graced by historical inevitability. By engaging in an artistic and historical analysis, this paper will argue that both ideologies claimed an unprecedented monopoly on the cityscape, making their citizens' relationship to their environment centralized and authoritative. Given the technological developments of the early twentieth-century, the prerogatives of construction were dictated primarily by political institutions rather than physical encumbrances. The use of geographic hegemony through architectural means thus became a defining feature of those who sought power, whether it be an oligarchy of corporations or a one-party dictatorship. This analysis becomes particularly interesting when considering the ostensible dichotomy of free market and nationalized economy, particularly in regards to property rights. These inner contradictions resulted in Moscow and New York sporting nearly identical neo-Gothic skyscrapers, regardless of whether they were construed by shareholders or Bolsheviks.

The contemporary skylines of New York City and Moscow are progressively dominated by condominiums, with skyscrapers obscuring classical landmarks and thus morphing two iconic cityscapes into a singular sea of high-rises. Historical artifacts such as the Empire State Building and the Moscow State University find themselves increasingly overshadowed by steel and glass, slowly disappearing along with their respective eras. Whilst the two may seem perfectly antidotal, further analysis demonstrates that New York and Moscow shared architectural similarities even before their contemporary real estate development. Their perceived differences were exacerbated by Cold War paradigms, wherein both cities acted as ideological idioms. New York's Art Deco buildings were viewed as emblems of the American Dream, with monuments such as the Chrysler Building and 30 Rockefeller Plaza embodying the capitalist spirit. In contrast, Moscow's Vysotki, with classical Stalinist architecture, acted as the West's natural antithesis, where Socialist Realism clashed with the extravagance and luxury of Art Deco. If one traces both movements' artistic origins, however, it becomes apparent that the differences espoused by New York and Moscow were performative rather than inherent; the Empire State Building's concrete blocks were crafted by the same ideologies which erected the spirals crowning the top of Hotel Ukraina.

This essay will thus demonstrate that the Soviet Union's totalitarian architecture was directly inspired by New York, with classical Stalinist buildings taking their cues from America's burgeoning corporate capitalists. Although the two were ostensible dichotomies, these similarities elucidate that, at the end of the day, the capitalist free market was not so free after all, and the communist "dictatorship of the proletariat" was more dictatorial than proletarian. All in all, this analysis highlights the importance of architecture in cementing political control, with the twentieth-century harkening the age of monopolies on power. Soviet and American high-rises of the 1930s and 1940s were meant to embody a new historical epoch, harkening the arrival of Hegel's final stage of historical development. While Art Deco initiated in Europe, its focus on exuberance and opulence guaranteed its success in America, particularly due to the post-WWI economic boom. With the birth of the USSR, Bolshevik authorities were equally keen on establishing the sense of a new era, resorting to architecture as well. In order to demonstrate this Hegelian approach, this essay will be divided into five parts, analyzing ideological movements vis-à-vis their physical manifestations. The first section will provide the necessary ideological framework through which the case study will be analyzed. The second section will delve into the history of the skyscraper, revealing how a utilitarian solution to economizing on plots of land morphed into an ideological flex. This will primarily follow the trajectory of American urban development, with a focus

on its tumultuous relationship with Europe's tastes and trends. With the 1925 International Exhibition of Modern Decorative and Industrial Arts in Paris gaining worldwide traction, American contemporary art developed along the same premises as those of Europe, albeit with a special focus on architecture. Given past and future attempts at remodeling cities, as embodied by Napoleon III and Adolf Hitler, respectively, this analysis will make apparent that the adaptation of artistic ideologies to urban centers is entirely political and indicative of a deeper meaning. The third section will provide an overview of the Soviet approach to art, and how the Modernist avant-garde was quelled in favour of Socialist Realism by the 1930s. The final section will offer a thorough case study, comparing New York's primary Art Deco buildings to the uncompleted Palace of Soviets and Moscow's Seven Sisters. It will additionally include an overview of Soviet architecture as export, with Eastern Bloc satellite states being the reluctant recipients. By following these monuments' legacies to the present day, this analysis will demonstrate the symbolic importance of erecting such buildings, and how they intended to shape the social psyche.

Hegel, historical development, and artistic movements

Although the Soviets initially embraced Constructivism, its focus on abstract theorizing proved too bourgeois for subsequent leaders, leading to its official denouncement in the 1930s.¹ What is interesting, however, is that this native

¹Although this artistic movement espoused many core socialist values (i.e. function dictating form, its focus on industrial design), it was nonetheless grounded in individual self-expression, anathema to the collective Soviet spirit.

Russian movement was cast aside in favour of American Art Deco, with the use of symmetry, concrete, and ornamentation all taking place within a Neo-Gothic paradigm.² Given their ambitious height, New York's Art Deco skyscrapers towered over the metropolis, creating a sense of absolute power. The massive dimensions of these architectural pieces meant to evoke a sense of urban domination, with the building's authority acting as a surrogate cathedral, basking as the ideological center of the city. Given the medieval European tradition of prohibiting the construction of a building taller than the city's main church, height within architecture was symbolic of the shift from religious to secular power. This totalitarian aesthetic was meant to be replicated in the Palace of Soviets, a colossal skyscraper that was to be the tallest building in the world. Although the construction project of the Palace was abandoned, its aesthetic vision was distributed amongst the Seven Sisters, a group of smaller but nearly identical buildings acting as Stalinist Moscow's most important landmarks.

The semiotic divergence between American and Soviet architecture lies in the fact that economic systems have dictated art's interpretation, with free market value becoming synonymous with inherent artistic value. By equating capitalism with liberalism, Western dealers, historians, and patrons alike have generated a dichotomy of genuine versus non-genuine, claiming the free market led to freedom of expression. This was postulated against the Communist Bloc, wherein totalitarian regimes were ostensibly

the sole arbitrators of sanctioned artistic output, thus regaling socialist art to the status of coerced propaganda (Groys, 2008). These generalizations were based on the premise that art created in the Western Bloc was apolitical, giving free reign to personal expression. For instance, the pluralism of modern art led to the decentralization of movements, aiming to deconstruct and negate preceding or concurrent movements. This was a stark contrast with pre-Enlightenment ideals, wherein the presence of a God dictated a clear focal point. Increased social and political secularization, however, marked a clean break, with Enlightenment ideals establishing a system of rationality. Renowned art critic Boris Groys (2008) claims this led to a Hegelian dialectic, with artistic output becoming "a field where every thesis is supposed to be confronted with its antithesis... Thus, the atheistic, humanistic, enlightened, modern world believes in the balance of power, and modern art is an expression of this belief" (p. 1). The Industrial Revolution and its consequences provided the material basis for a tangible social shift, with the mastery of man over nature harkening a new artistic age. This epistemological shift in artistic expression became a central leitmotif for American and Soviet architects in the 1930s and 1940s, with each laying a teleological perception of history as the foundation of their ideological basis. Stalin proclaimed that: What is most important to the dialectical method, is not that which is stable at the present but is already beginning to die, but rather that which emerging and developing, even if at present it does not appear stable,

²Originating in eighteenth-century Britain, this movement peaked in the nineteenth-century as an architectural companion to Romanticism. Given the latter's fascination with the Middle Ages, medieval churches were emulated as a spiritual tour de force.

since for the dialectical method only that which is emerging and developing cannot be overcome (Groys, 2008, p. 143).

These perceptions could be found echoed amongst American developers, whose views on the development of history differed only when delineating the final stage. American capitalism was to be humanity's crowning achievement, where Enlightenment ideals such as democracy, progress, and equality were finally achieved. The 1930s skyscraper was meant to represent not just the corporations it housed, but those who toiled with its construction. The Empire State Building was to be "the people's building", leading "a melting-pot nation of huddled masses not only to breathe freely, but also to accomplish great things" (Korom, 2008, p. 424). Both countries thus set off to build their peoples' monuments, with monumentality, height, and historicism projecting a dialogue with the past meant to foreshadow the new utopia.

The American skyscraper's evolution

The precise definition of a skyscraper has eluded scholars for decades, with heated arguments as to the necessary requirements for a building to qualify for this classification (Alastair, 1986). This included parameters as diverse as height, width, material, ratio, structural frame, visibility, purpose, and even technological features. American art historians thus disagree as to the origins of the first skyscraper or how it evolved (Brubaker, 1988). For the sake of brevity and clarity, this essay will adapt architectural historian Joseph J. Korom's (2008) conventionally accepted definition of a skyscraper, as a "building in which people either live or work, and that which includes a passenger elevator, [being] a building of at least five floors" (p.20). The mechanized element is an important focal point, creating an essential element of

temporal delineation. Whilst tall buildings certainly existed in increasingly industrialized Europe, their infrequency and conservative height did not warrant the need for large scale elevator installations. Skyscrapers were thus a uniquely American phenomenon, with the country's inimitable political and social structure shaping its urban centers.

It is no coincidence that skyscrapers started making their appearance immediately after the Civil War, with the Industrial North's capitals, New York and Chicago, taking advantage of the fortuitous economic boom of the Reconstruction Period. With a need for rapid mobilization and creation of steady supply lines, Union states further developed their already extensive railway system, while the war-effort contributed to the development of heavy industry. The creation of highly concentrated commercial centers made business and industry more efficient than ever, and cities' downtown cores become a new monolith of power. (Brubaker, 1988). Furthermore, the increased urbanization due to post-war migration demanded a sharp rise for property, leading to unusually expensive land lots. For those who wished to establish an enterprise in the newly bustling cities, height was viewed as a utilitarian principal; it was far cheaper to build upwards than to try and purchase more land. However, these thrifty architectural practices were quick to acquire a new meaning, with symbolic value becoming as important as practical considerations. With the Union's Civil War victory, rapid industrialization, and technological progress, American skyscrapers became an emblem of liberal democracy, transforming height into a virtue of its own.

Despite America proudly distancing itself from Europe's Ancien Régime aesthetics, it nonetheless wished to acquire an air of historical validity. It thus proceeded to

emulate classical architectural models, as seen by the construction of the Cooper Union Building in New York. This structure is an excellent example of this merging of epochs, although its outward Greek Revival façade was already dated by the 1850s. This contrasted greatly with its method of construction, however, which saw the seminal usage of steel beams as structural support (Korom, 2008). Content thus preceded style, offering a foreshadowing of the Soviet artistic reforms in the 1930s. In his campaign against formalism, Stalin dictated that “the novelty of Soviet art derived from the novelty of its content rather than from any ‘bourgeois’ novelty of form, which merely concealed an old, ‘bourgeois’ content” (Groys, 1992, p. 41). This was certainly applicable to New York’s skyscrapers, whose office capacity created an unprecedented environment for the mass concentration of workers, regardless of its sober exterior.

Although the comfort and maintenance of these buildings were initially deemed unsustainable, with steam being the primary source of heating, companies built with the future in mind. This was exemplified by Cooper’s approach when he constructed his eponymous building with an elevator shaft well before such a contraption was invented (Groys, 1992). This forethought is once more indicative of the monumentality of these new buildings, whose erection was to harken the coming of a new era. Developers were right in these assumptions, and by the end of the century, buildings were illuminated by electricity, substituting less efficient gas lighting (Groys, 1992). These technological novelties, however, were predominantly hidden behind columns and turrets, with Greek and Romanesque pastiche lending an air of historicity. This was to be discarded in the upcoming century, wherein height for height’s sake became an ideology and aesthetic

of its own.

Although steel beams had already been in use for decades, it was not until the late nineteenth-century that skyscrapers started to expose their structure, with a focus on frame becoming the new trend (Korom, 2008). By covering a building’s skeleton with a superficial wall of masonry, architects were previously adapting Romanesque or Ancient Greek camouflage. This changed in the 1890s when companies felt emboldened to uncover their steel and concrete beams. As a financially auspicious alternative, it additionally provided a new, minimalist alternative to its Old World imitations. Nonetheless, the 1893 World’s Columbian Exposition put an end to this era of austerity, with European models establishing themselves as in the vogue yet again. Thus, just as the École des Beaux Arts in Paris promulgated a historicist architecture, American developers reverted to dictating an imitative style (Brubaker, 1988). Although this involved an eclectic array of movements ranging from the Greek Revival to the Renaissance, it was the Gothic that left a lasting impression which would later manifest itself in Art Deco verticality (Robins, 2017). It is thus through this synthesis of past and present that New York’s skyline developed its historicist façade.

American Art Deco architecture differed from its European counterparts by virtue of its fixation on verticality. Just as conquering the Western frontier had become part of the national identity, the colonization of altitude made its way into American consciousness. “Inhabiting the stratosphere” was a crucial way of demonstrating one’s dominance over the environment, making height a unique feature of American Art Deco (Korom, 2008, p. 145). Moreover, the inception of this artistic movement in the

United States espoused interesting origins, predating the famous Paris Exhibition in 1925 that was meant to serve as the catalyst for its international promulgation. America accepted many European immigrants in the early twentieth-century, many hailing from Germany and Austria. Many artists and architects were included in their ranks, permeating New York's aesthetic with Germanic trends (Alastair, 1986). This made for an often eclectic blend of styles, although the Great Depression put an end to this frivolity, introducing an austere uniformity particularly noticeable in architecture. Buildings erected in the aftermath of the 1929 Wall Street Crash were less ostentatious, espousing fewer ornamentations and luxury materials. This made them an excellent blueprint for the structural characteristics of the arguably most-recognizable Art Deco skyscrapers. With strict zoning laws dictating parameters that would provide sufficient air and light for the street level, developers were forced to build sleek towers. Upward motion was streamlined through clean vertical lines, with windows being arranged in columns rather than rows. To achieve maximum support, buildings tapered geometrically, with elongated rectangular columns supporting the crowning tower. In order to camouflage bulky technical appliances, spires were added to the top, gracing the buildings with a secular steeple (Robins, 2017). Thus, the Gothic Modern was born, trumping other European trends such as the Renaissance or Greek Revival.

With medieval churches being arguably the most representative form of the original Gothic style, it is no coincidence that architects favored a religious monument. The One Wall Street building was almost a direct imitation of its neighboring Neo-Gothic Trinity Church, down to the curtained walls,

arched glass panels, and concave window frames (Robins, 2017). America thus espoused a new religion, that of free market capitalism. The imitation of the church motif was again found on the other side of the Atlantic, although the Soviets did not settle for building their monuments down the street from churches. The inaugural step in building the Palace of Soviets was the destruction of the Cathedral of Christ the Savior; it was from its ashes that the new religion was to rise. Much like the Palace of Soviets, which was supposed to be ornamented with communist emblems including a gargantuan Lenin crowning the entire monolith, American skyscrapers used symbolic decorations to advertise the buildings' purpose. For instance, the Chrysler Building's peak was layered, clearly evoking hubcaps and tires. The Walker & Gillette's Fuller Building boasted mosaics of the company's projects (Robins, 2017). The skyscrapers themselves had become more than just corporate housing; these buildings were an emblem of the country's ruling elites.

Art in the Soviet Union

The Russian avant-garde of the early twentieth-century flourished relatively well following the October Revolution, although Stalin ultimately put an end to their aspirations in the 1930s. The union between Modernists and Bolsheviks seemed odd, particularly with the latter's gravitation to conservative forms. Even Lenin admitted his knowledge of art was rather sparse, enjoying mainstream oeuvres such as Beethoven's Sonatas, and ideologically transparent literature such as Chernishevsky's *What Is to Be Done* (Groys, 1992). The communist appeal thus stemmed from its historical aspirations, with revolution acting as art itself. Modernists all over Europe were keen on exposing the real world, doing away with facades completely. One of the most

representative figures of the modernist movement, Nietzsche, claimed that the only justification for the world were aesthetics, making art the focal point of remodeling the world entirely (Groys 1992). The Bolshevik Revolution was viewed as the catalyst which brought about the new order, with Modernists lording it as the flood which wiped away the old, degenerate façade.

As Groys previously claimed, art created by Malevich or Khlebnikov post-1917 was barely noticed by critics in the West, with the epitaph of totalitarianism being firmly entrenched as a catch-all label for artists stemming from the East. By the time the rest of Europe took notice of Soviet artists, the latter's avant-garde experiments had already been extinguished by post-New Economic Policy (Pare, 2007).³ The politicized nature of 1920s artistic movements, however, had its roots in the previous decades, with Modernists viewing themselves as part of a larger ideological endeavor. By considering the world to be "regarded as material, the demand underlying the modern conception of art for power over the materials implicitly contains the demand for power over the world" (Groys, 1992, p. 21). This "aesthetic-political" project thus predated the revolution, although the latter simply proved to be an enabler. It additionally demonstrated the importance of art as political construction, particularly with Stalin's consolidation of power in the 1930s.

Amongst all artistic mediums, architecture remains the most dependent on political authorities and the means of production. Seizing control of the architectural scene was

thus relatively easy with the nationalization of manufacturing companies. Whilst this allowed the Bolsheviks to commandeer the rapid execution of workers' housing projects, it was additionally burdened with the task of building state-run department stores. Construction projects thus served to build authority as well, with state-sponsored buildings becoming a symbol of the government's power; the state seal on an imposing building was expected to generate awe and respect. Kharkov's Gosprom was an example of such a venture, with the state-run store being a veritable palace of industry. What is interesting, however, is that its multi-complex agglomeration endeavored to emulate an American city skyline, with its concrete and glass being shaped in an eerily evocative manner. This architectural style was adapted to a series of buildings, irrespective of their purpose. Such was the case with the VTsIK complex, immortalized by Yuri Trifonov's *The House on the Embankment*. As the ominous backdrop of the 1930s purges, this residential building became a symbol of state power (Pare, 2007). Whilst both these buildings were built in a Constructivist style, which was later deemed counterrevolutionary by Soviet authorities, nonetheless both Gosprom and VTsIK espoused the same pretensions of grandeur as its successor movements.

At its foundation, Constructivism was a politicized artistic movement seeking to revolutionize the pre-existing world. In architecture, Constructivism oversaw the "rationality of geometry merged with functionality" (Rowell & Wye, 2002, p. 12). These two characteristics are certainly

³The New Economy Policy (NEP) was a temporary relapse into a partially free market economy as a means of reconstructing after the Civil War. Stalin's break with this policy in 1928 signified the tightening of his power, with political and artistic freedoms being equally curtailed.

applicable to the Stalin Vysotki, although the Bolsheviks deemed art insufficiently subordinated to the Party. In the debate as to whether politics ought to be aestheticized or aesthetics politicized, Stalin decided everything ought to succumb to the State (Groys, 1992). Architects became mere servants of the party, just like American developers served their corporate masters. Buildings were thus meant to belong to a brand or an ideal, not artists.

The suicide of Vladimir Mayakovsky, the USSR's leading modernist poet, signaled the death of an era, and although Stalin offered posthumous praise, his compatriots were subjected to increasingly rigorous persecution. The process of Stalinizing the arts was gradual, with a series of decrees tightening the noose around the avant-garde's neck. This primarily involved the replacement of leading figures, as demonstrated by the architectural contest for the Palace of Soviets, which was ultimately won by Boris Iofan, an architect who rose to prominence under the Bolshevik's wings. As argued by Soviet historian Sona Hoisington (2003), however, the competition was not a means of returning to reactionary artistic norms, but indicative of "a shift from modern and functional architecture toward architecture that is eclectic and monumental" (p. 42). Buildings were no longer utilitarian in the usual sense, but aimed to remodel more than just the physical realm. Sergei Tretyakov noted the similarities between Bolshevik policy and artistic ideologies prevalent at the time, claiming: Forging the new human being is essentially the only content of the works of the Futurists, who without this leading idea

invariably turn into verbal acrobats... what guided Futurism from the days of its infancy was not the creation of new paintings, verses, and prose, but the production of a new human being through art, which is one of the tools of such production (Groys, 1992). The Bolsheviks' artistic goals were always apparent, and writers were lauded as the engineers of human souls. Physical engineers, however, were not less important, and they were to play a crucial role in the rebuilding of Moscow.

The Palace of Soviets was to play the pivotal role in Soviet architecture, setting the artistic norm. The initial site for the proposed project was carefully researched and calculated. For instance, the Construction Council evaluated factors such as location, construction costs, and human resettlement. Their decision ultimately landed on Okhotnyi Riad, a market area in the heart of Moscow. Not only would this require minimal destructive effort, as the area was sparsely populated by small, insignificant buildings, but it was also fortuitously located within the vicinity of the Red Square (Hoisington, 2003). The sudden change of location came as a surprise, particularly given the effort required to raze a monumental church to the ground. Symbolic value, however, was clearly to take precedence, with the palace's new whereabouts influencing the expected style. Politics had been thoroughly aestheticized, acquiring monumental proportions. Theatricality became an imperative quality of everyday life, arguably reaching its zenith with the Moscow Trials.⁴ Even the preparation of the construction site was to be a passage of rite, with the usage of dynamite intending to

⁴The Moscow Trials (1936-1938) served to eliminate the last of Stalin's main political opponents, involving a series of staged trials exposing "enemies of the people". These were broadcasted to the entire world as a means of propaganda, making a great show of the USSR ostensibly following the

create a spectacle (Hoisington, 2003). One temple was to replace another, making it clear that a new epoch had begun.

However, Soviet authorities ran into problems early on when the top prize winners failed to create a design that exuded unrivaled power. It is important to note that the competition was open to foreigners, including those of “high-bourgeois” origins. *Architectural Forum*, a respected American magazine, even placed an announcement calling for submissions, ultimately attracting ten entries (Hoisington, 2003). This was highly evocative of the close relationship between American and Soviet architecture, and although Iofan’s blueprint was ultimately chosen, its initial rejection paints an ambiguous picture as to what was considered authentic Soviet art. Mikhail Kryulov, one of the leading figures on the construction committee, was quick to scornfully remark that:

The configuration of the building is disharmonious and false, characteristic of foreign banks, hotels and offices- capitalist enterprises. The placement of a large figure of a worker bearing the likeness of the American Statue of liberty gives the project a pseudo-proletarian character (Gan, 2015, p. 172).

This statement’s honesty is bolstered by the fact that it was said prior to Iofan’s victory, and as subsequent analysis will demonstrate, was fairly apt in its evaluation. The Soviets’ key term was “monumental”, and only American skyscrapers were espousing an all-encompassing aura of power. This awe-inducing effect was achieved through a

combination of historicity, verticality, and modern building techniques.

By analyzing the rejected models for the Palace of Soviets, it becomes apparent why corporate culture was to stealthily shape Moscow as well. As previously mentioned, the competition’s top entries lacked monumentality, which once analyzed, can be defined along historical aesthetics. Doditsa and Dushin’s entry won first prize; espousing symmetry, clear geometric shapes, and glass panels, this project combined functionality with modern materials (Hoisington, 2003). Whilst the proposed building was certainly sprawling, it was way too flat, clashing with its historical surroundings. For an edifice to inspire awe, according to Bolshevik leaders, it had to be taller than it was wide (Groys, 2008).

A special grand prize was accorded to Ivan Zholtovskii’s entry; the reasons for such an exception are revealing. The design was purposely structured to resemble grandiose historical monuments, both domestic and international. Aside from including a Kremlin tower, Zhlotovskii additionally incorporated a visual reference to the Colosseum in Rome within his blueprints, turning an ancient allusion into contemporary political discourse (Hoisington, 2003). With the fall of Constantinople, Moscow was to become the Third Rome, and although this concept espoused theological origins, it raptly assumed political dimensions. Lenin may have proclaimed imperialism to be the highest stage of capitalism, but the Soviet Union was clearly meant to not only become a successor empire, but also the final stage of civilization. Whilst Zhlotovskii’s designs were

rule of the law. After strenuous torture, the defendants were forced to proclaim their guilt, with the staged confessions being akin to theatrics.

lauded for their correct perception of history, the Bolsheviks were looking for a triptych combination of the sacred, historical, and monumental. Architecture was to adapt the role of “the icon [...] in Russian Orthodox culture, in that it had a simultaneous existence in two orders of reality, sacred and profane” (Dobrenko & Naiman, 2011, p. 11).

The final stages of the competition were closely monitored by the party, which made increasing demands upon the participants. With the unsuitability of the previous proposals, the Bolsheviks gave a clear admonition:

[The candidates were] warned not to design low, squat buildings but to make the Palace of Soviets a single structure, tall and imposing and situated on an open square. They were instructed to give it a crowing feature but cautioned to avoid anything that smacked of ecclesiastical (Hoisington, 2003, 51).

A nearly identical order had been given around three years prior in America when planning the construction of the Bank of the Manhattan Company. Intended to be the world’s tallest building, the design was meant to exude supremacy, solemnity, and authority, going “halfway to hell and right up to heaven...” (Korom, 2008, p. 42). Iofan’s victorious proposal not only matched this description, but breached heaven itself, with “Lenin taking the place of the cross and cupola as a demigod” (Drutt & Malevich, 2003, p. 92).

Although the Palace of Soviets was later abandoned due to the onslaught of WWII, it nonetheless served as an important blueprint for subsequent projects. Its physical foundations may have been disassembled for various war constructions, but its ideological foundations paved the infrastructure of ideological state building. Moscow’s Seven

Sisters, the most prominent features of Stalinist architecture, all share the same aesthetico-political traits, each carrying the unfinished Palace’s soul.

New York versus Moscow: a case study

With shared illusions of grandeur acting as a common foundation, it is no surprise that New York and Moscow’s skyscrapers looked very similar. The Neo-Gothic style reigned supreme, with its focus on verticality making it highly discernable. This style was not merely focused on height, but the manner in which the building appeared to travel upwards. This involved the creation of streamlining, a practice which incorporated uninterrupted lines or patterns. By stacking large narrow windows in columns, the buildings were striped with uninterrupted lines, creating vertical motion. By adding textured paneled brickwork, architects increased the number of lines, while the contrast of thick and thin furthered the illusion of movement. To direct this motion upwards, the main tower of the buildings was surrounded by additional rectangular blocs stacked on one another. The way they were organized differed, with some buildings espousing symmetrical pairing, such as the Bank of Manhattan Building, whereas others were purposely arranged off-center, with asymmetry creating a new sense of balance, as espoused by the Medinah Club Building. It is important to note that asymmetry was a uniquely American feature, with all of Moscow’s Seven Sisters being built evenly across a definitive axis. In both symmetrical and asymmetrical cases, however, every stacked block was smaller than its predecessor, with the highest, narrowest blocks ultimately wrapping around the primary tower. As highly geometrical structures, Neo-Gothic buildings were carefully layered, making it appear as if the



Medinah Club Building (Korom, 2008, p. 378).

central part of the edifice were growing out of the rest of the structure. The finials were another extremely important element, enhancing the verticality of the edifice. A fancy spiral was usually only reserved for the very top of the building, while the smaller surrounding rectangles espoused a classic block top to make the tower appear even more slender. Whereas the overall building narrowed through rectangular layering, much like a pyramid, the crowning spire itself usually apexed through a smooth, cone-like structure (Robins, 2017). The juxtaposition of the main structure's harsh, ninety-degree angles with a seamlessly narrowing tower thus created a truly skyscraping peak, with the building itself seemingly ascending into heaven.

Buildings were not just meant to be tall, but the tallest. Whilst American developers were competing with one another to beat the latest world record, the Soviets were intending to triumph over the whole world. American records were set by a matter of meters and new "sky kings" were declared



Empire State Building (Korom, 2008, p. 424).

every year. Walter Percy Chrysler and William Van Alen were full of spiteful triumph when the secret installation of a massive steel spike at the top of their Chrysler Building made the skyscraper stand at a record 1046 feet, beating their archrival, The Bank of Manhattan, by 119 feet (Korom, 2008). When the Empire State Building was finally erected, it held the height record for decades until the construction of the World Trade Centre. Even then, it only stood at 1250 feet (Korom, 2008). The main tower of the Palace of Soviets was to stand at 1365 feet, although its crowning Lenin statue was to add an extra 328 feet. It is important to note that these were revised parameters, as the originally proposed height lagged behind its American counterparts (Korom, 2008). Height was indicative of power; it demonstrated wealth, technological advancement, and social relevancy, with occupational use playing an important role.

The Empire State building is a particularly interesting phenomenon due to its latency of construction. Plans for a monumental



Tift, Hotel Ukraina (Tift, 2002).

building were established as early as 1928, although the Stock Market Crash put a damper on those plans. Contractual obligations had to be fulfilled, however, and the skyscraper was unveiled in 1931. Despite being greatly admired by the public, the building espoused extremely high vacancy rates, being largely empty for its entire first decade of existence (Korom, 2008). This put a damper on its *raison d'être*, with the Great Depression undermining the prowess of American capitalism. The Empire State Building was thus the last of its kind to be built in the 1930s, whereas Moscow's landmark buildings were barely in their conceptual phases.

WWII put Stalin's projects on hiatus, and although the Palace of Soviets was ultimately abandoned, it gave birth to the Seven Sisters. The first completed skyscraper was the Kotelnicheskaya Embankment Building, opening its doors in 1952. As a primarily residential building, this edifice did not share the same problems with vacancy as the Empire State. As a typical *komunalka*,



New York Life Building (Korom, 2008, p. 371).

or communal apartment, which included an additional wing for party elites, it created the illusion that all members of society lived under one roof (Kruzhkov, 2014). The Empire State Building endeavored to flex with this democratic aesthetic as well, by lauding itself as "the people's building." There was to be no fancy rooftop restaurants, and for a symbolic price of fifty cents, the everyday worker "could briefly have a better view of the city than any corporate executive" (Korom, 2008, 428). For both Americans and Soviets, skyscrapers were supposed to cower the everyday individual, but also allow them the chance of joining the monolith of power. Surrounded by inescapable height, the individual was placed in an urban panopticon, with the towering buildings visible from every city corner.

The physical similarities between some of New York's skyscrapers and Moscow's *Vysotki* are striking to the point of bewilderment; if one were to remove a building from 42nd Street and place it on the banks of the Moskva river, it could pass

as the eighth sister. Except for the crowning spire, Hotel Ukraina and the New York Life Insurance Building have nearly identical proportions, facades, and finials. Both used limestone for their outward appearance, layering the window columns with an additional panel that made them stand out and add an extra dimension to the façade. Their architects did not skimp out on marble, with each lobby containing a grandiose display of expensive materials (Korom, 2008) (Kruzhkov, 2014). The exteriors of both buildings are equally striking, with four rectangular blocks stacked symmetrically on one another. As they climb up, they retain roughly the same height, although they do get narrower. This creates an interesting effect wherein the bottom rectangles are horizontal, whereas the final one is vertical. The main difference is that the New Life building is crowned with a pyramid tower, contrasting with Hotel Ukraina's star-tipped spire. Both buildings espouse smaller ornamental finials on their third block, imitating the lower peaks of Gothic churches. The main difference lies in the fact that Hotel Ukraina has two additional towers at its sides, which is a unique feature to all Stalinist Vysotki. Highly dense Manhattan allowed for limited lot space, whereas Moscow architects could afford superfluous sprawl. This additionally allowed the Soviet authorities to demonstrate that it had no competition, allowing for its unbridled development over any territory.

The Bolsheviks' architectural expansion was not limited to Russia, but made guest appearances in other Soviet republics and

even satellite states. After emerging victorious in 1945, the Bolsheviks needed to assert dominance over their extended sphere of influence. This involved the 'generous' bestowing of Vysotki upon brotherly nations, although it is interesting to see what purpose they served and where. Warsaw and Riga provide two differing examples, as Poland became a satellite state while Latvia was annexed outright. Whilst both cities received buildings that were to foster education, Riga pushed the Latvian Academy of Sciences to the periphery, whereas the Palace of Science and Culture was located in the heart of Warsaw. Although both were entirely based on the Moscow State University, the Riga rendition is clearly the shortest and shabbiest, being funded by kolkhozes. To this day it is relatively innocuous, being far from the city's representational center.⁵ Given Poland's fierce resistance to communist rule, the Palace of Science and Culture was spitefully built monumentally, with impressive height, vertical and horizontal surrounding blocks, and a lengthy spire. This was to remind the Poles who was in charge. Given the ongoing heated debates as to its possible destruction due to its political ramifications, it becomes quite apparent that architecture as a symbol of power has prevailed.

Conclusion

Initially viewed as utilitarian, skyscrapers quickly outgrew their role as mere office, administrative, or residential buildings. They became monoliths of authority, cementing themselves as the rightful heirs of history.

⁵The construction of a Vysotka in every Eastern Bloc country was a show of unity, although it additionally aimed to shape individual national elites' relationship to Soviet power. The kolhoz contribution in Estonia was meant to consolidate an agrarian identity, whereas Poland was symbolically placed under central supervision.

Edgar Selwyn's 1932 movie *Skyscraper Souls* encapsulated the eerily religious nature of these new buildings. In one poignant scene, a businessman turns to his associate, proudly proclaiming:

I've achieved something big. Something worthwhile. Feel it under, it's solid! Even the fiercest storm can't budge it! It bends, but it won't break, and it stands here defiant!... Hamilton, did you ever stop to think, a million men sweated to build it: mines, quarries, factories, forests... Men gave their LIVES to it! I hate to tell you how many men dropped off these girders while they were going up. But it was worth it - nothing's created without pain and suffering! A child is born, a cause is won, a building is built (Korom, 2008, p. 402).

This religious veneration was present amongst the Soviets as well, and scornfully remarked upon by Malevich, who upon visiting one of the new oeuvres of Socialist Realism, remarked that "the walls [of churches and Soviet buildings] are decorated with countenances and portraits, also arranged according to merit or rank. Martyrs or heroes exist in both the former and the latter; their names are also listed as saints. There is no difference; on all sides, everything is identical, for the question is identical, the aim is identical, and the meaning is the quest for God" (Druitt & Malevich, 2003, p. 171). Both communism and capitalism were the final stages of history for their respective adherents, meaning the kingdom of God had finally come to earth. It was up to the people, however, to build it.

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The importance of population density and movement in the 2002-2003 SARS pandemic

Nicholas Yue

Abstract

The movement of people within high-density areas were key in the spread of Severe Acute Respiratory Syndrome (SARS) in the 2003 pandemic. Many of these hotspots are characterized by areas of high population density; specifically, packed hospitals in large cities were major hotspots for the spread of this pandemic. In addition, hotels were areas of major concern with several groups (especially travelers) gathering in the same areas and interacting with the same surfaces as other strangers. While the spread of SARS was focused on person-person interactions, its negative impact and spread was exacerbated with the arrival of the Chinese New Year holidays where people from all over China went home by land and air travel. Furthermore, successful containment measures and the population's self-protecting response towards the virus strongly contributed to the end of the pandemic. In relevance to the ongoing COVID-19 pandemic, similar containment measures are being employed to combat and reduce the spread of the virus.

Introduction

Being classified under coronaviruses, Severe Acute Respiratory Syndrome Coronavirus (henceforth as SARS) has been identified to have zoonotic origins. Common symptoms of SARS include cough, shortness of breath, high fever ($> 38^{\circ}\text{C}$), and difficulty breathing (Zhong et al., 2003). However, unlike many other coronaviruses (eg. COVID-19 and MERS) it does not originate from bats (Zhao, 2007). Instead, analysis of the human SARS virus's genetic sequence found a similarity of over 99.6% to the Himalayan Masked Palm Civets, confirming the origin of the disease (Shi & Hu, 2008). In comparison with COVID-19, SARS is deadlier but far less transmissible (Peterson et al., 2020).

SARS first broke out in Foshan, Guangdong Province in southern China on November 16th, 2002 (Cao et al., 2016). Hong Kong reported its first case of SARS on February 21st, 2003, in which an infected physician came to the city from Foshan (Yang et al., 2020). In addition, Hong Kong was also identified as the largest recorded area of a SARS outbreak outside of mainland China, reporting 1,755 cases and 299 deaths in just a span of three months (Chan & Schloenhardt, 2004). Over the span of 9 months (November 2002—July 2003), the virus infected 8,437 people and caused 813 deaths worldwide with most of these deaths originating from mainland China and Hong Kong. This severe virus had a fatality rate of 9.5%, compared to the current 2%—3% of COVID-19 (Guarner, 2020). However, successful countermeasures and bans implemented by both the Hong Kong and mainland Chinese government were instrumental in halting the pandemic and the virus from spreading further (Chan & Schloenhardt, 2004).

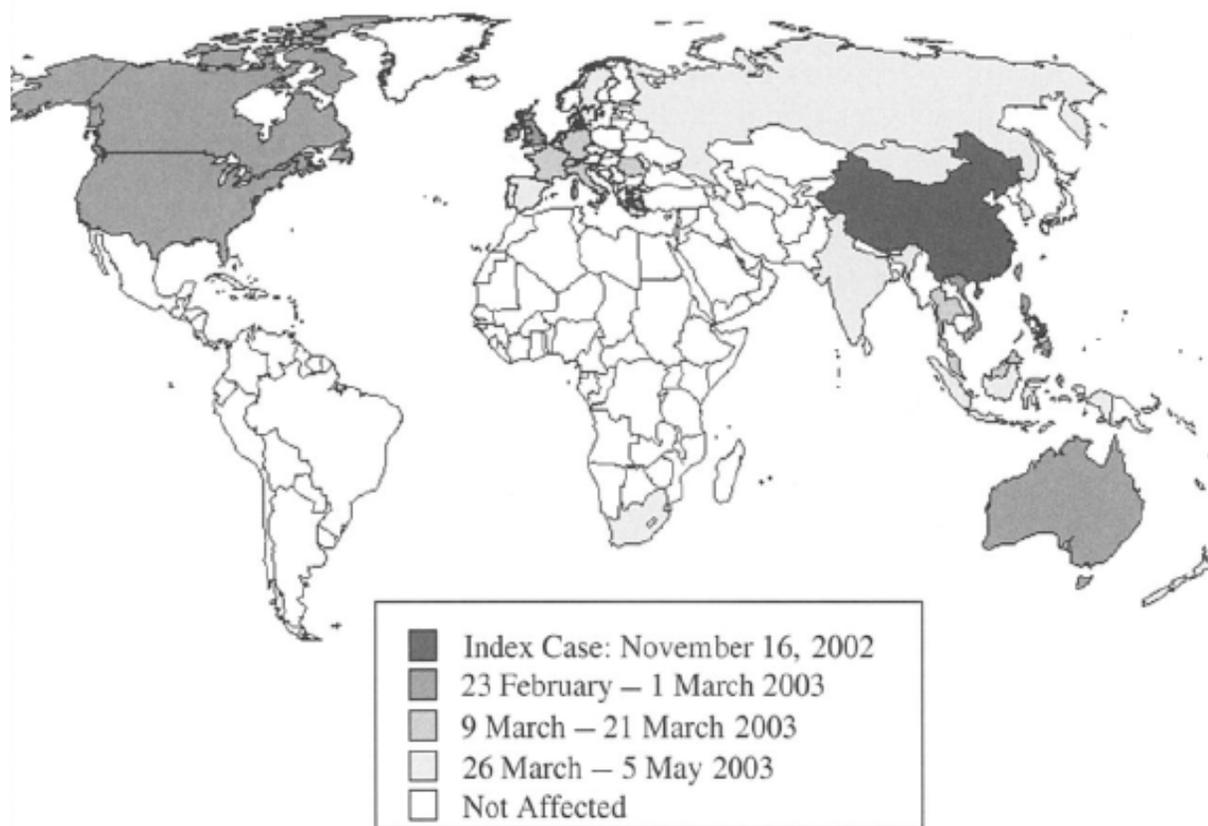


Figure 1. Map of the spread of SARS organized by date of index case in each country (Bowen & Laroe, 2006)

Population density was a large factor for the SARS outbreak. In addition, several other factors, in tandem with population density, contribute to the virus' spread. Firstly, the virus was mainly transmitted through large droplets of bodily fluids (Guarner, 2020). Secondly, transportation further exacerbated the virus' spread from its origin to different places both local and abroad. Thirdly, densely populated places such as hospitals and hotels became hotspots of transmission and infection. However, while containment measures of the virus in Hong Kong were largely successful, successful containment in mainland China only occurred late in the pandemic due to the late implementation of

their containment measures. The purpose of this article is to first draw links between infections and population density and movement and to second analyze the success of different containment strategies used.

Population density and high rates of infection

There is a strong, positive correlation between population density and rates of the 2002-2003 SARS infection, with infection rates higher in densely populated cities compared to rural areas. For instance, rural areas of Guangdong province were largely spared from the pandemic while more populated

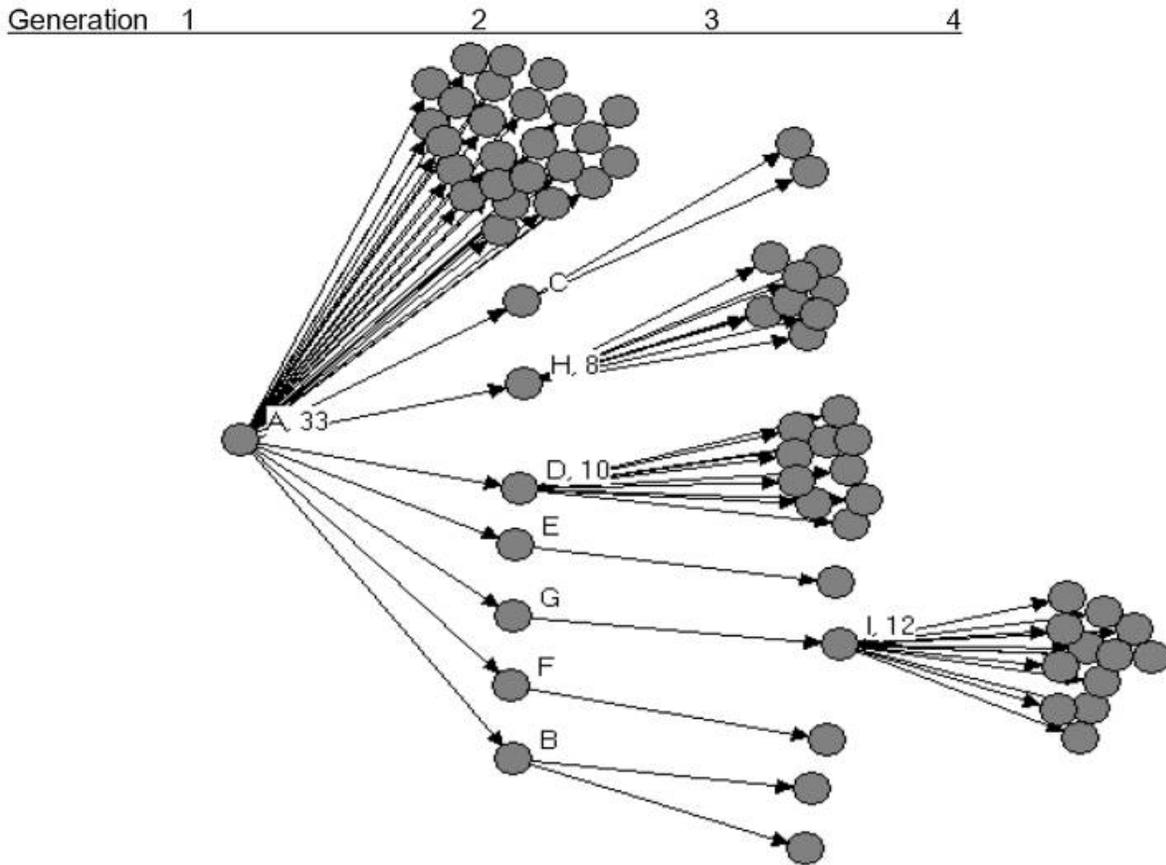


Figure 2. Super spreader case diagram infecting 77 people in Beijing, 2003 (Shen et al., 2004)

cities such as Foshan and Guangzhou were hit hard. Guangzhou suffered the highest incidence rate of the province at 12.5 cases per 100,000 people (Xu et al., 2004). This positive density-infection relationship was most evident in hospitals, which were major hotspots in several cities, many being the local source of the virus' outbreak due to their densely packed environments and vast amounts of people coming and going (Shannon & Willoughby, 2004). A prominent case that caught vast attention was in Hong Kong's Prince of Wales hospital; a secondary infection of the index case (first case) was admitted into the hospital. Consequently, this same patient infected over 100 hospital staff

and was categorized as a super spreader (a patient who significantly infects greater than the average number of people) (Lee, 2003). Similarly, in Tianjin, a super-spreader patient arrived after being initially infected from the nearby capital and hotspot of Beijing. Furthermore, this index case for Tianjin led to 111 infections in the city's Pingjin hospital, 33 of the 111 were a result of direct infection. The attack rate was roughly 9.7% and 89 of infections could be traced back to the index case (Wang et al., 2005). Studies examining these super spreader events in a Beijing hospital have found that compared to average infection rates, hospital staff that have taken care of an infected patient are 3.27

times more likely to contract the disease. In addition, one study found a strong connection between infection and respiratory secretion (Liu et al., 2009). This result has practical implications as medical staff may be highly vulnerable when they are in close contact with patients who have possibly contracted the virus. Consequently, from patient to medical staff, the impact of this virus can result in widespread secondary and tertiary infectious within the hospital transmitting between these staff and other patients.

Hospitals are not the only type of high-density environments that can exacerbate the spread of a virus. Likewise, densely packed buildings such as hotels and housing estates are very susceptible to the occurrence of super spreader events. A canonical example of this is in Hong Kong's Metropole Hotel, where the city's index case infected 16 other hotel guests residing on the same floor. These guests later returned home, spreading the disease to their own home nations of Vietnam, Singapore, and Canada; two of the infected individuals were local to Hong Kong (Hung et al., 2018). Modern air travel catalyzed the rapid, worldwide spread of the virus among global cities as these infected residents returned to their homes (Chan & Schloenhardt, 2004).

Super spreader case diagram infecting 77 people in Beijing, 2003 (Shen et al., 2004) event in a densely populated building in Hong Kong led to the Amoy Gardens housing estate outbreak in Ngau Tau Kwok district; a total of 321 SARS cases were reported (Lee, 2003). The same index patient who was treated at the previously mentioned Price of Wales Hospital visited his brother in this estate after developing symptoms, infecting him and his sister-in-law as well. The virus steadfastly spread through the whole housing

estate, with 41% of the infections being in the same block the index patient's brother was located in. This rapid spread was partially due to a faulty sewage system causing bodily waste to come into contact with the water closet (Lee, 2003). As many other densely packed environments, densely packed housing estate environments establish a breeding ground for an impending outbreak to occur.

Impact of population movement on the spread of SARS

The positive links between transportation and the spread of disease have existed for a long time; however, the magnitude of these relationships vary in the different methods of transportation available. For instance, larger versus smaller cities are likely to have vastly more transportation connections to other cities, towns, and rural areas. Likewise, there is evidence to suggest that cases of SARS in rural areas originate from larger, urban cities (Cao et al., 2016). Individuals most likely returned or visited the rural area while carrying the virus, in turn, spreading the virus in these rural areas. It is common for people in China to leave their families for large cities to work and then return home daily, visit on weekends or during holidays. In addition, while counties and towns in Northern China reported SARS infections mostly stemming from major transportation routes such as national highways, freeways, and railways. An analysis of this data after correcting for population and healthcare worker density showed a lack of correlation with railway travel (Fang et al., 2009). The relationship with highways and freeways, but not railways alone, can suggest that cars and buses come into contact with many smaller counties and towns which lack train stations. These modes of transportation are a main form of travel for residents from small hometowns, who likely bring the virus

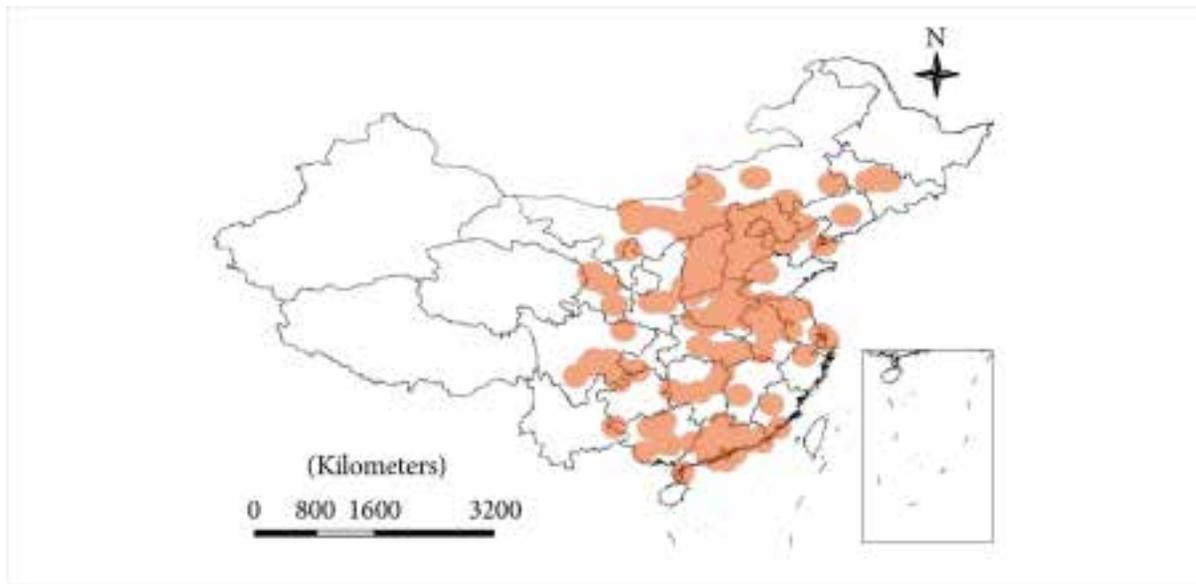


Figure 3. Spatial distribution of SARS across mainland China, orange zones indicate locations of outbreaks (Cao et al., 2016)

from outside of their residence into their communities. However, this heightened viral transmission via transportation methods may be ameliorated with precautions taken (e.g., sterilized equipment, wearing of masks, social distancing, and hand hygiene) during travel. However, travel may be inevitable for some populations. In the case for rural areas in China, travel was essential due to the rapidly increasing amounts of socio-economic activity in major cities in the past few decades.

In the age of globalization, air travel intensifies the spread of viruses, even worldwide, at a scale unseen before. Within 10 days of the disease's spread to Hong Kong on 11th March 2003 (Lee, 2003), SARS cases surmounted and were subsequently reported in Canada, the United States, Singapore, the Philippines, Taiwan, and Vietnam (Bowen & Laroe, 2006). By April 2nd, the World Health Organization (WHO) confirmed that "SARS was spreading by air travel along international routes" (Bowen & Laroe, 2006, p132).

Thus, air travel is a likely factor in explaining why disease hotspots spread directly from Guangdong Province to Beijing, prior to the provinces in between. In light of these findings, and to prevent the further spread of the virus, methods of transportation and population movement brought forth by globalization were restrictions on hotspot areas (Bowen & Laroe, 2006). We are seeing similar trends in the COVID-19 pandemic, where travel facilitated for rapid spread of a coronavirus and also travel restrictions being placed, especially on hotspot areas.

Containment measures in Hong Kong and Mainland China

As the current and severe SARS-Cov-2 (COVID-19) pandemic continues to teach us, the behaviors of the population are influential in the fight against it. Many comparisons have been drawn between the ongoing COVID-19 pandemic and the 2002-2003 SARS virus as both SARS and COVID-19 are coronaviruses themselves. Notably, the SARS outbreak in

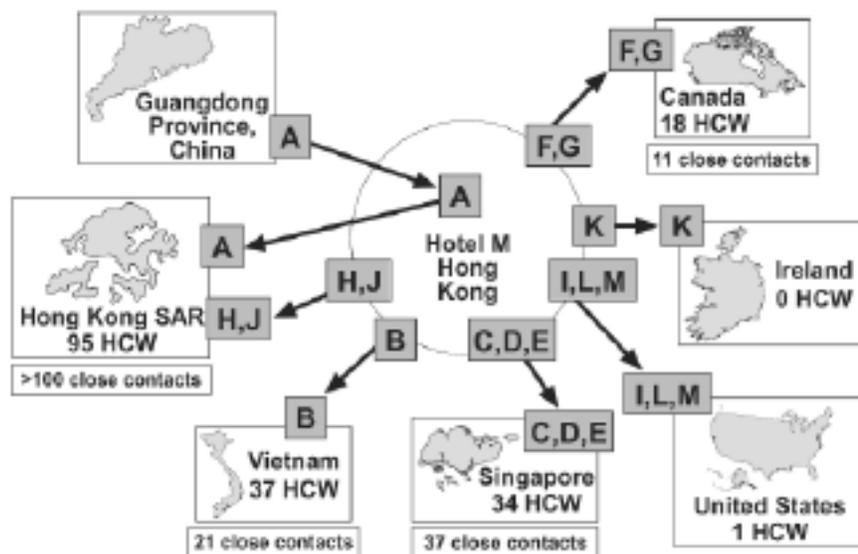


Figure 4. International spread of SARS from the Metropole Hotel super-spreader event in Hong Kong (Shannon & Willoughby, 2004)

Hong Kong lasted only three months partially due to the local population's behavior and fear of the virus. A study that took place in Hong Kong during the SARS pandemic revealed that 94% of the general public wore masks in public areas, 82% had forgone crowded places, and 95% washed their hands very frequently (Lau et al., 2004). The effectiveness of these habits (in particular, wearing masks) can be compared between these Hong Kong residents with residents of Shenzhen and Guangzhou, China, whose hygienic habits were infrequently observed. (Lau et al., 2004). In addition, a lack of timely response to the initial outbreak by the Guangdong Provincial Government that may have let infections spread further. Furthermore, this delay in responding may have catalyzed the spread of the virus to the country's capital of Beijing, which had the most recorded cases anywhere in the world (Bowen & Laroe, 2006). But, after China finally acknowledged the existence of the pandemic, they implemented

many new changes, including preventive measures and court-approved penalties if not followed (Bowen & Laroe, 2006). These restrictions and disease-preventive behaviors, when implemented, intuitively limited the continued spread of the virus. Likewise, the effectiveness of these measures has trickled into the current COVID-19 pandemic, as these measures similarly established by governments combatting the ongoing pandemic.

The previous findings highlight that International air travel has since been identified as a prominent factor in the global spread of SARS. Linking back to the case at Hong Kong's Metropole Hotel (Figure 4), infected individuals would then return home via air travel worldwide. Soon after an outbreak was declared, and unsurprisingly, the WHO issued a travel advisory on the city for all travelers. This travel advisory limited residents' travel to the city for essential

purposes only to curb the rising international spread of the virus. Despite these restrictions, several travelers ignored the warnings and returned home while infected with SARS (Chan & Schloenhardt, 2004). These unmet restrictions led to a response by Hong Kong's government in late March and early April respectively, making two major legislative changes in response to the outbreak. Firstly, the Quarantine and Prevention of Diseases Ordinance list was updated to include SARS, allowing health officials to search aircrafts, vessels, and trains for signs of the disease; testing passengers; and quarantining any infectious person until they were no longer contagious. The second change was a modification to the Prevention of the Spread of Infectious Diseases Regulation, allowing health officials to medically examine travelers, and restrict their departure from Hong Kong if they had any SARS contact history or were suspected of having contracted SARS (Chan & Schloenhardt, 2004). These robust, legislative changes paved the way for border control measures designed to limit the spread of the disease. Favourably, the implementation of these control measures allowed health officials to detect and react quickly to cases of viral infection, prevent individuals from entering or leaving the city, and most importantly protecting locals, travelers, and foreigners from the virus and its spread.

Toward the end of the SARS pandemic, the Chinese government finally implemented quarantine measures to prevent the virus' spread. Notably, the government, tracked body temperatures; if one's temperature was above 37.5oC, they would not be allowed to travel and be put into state-sponsored isolation wards until their temperature went back down (Cao et al., 2016). Interestingly, with viral transmission being linked to

transportation, and with the with the large infection numbers in Beijing, it was surprising that the disease did not spread rapidly to these rural areas. However, this lack of spread can be attributed to draconian restrictive measures taken by those same rural towns and counties in preventing travelers from entering (Bowen & Laroe, 2006).

Successful containment of the SARS virus in Hong Kong was largely due to the response and cooperation of the city's population with protective behaviors and compliance with government guidelines. A key reason for this successful viral containment in Hong Kong was due to the heightened responsibility of its citizens and their fearful attitude towards the virus. As previously mentioned, there were high rates of citizens practicing hygienic practices which included avoiding large crowds, washing hands more often, and wearing masks. However, the situation in mainland China was in between these two cases, where its citizens were not as hygienically conscious as in Hong Kong, but the limited government containment measures worked when they were implemented (Lau et al., 2004). Thus, these differences can be attributed to cultural values toward the importance of hygienic practices as well as standards.

Conclusion

The outbreak and spread of SARS were largely due to population density and movement, countered by successful containment measures in Hong Kong and mainland China. Higher case levels in dense cities with infected areas and lower-case numbers in rural areas suggest a link between density and infection rates. Notably, population movement and transportation were key factors in the spread of the

virus, facilitating its rapid spread. While containment measures were successful in Hong Kong, they were implemented too late in mainland China due to the denial by the government. Temperature checks, quarantine protocols, and the population's behavior towards hygiene were also crucial to preventing further spread.

Overall success against the 2003 SARS pandemic was largely due to an understanding of transmission patterns, symptoms, and ability for diagnosis, leading to successful containment measures (Yang et al., 2020). Some of the key, preventive measures and regulations from the 2003 SARS pandemic have been instrumental and similarly used during the ongoing COVID-19 pandemic. For example, similar rigorous infectious control (e.g., contact tracing, quarantine of close contacts, establishment of designated hospital wards for patients, ...) and protocols for early detection and diagnosis have been implemented (Yang et al., 2020). Despite the lack of a widespread vaccine, these disease-preventive actions have paved the way for the public health measures currently employed in reducing the virus' spread through isolation, social distancing, and quarantine methods to curb the viral spread that can stem from highly dense populations and their cascading movements (Wilder-Smith, Chiew, & Lee, 2020). The significance of the lessons learned from the 2003 SARS concerning population density and movement have thus propelled ways for countries to curb viral case counts.

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The implications of COVID-19 on the Los Angeles homeless population: An evaluation of the shortcomings of LA county's response

Katherine Moir

Abstract

Homelessness in Los Angeles county has long been an issue and topic of concern amongst community members. However, the COVID-19 pandemic has introduced a new set of challenges for the homeless population due to their high level of vulnerability from social, health and environmental points of view. As a result, LA county has been forced to make quick and drastic reforms to existing services and policies, as well as introduce new services to reduce the level of vulnerability of the homeless population. This paper will evaluate the effectiveness of Los Angeles County's efforts to mitigate the vulnerability of homeless people to COVID-19. The effectiveness of the services will be determined by evaluating why homeless people are disproportionately vulnerable during the pandemic. As well, the recent reforms, policies and new services introduced by LA county will be analyzed to determine their efficacy. It is concluded that while LA county has made an admirable effort to provide services and resources to the homeless population throughout the pandemic, the weak pre-existing infrastructure and services that were in place prior to the COVID-19 pandemic left a gap too large for the county to overcome. As a result, homeless people remain disproportionately vulnerable to the virus and its associated implications.

As the threat of COVID-19 continues to grow in the United States, there is increasing concern about the nation's most vulnerable groups. Los Angeles (LA), California, has experienced the most cases of coronavirus of all counties in the United States, reaching a total of 756,116 cases (John Hopkins University, 2020). While the threat of coronavirus has been both daunting and debilitating for all citizens, LA's homeless population remains one of the city's most vulnerable groups. COVID-19 has put social and financial strain on populations around the world, as demonstrated in LA in 2020 with homeless citizens reaching 66,433, an increase of 12.7% since 2019 (LAHSA, 2020). This large increase in homelessness, and the changing practices and policies designed to protect these individuals from contracting COVID-19, have completely altered the current support systems, such as rehousing and prevention, and led to the development of new programs. This paper will investigate the reasons why homeless people, particularly in LA, are highly vulnerable due to the implications of the coronavirus and will evaluate current programs and services designed to support these people during the pandemic. I will argue that while LA has made a commendable effort to help homeless populations, the lack of support infrastructure that existed prior to COVID-19 has been too large to overcome and has resultantly left the homeless population disproportionately vulnerable. This thesis will be supported by first analyzing the heightened vulnerability of homeless people during the pandemic. Then, an evaluation of the changes that have been made to pre-existing infrastructure and policy regarding homeless people. Finally, I will look at new policies that have

been introduced that were designed to reduce the vulnerability of homeless people during the COVID-19 pandemic.

To both understand and evaluate the county's response to the threat of the pandemic, it is critical to first explore how homeless people are at a greater risk. The homeless population is increasingly vulnerable to COVID-19 primarily due to issues of access and health, including a reduced ability to physically distance and isolate, a lack of access to sanitation and healthcare, and a higher frequency of pre-existing health issues (Perri et al., 2020) (Tsai and Wilson, 2020). One of the biggest obstacles for homeless people is their inability to physically distance and isolate. When living on the street or in shelters, either for the day or at nighttime, homeless people are repeatedly within six feet of an unlimited number of people (Perri et al., 2020). Living in shelters poses an even greater risk as each day there is a new group of people who are forced to live in close quarters for an extended period of time (Miyawaki et al., 2020). Considering government issued guidelines encourage people to remain in a small, consistent social circle, homeless individuals are at extreme risk. Given these circumstances, there is an increased possibility of large-scale transmission within the shelter (Perri et al., 2020). Another major challenge homeless people face is access to sanitation, water and hygiene. Due to COVID-19 restrictions, the number of people that shelters can accept has been reduced (Culhane et al., 2020). The implications of these reduced spaces will be discussed below, however, since there are fewer spaces, homeless people are not able to use the sanitation resources these shelters normally offer. Similarly, the temporary closure of public spaces which offered bathroom facilities to homeless people further reduces their access to sanitation

(Speer, 2015). Healthcare is another resource which homeless people can have difficulty accessing. Barriers to access can be largely attributed to a lack of health insurance, fear of discrimination, difficulty keeping appointments and bad experiences with healthcare services (Jego et al., 2018). While there are various foundations and resources that help to cover homeless patients, not all people meet the criteria, leaving them unable to afford or receive the care they need (Jego et al., 2018).

Homeless people are also at a greater risk of contracting the virus because they are generally older and have higher incidences of pre-existing health conditions per capita than people with homes. A recent study observed that the average age of homeless people in the city of Los Angeles County is between 50 and 55 (Culhane et al., 2020). COVID-19 is much more dangerous for older populations, meaning the homeless population is at an increased risk of suffering from more severe forms of the illness (Culhane et al., 2020). In addition to age, homeless people are much more susceptible to pre-existing health conditions such as cardiovascular and respiratory disease (Culhane et al., 2020). The homeless population has a prevalence of obstructive pulmonary disease at 20 to 30 percent, as opposed to 10 percent for non-homeless adults (Culhane et al., 2020). As well, homeless people are hospitalized with medical surgical conditions 10 to 15 years earlier than the general public and suffer from age-related impairments around 20 years before housed individuals (Culhane et al., 2020). The higher prevalence of poor health conditions puts the homeless population at a far greater risk of suffering from more severe cases of coronavirus (Culhane et al., 2020). In combination with their reduced access to healthcare and places to isolate, higher

instances of poor health puts a large strain on both the individual, as well as the medical and social institutions designed to help them (Miyawaki et al., 2020).

In addition to vulnerability of contracting COVID-19, homeless people are also vulnerable due to lack of social service resources. Public spaces and social services are closed down meaning that homeless people have less access to the resources they need to survive, such as food, warmth and water (Tsai and Wilson, 2020). Furthermore, stigmas around homelessness are heightened during COVID-19 since many people associate these individuals with uncleanness and illness (Pauly, 2014). Negative stigmas are further perpetuated by the social distancing norms which have been implemented since they are often impossible for homeless people to abide by (Logie and Tuberc, 2020). The lack of resources and stigmatization places stress on the homeless, who, as a result, are at heightened risk of suffering from medical conditions like depression, anxiety, cardiopulmonary disease, and malnutrition (Daiksi, 2007).

Given the unique challenges homeless people face during this pandemic, governments on a municipal, state, and federal level have introduced policies and reforms to help increase the number of services provided and ensure the resources already available are COVID-19 safe. Los Angeles has 42,000 unsheltered homeless people, the highest number of all cities in the United States (Goodsmith et al., 2020). This large vulnerable population has forced the county to make rapid and collaborative efforts to provide the unsheltered homeless with safe interim housing to ensure the safety of the population throughout the pandemic (Goodsmith et al., 2020). Through programs like medical sheltering and an eviction moratorium

(County of Los Angeles, 2020), municipal, state and federal levels of government are instituting collaborative programs aimed at both slowing the rate of homelessness and keeping indigent people safe during the pandemic.

The first major change from government authorities has been to homeless shelters. As previously discussed, the structure of these shelters was highly conducive to outbreaks of coronavirus. As a result, the county and state have introduced restrictions on the density of people that can be housed. According to a report published in March of 2020, the density reduction needed to ensure current shelters are following COVID-19 protocol is 3,426 units (Culhane et al., 2020). However, in order to provide shelter to all those in need, there needs to be 62,885 new private units (Culhane et al., 2020). Implementing these units would cost Los Angeles county a total of \$1,572,122,500 to create the new capacity, and \$198,931,200 for the creation of quarantine units (Culhane et al., 2020). The need for suitable, COVID-19-safe housing in LA far exceeds the requirements in other regions, with those in the top 1% requiring a minimum of 2,100 additional spaces (Culhane et al., 2020). The overwhelming number of spaces needed has required the county, state, and federal government to make rapid changes. However, the sheer cost and amount of space required poses large financial and spatial challenges for the city, and there is difficulty meeting the needs in such a short period of time. Despite many efforts, the vast majority of homeless people are living on the streets, which has put them at a higher risk of contracting a severe form of the illness, and also places social and resource stress on this population (Kuhn et al., 2020). In analyzing the number of COVID-19 cases among homeless people, it has however been

noted that they generally have a lower number of cases per capita than other populations (Holland, 2020). A smaller number of cases is likely because the majority of LA's homeless population live and sleep outside due to the lack of sheltered spaces available (Holland, 2020). Since they are outside, the rate at which the virus can be transmitted reduces (Holland, 2020). However, as discussed previously, living without shelter increases people's risk of suffering from many other issues and ailments, such as depression, disease, and malnutrition, which increases their overall vulnerability.

There have been various changes to help prevent an outbreak of coronavirus in shelters. The Los Angeles County Department of Public Health released a report detailing a guide for how shelters should operate during COVID-19 (Los Angeles County Department of Public Health, 2020). The report details processes for screening guests for symptoms of COVID-19, protocols for when a guest or staff is symptomatic, what to do in the event of exposure or an outbreak, and guidelines for quarantine and for use of personal protective equipment (Los Angeles County Department of Public Health, 2020). However, an issue arises when clients are sent back out onto the street in the event a client fails the screening or does not meet other qualifications to enter the shelter. While there are programs to help those who are symptomatic or infected with COVID-19, as will be discussed, there is not enough infrastructure to support all those who need to be isolated. As a result, many of these individuals are forced outside where they are more vulnerable to suffering from COVID-19 itself, or other consequential implications like lack of access to resources or poor mental health.

In addition to changes in capacity, alterations

have been made to the policies regarding admittance of homeless people into shelters and encampment locations. In keeping with guidelines recommended by the Centre for Disease Control (CDC), encampment members are encouraged to sleep with a 12-foot radius between tents (CDC, 2020). As well, the CDC asks counties and cities to provide 24-hour water, soap, sanitizer, hand washing stations and portable toilets for encampments, with the latter two being required for encampments exceeding 10 people (CDC, 2020). The LA county has been following these recommendations (Culhane et al., 2020). Though these efforts have been quite successful, encampments are still a major risk since living outdoors can increase one's susceptibility to other illness and early death (Holland, 2020). As well, many individuals living in encampments are not following COVID-19 safety protocols (Oreskes, 2020). Given the number of unsheltered homeless people in Los Angeles is growing, the ability for municipal organizations to track and control encampments could be diminished. Therefore, while infrastructure has been put in place to help these communities meet their sanitary needs, the sheer amount of homeless people in these areas makes their efforts less effective.

In addition to reforms on pre-existing services, the county of LA has also introduced two new policies: Project Roomkey and Medical Sheltering. Project RoomKey was created from collaboration by the county, state and the Los Angeles Homeless Services Authority (County of Los Angeles, 2020). The goal of the project is to find hotel and motel rooms for the most vulnerable homeless populations (County of Los Angeles, 2020). Vulnerability in the context of Project Roomkey is individuals aged 65 and above, or those who have a pre-existing medical

condition which places them at higher risk of complications if they were to contract the virus (County of Los Angeles, 2020). To qualify for the project, individuals must be referred by law enforcement or a homeless services provider (County of Los Angeles, 2020). The project aims to have 15,000 rooms available for use (Goodsmith et al., 2020). In spite of this goal, at the height of the project in September, there were only approximately 3,650 rooms being used (Los Angeles Times, 2020). Due to this lack of success, the project is winding down (Los Angeles Times, 2020). The failure of the program can be largely attributed to the minimal number of motel and hotel owners who were willing to participate (Los Angeles Times, 2020). In this scenario, despite the county and state level governments' innovative approach to find shelter for homeless people, the lack of pre-existing infrastructure and co-operation from the community has left tens of thousands of homeless people unsheltered and highly vulnerable.

In addition to hotel and motel rooms, the LA county is using trailers, recreational vehicles (RVs), and other mobile homes, to house those who have contracted COVID-19, or are experiencing symptoms and are awaiting their test results (Benavides and Nukpezah, 2020) (County of Los Angeles, 2020). It is notable, however, that this self-isolation program is open to all community members, not just those who are homeless (County of Los Angeles, 2020). While having a self-isolation program accessible to all in society is commendable, it can reduce the availability of spaces for the homeless. Resultantly, this reduced availability of spaces increases the number of homeless people who will still be living and sleeping on the streets, or in encampments.

In conclusion, although the county of Los Angeles has made valiant efforts to improve the state of homelessness and reduce the vulnerability of this population during COVID-19, the lack of both pre-existing infrastructure and cooperation from other members in society has resulted in an inadequate level of services available. Given the high level of vulnerability homeless people face in any social, economic, or health emergency, the services that are currently available are not sufficient. A majority of this population are still spending their nights on the streets (Kuhn et al., 2020). As well, programs like Project Roomkey are proving to be less valuable than initially anticipated (Los Angeles Times, 2020). Overall, sufficient programs and services for the homeless were already severely lacking prior to COVID-19. With the influx in the number of homeless people, and the changing policies in operation and occupancy, the gap for meeting the needs of the homeless was so great that efforts to decrease vulnerability of these citizens has not been as effective as many hoped.

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Shock doctrine and disease: Examining COVID-19 in North American Cities

Jonah Baetz

Abstract

The COVID-19 pandemic has devastated North American economies at all geographical scales and has been particularly impactful in large cities (Adler et al., 2020; Ali & Keil, 2006; Patel & Shah, 2020; Shenker, 2020). This paper uses Naomi Klein's framework of shock doctrine to understand how the COVID-19 crisis effects economic and spatial restructuring (Klein, 2007). This pandemic has exemplified how a crisis can benefit corporations through government subsidies and new legislation (Montpetit et al., 2020). The restructuring that comes from a crisis like COVID-19 often affects disadvantaged communities more seriously and manifests itself spatially through rising economic inequality (Adler et al., 2020).

Introduction

The devastation of the COVID-19 pandemic has been felt at all geographical scales both economically and socially. Its effects on urban centres, particularly those with global connections, have been especially pronounced (Adler et al., 2020; Ali & Keil, 2006; Patel & Shah, 2020; Shenker, 2020). These effects are only beginning to be fully understood, and will likely have lasting socio-economic implications well into the future. Because of this lack of certainty, it is important to examine COVID-19 against past models in terms of how a crisis can lead to neoliberal reforms. Another important thing to consider is that many past crises — including disease outbreaks — have radically changed the built environment of cities and further facilitated processes of reform. Naomi Klein's shock doctrine employs the economic theories of Milton Friedman to understand how crises offer opportunities for sweeping economic changes (Klein, 2007 p.4). Though these have typically resulted in, among other things, the privatization of public services, deregulation and land liberalization (Klein, 2007 p.5), it is worth considering whether these crises could be used to foster more economically, socially and environmentally sustainable reforms. This paper will seek to prove that the COVID-19 pandemic as a shock doctrine-style crisis represents an opportunity for the neoliberal restructuring of North American cityscapes. It is divided into four sections, first seeking to establish a framework following Klein's shock doctrine theory. It will then discuss the relationship between disease outbreaks and urban spaces. The final two sections will establish the COVID-19 pandemic as a shock doctrine-style crisis, and how that impacts the cityscape.

Theoretical framework

The primary framework that this paper will use to understand the COVID-19 pandemic is Naomi Klein's shock doctrine. This theory examines the role of crises in generating change within capitalist systems. Simply put, shock doctrine is "exploiting crises to push through a political programme" (Klein & Smith, 2007). A crisis allows for particular economic policies like the privatization of public

assets, deregulation and land liberalization to be enacted quickly and efficiently (Klein, 2007 p.9). The reason this is possible is because of the social and political effects that a crisis generates. When a crisis — such as a natural or economic disaster — occurs, then what would at one time have been politically contentious becomes possible to do with limited public pushback (Klein, 2007 p.6). This process of crisis and reform is understood within shock doctrine as ‘shock therapy’ and has been used quite effectively by Western governments (Klein, 2007 p.7). This is particularly true for the American governments responsible for the privatization of elementary schools following Hurricane Katrina in 2005 to the neoliberalization of Iraq following the 2003 American invasion (Klein, 2007 p.5-7). This process was perhaps best and most notably exemplified by Augusto Pinochet during the capitalist reformation of Chile in the 1970’s (Klein, 2007 p.7). In this case, a new neoliberal regime of capitalism was imposed by the Chilean government following a military coup, largely through the influence of the economic theory of the Chicago Boys (Klein, 2007 p.62). Neoliberal regimes often feature structural changes to capitalist production and modes of accumulation, most commonly taking the form of the privatization of formerly public services, deregulation of production, and an overall departure from the Keynesian strategy of state influence in the economy. These are the features that are important to look for when considering Klein’s shock doctrine. Both the Chilean and Iraqi examples show a process of significant shocks to the system being used as an opportunity to enact radical structural changes. While being geographically disparate, these two examples show the power of shock therapy in allowing primarily Western states to impose capitalism on countries in Latin America and the

Middle East. The sweeping changes to New Orleans education systems that resulted from Hurricane Katrina show that this process is not exclusive to foreign states, but also works within Western countries like the United States. To that point, disease outbreaks hold a similar power of system shock that can serve similar political-economic ends as invasions or natural disasters.

Disease and urban spaces

Viruses are well documented as having especially devastating impacts on urban environments. History holds countless examples of this from the cholera outbreaks in 19th century London that identified the need for modern sewer systems, to modern outbreaks of Ebola that showed just how connected cities are through globalization (Shenker, 2020). As well, COVID-19 has brought into discussion the issue of planning for density versus disaggregation (Shenker, 2020). Planning for density is a strategy to promote sustainability in cities while disaggregation is currently being used (albeit on an individual scale) to combat the current COVID-19 pandemic (Shenker, 2020). The effects of viral outbreaks are not distributed evenly and often affect urban areas more acutely, particularly in the early stages of an outbreak (Adler et al., 2020). Adler et al. (2020) present the case that mega regions — large urban conglomerates — have accelerated the spread of COVID-19 along existing lines of trading and globalization. While heightened levels of social interaction in these regions can in many ways be a competitive economic advantage, it can also lead to increased vulnerability to disease (Adler et al., 2020). As well, because of the global connections between large urban areas through trade and other economic activities, when disease outbreaks occur they are more quickly felt in these areas of high social

interaction (Adler et al., 2020). When an urban region is faced with a recent outbreak and particularly of a new disease, its health systems operate under higher uncertainty than those less populous regions that experience outbreaks later on (Adler et al., 2020). During the SARS outbreak, processes of globalization were linked to the spread of the disease in global cities like Toronto (Ali & Keil, 2006). Because global cities are physical intersections of global paths of movement, they are particularly susceptible at the beginning of a disease outbreak (Ali & Keil, 2006). Cities have a long history of being sites where government control is heightened during times of crisis (Shenker, 2020). Crises of any sort whether they relate to public health (such as COVID-19), or political stability are understood by Shenker (2020) to be an opportunity for strict laws to be implemented in the name of public safety. Disease outbreaks like COVID-19 also have an impact more specifically on slums and other informal housing situations. Patel and Shah (2020) examine how the uneven spread of disease can be particularly devastating for slums and ghettoized communities that may not have access to adequate sanitation, public health resources and other important determinants of health (Patel & Shah, 2020). In this way, there are multiple levels and intersectional aspects of the unevenness that disease creates within urban areas.

Shock doctrine and COVID-19

Disease outbreaks like COVID-19 have immense impacts on economies at all scales. The effects of these disease events are crises that — read through shock doctrine theory — are opportunities for governments to impose sweeping neoliberal reforms. During the current pandemic, a familiar story is once again playing out. While corporations turn up record profits, the negative effects of

the crisis are offloaded onto the individuals providing the labour (Montpetit et al., 2020). At the same time, large corporations are able to restructure themselves around large government subsidies (Montpetit et al., 2020). GDI — a billion-dollar janitorial company — has seen record profits during the third quarter of 2020, while also receiving \$29.4 million from the Canadian government in wage subsidies (Montpetit et al., 2020). This is an example of how a crisis like COVID-19, and the government action intended to remedy its effects, can result in an economic shift to benefit corporate interests. Far from being an unfortunate side-effect of economic stimulus programmes, this type of corruption is in fact a familiar part of crisis response strategy. Drawing on the work of Harvey, Doshi & Ranganathan (2018) argue that “corruption is central to ongoing capital accumulation, especially in moments of crisis”. Further to this point, economic recovery strategies like stimulus package may altogether fail their stated goal of helping individuals facing economic disaster. Goldmann (2020) argues that these programmes “might fail to adequately support the poorer and marginalised parts of society, which are disproportionately affected by the crisis. This would further decrease their financial, social, and cultural capital to raise their voices and make themselves heard in the public”. This means that the COVID-19 crisis has a dual effect of worsening economic patterns of unevenness by failing to help those with less financial power, while at the same time allowing large corporations to profit. Saad-Filho (2020) and Nunes (2020) understand the current pandemic explicitly as a capitalist and neoliberal crisis. COVID-19 has led to a global scale, marxist-style breakdown in the organization of production where what were once “rational” global supply chains fell apart (Saad-Filho, 2020).

As well, its destructive effects force the world to rethink how organize society and the interrelations between people (Nunes, 2020). Saad-Filho goes so far as to theorize that “neoliberal capitalism has been exposed for its inhumanity and criminality, and COVID-19 has shown that there can be no health policy without solidarity, industrial policy and state capacity” (Saad-Filho, 2020). The COVID-19 is not simply a public health emergency. It is necessarily an economic crisis that has created enough shock to the system for it to act as a crisis similar in mechanics (but not scale) to Hurricane Katrina and the American invasion of Iraq as described by Klein (2007 p.5-7).

Neoliberalizing cities

Neoliberal reforms are an important aspect of the global crisis that affect the construction of urban environments. The connection between cities and shifting economic strategy is well established. Brenner (2000) views cities as crucial landscapes through which the shift from the Fordist-Keynesian to neoliberal model occurred, stating “urban regions are among the key geographical sites in and through which this multiscale reconfiguration of capitalist spatiality is currently unfolding”. The reason for this structural shift lies in the existing uneven geographies present in urban spaces. Amin (2000) argues that the city is home to some fundamental conflicts between actors that influence the formation of urban political economies. They argue that the “juxtaposition of difference in close spatial proximity generates political challenges, such as the contest between the business community and the homeless over the spaces of the city, or the competing demands of different classes, social and ethnic groups over the city’s cultural resources” (Amin, 2000). Thus, it should be understood that the way that cities are built depends hugely on the various economic, political and cultural

forces that influence resource allocation and decision making. Amin (2000) also makes the connection between neoliberal globalization and the formation of cities. This shows an important connection between neoliberal reforms and the built urban environment. As well, this neoliberal globalization that includes market liberalization and foreign-direct investment is influencing at an increasing rate the prevalence of land grabs (Zoomers, 2010). While land grabs may typically occur in more rural areas for agricultural production purposes, they do contribute to increasing rates of urbanization (Zoomers, 2010). This means that increased density in urban centres could in the future and the present pandemic lead to increased effects of disease. Oosterlynck & González (2013) propose that while this particular crisis has had a familiar impact of fostering new neoliberal reforms in the city, it also presents an opportunity to explore “more just, democratic, ecological city-regions” as “post-neoliberal alternatives”. Indeed, there is already mounting pressure for society to look at potential alternatives. In some American cities, private hospitals are facing pressure to offer vacant ICU beds (Shenker, 2020). In Los Angeles specifically, some individuals facing homelessness have seized vacant units (Shenker, 2020). This are small yet significant slips that could lead into a larger shift away from increased privatization during crises and towards more community-based responses to crises.

Conclusion

The COVID-19 pandemic is a city-shaping crisis that represents an opportunity for shock doctrine-style neoliberal reforms. Disease has long been established as something that is deeply connected to the built urban environment (Adler et al., 2020; Ali & Keil, 2006; Patel & Shah, 2020; Shenker,

2020). Its connections to globalization and neoliberalization are important to understanding spread, and how it can be seen necessarily as an economic as well as political crisis (Adler et al., 2020; Ali & Keil, 2006; Klein, 2007 p.216). Under Naomi Klein's shock doctrine theory, a crisis represents an opportunity to enact sweeping neoliberal reforms that take the shape of land privatization, deregulation and the selling off of public services (Klein, 2007 p. 5). With that in mind, the COVID-19 pandemic also presents an opportunity for a shift in crisis response to one that can foster a push towards economically, socially and environmentally sustainable urban spaces. Instead of continuing to exploit human crises as opportunities for profit-generating reforms, crises like COVID-19 should be used to correct existing patterns of uneven development rather than deepen them.

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The strata of society and the peer-review process: How the first geologic map of the United Kingdom braved both

Lindsay Trottier

Abstract

The Map That Changed the World by Simon Winchester recounts the life of William Smith, a geologist who was the first to produce a detailed geological map of the United Kingdom in 1815. Smith faced a number of setbacks throughout his life before being recognized as the Father of English Geology; most notably, he was accused of plagiarism by the Geological Society of London. The book review examines how social class, the theory of gradualism, and the peer-review process shaped William Smith's life and work.

Synopsis

The Map That Changed the World by Simon Winchester describes not only the life of William Smith, but also the challenges faced by an up-and-coming scientist during the early 1800s. Smith was born in 1769 in Churchill, Oxfordshire in England, a time where the Bible played a large role in how society understood the formation of the world. The incorporation of biblical thought posed a problem for many scientists of this time, where the creation of new theories and ideas of how the world works needed to be explained in a way that conformed to the strict story of God's Creation, otherwise scientists faced social exile. Smith took advantage of England's reliance on coal during the beginning of the Industrial Revolution, leading him to a career in which he was exposed to the Earth's layers of rocks daily, both as a surveyor and a canal digger. The arrangement of strata piqued an interest in him, and through many years of observation and recording, Smith discovered the relation between the differing layers of rock, and eventually a hypothesis on how these layers may have formed. In 1815, Smith was the first to publish a detailed geologic map of the United Kingdom, but he soon went on to become a victim of plagiarism and sabotage. Smith then experienced a financial hardship that led to his declaring bankruptcy and imprisonment in June 1819. After Smith was released from prison in August 1819, he fell out of the public eye, taking on smaller mapping jobs across England. It was not until William Smith reached the ripe age of 62 that he received the first Wollaston Medal, the highest recognition of the Geological Society of London, and his role as the Father of English Geology was finally recognized.

Analysis

Due to the strong presence of a class system in Europe and the United Kingdom, many intellectual societies were comprised of higher-class individuals, in terms of wealth and success, and often refused admission to individuals of a lesser status. Status was associated with not only the area of the country or the degree of rurality of the area you were raised in, but also the educational background held by the individual. Since William Smith was raised in the countryside and never received a formal education, it was not unusual that a man of his status was forbidden membership

to the Geological Society of London. Furthermore, William Smith's tendency to work exclusively off observation and dissection of strata, means that his conclusions were purely empirical and the product of inductive reasoning. This too was not the norm, as many intellects took a more theory-based approach to science, coming up with theories to describe phenomena, and then applying their observations accordingly as evidence. The combination Smith's social status, or lack thereof, and his alternative use of observations would have made it hard for his peers to accept him and his work. During the beginning of the nineteenth century many scientists took a catastrophic viewpoint of the Earth's structure, in that the Earth has taken its current shape as a result of wide-spread, powerful events. Paired with a strong biblical influence, this led many geologists to the idea that Noah's Flood was likely one of the wide-scale, powerful phenomena necessary to cause sedimentation of rocks at the scale they were studying. This idea generally satisfied scientists until William Smith's empirical evidence for the principle of faunal succession came to light. Smith's observations provided James Hutton and Charles Lyell with the evidence they needed to introduce the theory of gradualism, as opposed to catastrophism. This theory allowed scientists to think of the Earth's development as something that occurred over large time scales. This was the beginning of science as a study that did not necessarily have to come from an authoritative, biblical viewpoint.

The collection of William Smith's fossils and observations of the strata in the United Kingdom represents the importance of system boundaries in the formation of early geological theory. While it had long been established that geological time scales were

extremely long and that somehow water played a role in the deposition of sediments, it was not until the 17th century that geology became its own field of science. Finally, fossil hobbyists and surveyors were rightly recognized as scientists, but now, spatial scales restricted them from uncovering more hints about the origins of the rocks beneath them. Over a horizontal spatial scale, Smith collected his evidence during his travels for work and pleasure. While Smith was given the opportunity to expand his work into Russia, he declined, ultimately limiting his observations to the United Kingdom. It is interesting to consider how William Smith's work may have evolved if he had taken up this offer, or if he had travelled outside of Europe, as different geographical places may have different fossils at different strata, especially in the younger layers. Variation of fossils in the same stratum would have been more difficult to explain and could have led to problems during Smith's formation of the principle of faunal succession. William Smith's work was also restricted and governed by vertical boundaries. His collection was largely restricted by the depth of the coal mines and canals he was working on, which means that his collection would not have been complete by any means. Today, we dig mines over 10,000 feet deep, which increases the spatial scale at which observations can be taken and have helped us to increase the time scale of our knowledge.

This novel also highlights the importance of peer review and scientific communication. William Smith was often seen to approach his peers with new observations and information he had collected and have them offer their opinion on the matter. A key demonstration of this was when Smith described to his peers at the Geological Society of London, the location and the fossils found in each stratum.

After his presentation, the members of the society would have discussed the findings and asked Smith any questions they had, as well as provided him with feedback. This was the first step to take in the process of getting a scientific paper published, and this is the same process that scientists enforce today. William Smith would have made any changes or clarifications as necessary before being able to publish his article as a peer-reviewed article. Without this accreditation, the article would not be considered to be a very reliable source, and this still holds true today. This peer-review process is very similar to the process of a thesis defense which we continue using today as a way to peer-review new research. This process is also important in ensuring that new science is in fact 'new science' meaning that the work to be published is unique and novel. A major flaw that the Geological Society of London demonstrated at this time was the publication of plagiarised work by George Bellas Greenough. The publishing, and success, of Greenough's map demonstrates that without unbiased communication within the scientific field, rightful authors could not claim theories as their own and gain success in their field, unless they were part of the elite upper class. This habit began to break when members of the Geological Society changed, and especially when they realised their reputation would be diminished dramatically if other societies heard about what they had done. In the end, this is the main reason that William Smith was honoured by the society before his death, and represents the importance of unbiased scientific communication.

Conclusion

While William Smith's story is fascinating on its own, Simon Winchester also holds the readers attention by writing about Smith's life as if it were fictional. As a reader, it was almost easy to get lost in Winchester's narrative, and forget that he is describing William Smith's lived experiences. However, the author's style of writing can be somewhat unorganized at times. Winchester recounts Smith's experiences in a somewhat discontinuous matter, causing the reader to revisit previous chapters to help jog their memory of the people, places, and names that have long been forgotten since reading the more fictional sections of the novel. Although William Smith lived almost 200 years ago, his experience as an up-and-coming scientist is still relevant today. Being a young student myself, I quickly identified with Smith's curiosity and admired his dedication to the work that leaves him fulfilled. It was refreshing to read about a scientist who continued to contribute meaningfully to their field of research in the face of adversity, and despite not receiving the immediate recognition he so deserved after the publication of his impressive map. It is hard not to enjoy the story of an underdog's success.

Socio-economic implications of gentrification in San Francisco

George Hodges-Maley

Abstract

At present, the rapid gentrification of Silicon Valley at the hands of technology companies is contributing to the growth of multifaceted social inequality, primarily through urban displacement of socio-economically disadvantaged groups. This poster focuses on the detrimental impact of Facebook's role in Silicon Valley's gentrification, particularly through their indirect effect on property and rent prices which lead to displacement in communities surrounding their Menlo Park offices. With the announcement of the company's Willow Village development, the impact on the communities Facebook situates itself amongst is threatened to be further exacerbated. Through review of the literature, I find Facebook's mitigation efforts in response to concerns over gentrification to be ineffective, resulting from the indirectness and delayed nature of pledging funds. To minimize their contribution to the issue of displacement in Silicon Valley, Facebook must put in place more direct and immediate solutions, especially to mitigate the effects of the Willow Village development.

Introduction

Situated in the heart of the Silicon Valley is Menlo Park, a city home to 34,000 (U.S. Census Bureau, n.d.). While laying claim to Facebook's main campus, it is also a center of "critical gentrification and displacement" (Urban Displacement Project, 2020). With property prices exceeding 400% the national average (Silicon Valley Institute for Regional Studies, n.d.) and outward migration of renters reaching almost 15% in 2017 (Hwang, 2019), the issue of economically forced displacement is apparent. With the driving force of this displacement being rampant gentrification (Chapple, 2016), the role of the tech industry emerges.

In the western hemisphere's "tech capital" (Ghaffary, 2019), the frequency and magnitude of renter mass-evictions are acutely increasing (Levin, 2016). This comes as landlords seek to capitalize on the gargantuan profits which the expansion of the technology industry brings through a growing influx of affluent technology employees. While Facebook is not the sole contributor to this phenomenon, it is certainly one the largest drivers in Menlo Park's gentrification. Facebook's main campus employs over 12,000 workers, many of whom are financially incentivised with 5-figure bonuses to live in close proximity to the office (Streitfeld, 2018) and receive salaries upwards of \$100,000- over 3 times the U.S.' median income (Ghaffary, 2019).

Since the 2015 opening of the company's first Menlo Park campus, critics have blamed Facebook of perpetuating gentrification and racial inequality (Ellis, 2017; Levin, 2016). This is a result of the displacement of majority low-income and racial minority groups, which has become an increasingly



Figure 1. A map of Facebook’s campus and surrounding Silicon Valley (Google Earth, 2020).

poignant concern among activists and scholars (Levin, 2016; McElroy, 2019). This poster seeks to lay out the typical practices of both the tech industry and Facebook, identify what issues they create in relation to gentrification and then to present possible solutions to the issues informed by the context of the current Silicon Valley market.

Practices of the tech sector

Responsibility for gentrification and exacerbated socio-economic inequality isn’t isolated to Facebook. Following a half-century corporate tradition, Apple, Google and Twitter (among other large players) have established company campuses in the

San Francisco Bay Area, ushering in similar concerns for the communities they situate themselves in. Despite the massive investment of capital needed for such projects, the past two decades have seen the propagation of corporate microcosms become an increasingly common practice. There is good reason for this: there is an increasing need for these companies to attract and retain talent. This necessity comes as the industry sees an exponentially growing demand for highly-skilled labour, resulting in the highest turnover rate of any industry at 13.2% (Booz, 2018). For the most part, corporate campuses are effective in these aims, bringing essential human capital that these companies depend

on, alongside productivity benefits brought by tailor-made spaces (Chevez & Huppertz, 2017). These campuses, however, have been met with many of the same concerns over gentrification and displacement. These concerns mount on top of worries that they isolate high-paying jobs from existing communities, exacerbating income inequality (Stehlin, 2015), further contributing to the economic inaccessibility of housing in the region. Coupling this with the fact that, increasingly, even the affluent tech workers are struggling to afford the gentrifying housing market (Ghaffary, 2019), the internecine problem that corporate campuses create reveals itself. The inflating unaffordability of the market results in prospective employees becoming disincentivized to accept positions in the campuses specifically built to attract them, meaning that as the issue intensifies, the massive investments made into campuses become redundant. This cyclic issue displays why keeping the region's property prices low is in the best interests of tech companies. Despite this paramount importance, there is a disparity between what tech giants are doing to combat their impacts. Leading the pack through initiatives is Google, who owns \$7.5bn in Silicon Valley real estate holdings and, beginning in 2019, has made the endeavour to build almost 10,000 homes in Mountain View, Ca, with an additional \$1bn fund to construct an extra 20,000 over the next 15 years (Brinklow, 2019). On top of this, their North Bayshore campus is poised to bring 5,700 new homes for employees, with 20% of which being designated for below-market value rentals (Brinklow, 2019). In contrast, Apple, who holds just shy of \$9bn in Silicon Valley properties, has been much more reluctant and lackluster in their commitments (Kendall, 2019). Prior to 2016, their commitments to combating Silicon Valley's housing crisis was a little

over \$6mil (the minimum amount required by law), meanwhile the company's Apple Park Headquarters came with no plans for employee housing. While Apple is still scores behind in their overall mitigation, they have pledged \$2.5bn to fight the issue (Dougherty, 2019). Although this amount initially presents itself as a large figure, this is regarded as having little potential for actual change, seeing as the company has laid out little framework to produce housing or address the actual problem. Overall, in fact, 'pledges' made by companies are slated as being insufficient in tackling the issue, as these funds are typically set up to create for-profit housing, which many argue just perpetuates the issue (Dougherty, 2019), as larger numbers of affordable housing is needed. Real estate developments carried out by Silicon Valley companies, however, do hold potential to alleviate displacement. Numerous scholars regard affordable housing as a key tool in combating urban displacement. Despite the potential, the primary issue with such projects is the immense time investment they require. With Google's Mountain View development being stanced to remain in the planning phase 6 years after it was announced (Google, n.d.), no tangible benefits have been felt from this initiative so far. All the while gentrification has continued to dominate the region. Presently, the most significant direct actions taken by Silicon Valley tech companies have been in the form of corporate policies aimed at income equality. These have taken the form of Google's and Apple's decisions to add previously third-party-contracted security guards to their payrolls in 2014 and 2015 respectively (Chapple & Zuk, 2015), in addition to Apple's commitments to income and hiring equality for women and underrepresented minorities (Statt, 2016), improving financial security and equality for these workers.

Discussions of Facebooks' practices in Menlo Park

Facebook's role in Silicon Valley housing has fallen neatly in line with the emerging industry standard of constructing vast corporate havens, with Facebook's Menlo Park offices accommodating 12,000 employees (Streitfeld, 2018) over two campuses. Facebook's need for these campuses aligns with their corporate visions of "workspace [s] designed to foster collaboration between teams, [and] for focused work" (Tenanes, 2018). More deeply, however, a flashy custom-built campus acts as an attractive bonus for prospective employees, important for a company who is only able to secure 55% of the talent it offers 6-figure salaries to (Rodriguez, 2019). Of course, this massive amount of employees, being situated in an area where the number of jobs are growing against new housing at rate of 6 to 1 (Brinklow, 2017), has resulted in the rapid gentrification of Menlo Park. In a similar fashion to Google and Apple, Facebook has recently acknowledged their impact on the Bay Area housing situation, establishing a \$1bn fund to aid the tackling of the housing crisis (Dougherty, 2019). The issue, like other corporate funds, is that it doesn't tackle fast enough the root issue of the company's expanding workforce. When combining this with the aforementioned unaffordability of the market, the relative insignificance of these sums becomes apparent, especially seeing as a recent purchase of Google's shows that \$2.1bn can only acquire 60 properties in the region (Kendall, 2019). A monumental shift in Facebook's campus projects came in 2018, with the announcement of plans for 'Willow Village', a 59-acre employee village immediately to the south of their existing Menlo Park campuses. The development is currently stanced to bring 1.25million square feet of new office space and, with it, an additional 5,000 employees (Bradshaw, 2020).

The new shift in company policy comes with the inclusion of 1,735 new dwellings for employees (Bradshaw, 2020), presenting a huge possible addition to the city's limited housing stock.

Despite this large number, a deficit of over 3,000 homes will still be the result, and with it, the mass displacement of lower-income households, especially through evictions, which is already an ongoing process (Levin, 2016). As will be discussed in the next section, the ramifications for the elevated stress on the peripheral housing market are set to become further exacerbated by the 'Willow Village' Development. In turn, this presents Facebook's efforts as just falling short of minimizing the issues that gentrification causes for both the company and its neighbours. However, through some readjustments to initiatives, these issues can be mitigated, as will be discussed.

Indications of gentrification and implications

As previously identified, gentrification in the San Francisco Bay Area is being driven by the unequal growth between jobs and housing stock, alongside income inequality. This, in tandem with the immigration of affluent tech workers to fill professional roles, has led to the median house price in Silicon Valley far exceeding \$1million in 2020 (Silicon Valley Institute for Regional Studies, n.d.). Gentrification- rising house and rent prices- results in the mass evictions that the region currently sees, with occasionally over 200 evictions taking place in a single day (Levin, 2016). In 2019, 54% of the city's low-income households of colour were situated in gentrifying neighbourhoods (Mercury News, 2019). Examining this in the context that people of colour are overrepresented in households experiencing poverty (U.S.

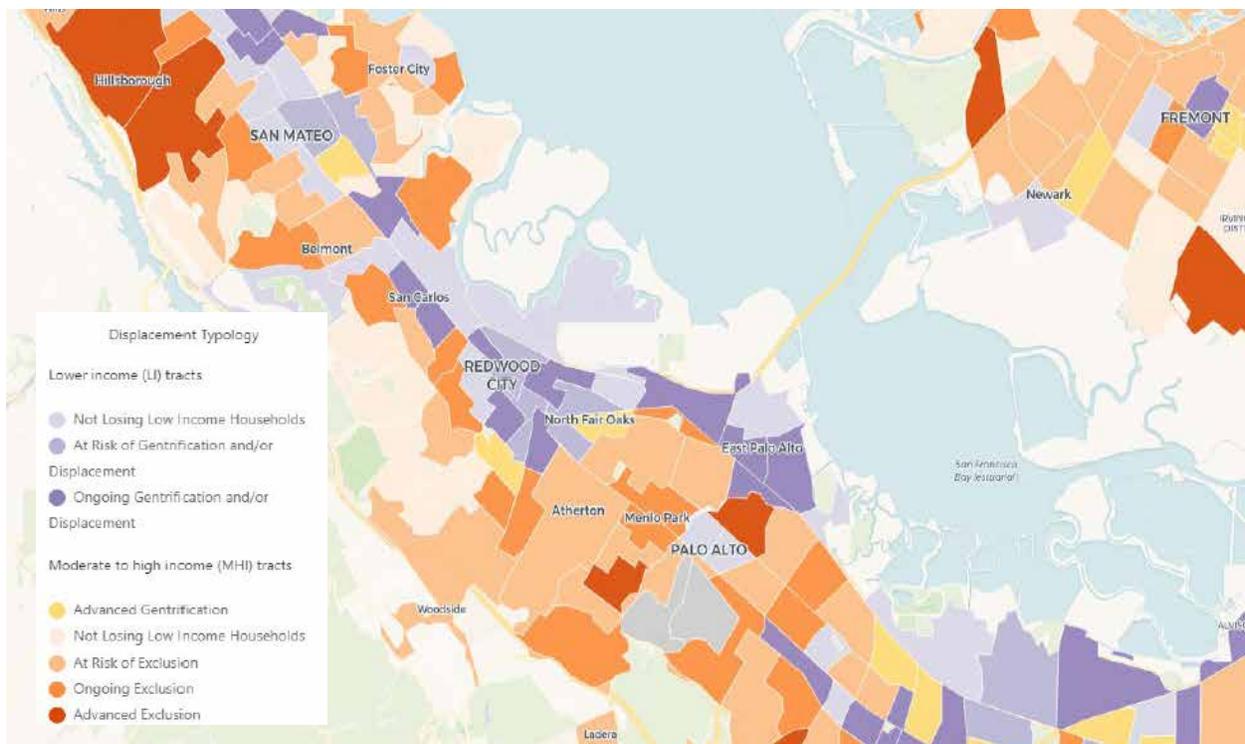


Figure 2. A Map of The Extent of Gentrification and Displacement in Menlo Park. *Note.* Data as of October 2020. Edited to show the location of Facebook current and proposed campuses.

Census Bureau, 2020), the spatial and racial inequality of urban displacement can be seen. With poverty being intrinsically linked to urban displacement, people of colour are made more susceptible to the issue of evictions and displacement, particularly in gentrifying areas, leading to the potential exacerbation of racial income inequality. As Figure 2 shows, gentrification and advanced displacement pervades almost all Silicon Valley communities, with the communities immediately surrounding Facebook now undergoing a new wave of gentrification. As the issue develops, property becomes increasingly more inaccessible to even Facebook employees, as previously discussed. Also manifesting as a deterrent for prospective employees is the poor corporate image resulting from community backlashes, such as a series of attacks on tech company

shuttle buses (Hollister, 2013). Additionally, by exacerbating urban displacement through deepening socio-economic inequality, socio-health inequalities are perpetuated, as will be discussed.

The potential ramifications for regional socio-health inequality can be seen through the nexus between gentrification, urban displacement, and poor health itself, which has been well established (Chapple, 2016; McElroy, 2019). It is known that evictions result in a four-times higher rate of mental illness and suicide for evictees (Rojas & Stenberg, 2015), while gentrification of neighbourhoods also results in poorer overall health for the most vulnerable, due to the economic inaccessibility of necessities and health services (Izenberg et al., 2018; McElroy, 2019). Furthermore, the edge

cities the displaced migrate to often have already stressed healthcare infrastructure (such as Oakville, Ca), with much poorer environmental health factors than the neighbourhoods they were displaced from (Ramírez, 2019), exacerbating health issues. Also significantly, the negative effects that gentrification has on financial health and credit also poses a threat to physical health (Ding et al., 2016), especially in the context of the privatized US healthcare system. The progression of these inequalities also significantly contribute to previously discussed racial inequality, as ethnic minority groups disproportionately experience displacement, as well as the socio-health and socio-economic consequences of gentrification (Desmond & Gershenson, 2017; Mercury News, 2019; Ramírez, 2019).

Potential solutions

With issues of shortages in affordable housing, housing stock in general and income inequality, there are a multitude of issues which Facebook must attempt to mitigate. By reviewing the literature, several potential solutions present themselves. These solutions are based on speculation and opinion as to what would be potentially feasible for a single corporate player and would need to be thoroughly assessed. These hypothetical actions are not aimed at solving gentrification, as much greater change would be needed, but instead aim to suggest what Facebook could do in order to alleviate their contribution to a complex issue.

As identified, simply establishing funds to construct housing is ineffective, therefore for Facebook to make the most impactful changes, a more proactive approach must be taken.

Most crucially, Facebook must increase

housing stock (specifically the number of affordable housing options) in and around their campuses. The most readily feasible way to do this would be to increase the number of homes in the Willow Village development, instead of reducing the stock, as they have done (Bradshaw, 2020). The beneficial effect of increasing the housing stock in tandem with increasing the proportion of below-market rate housing is accepted as a crucial step in alleviating gentrification (Chapple, 2016). This is due to the fact that a greater housing supply, especially those at affordable rates, can ease demand and reduce displacement caused by new employees. This can, in turn, reduce socio-economic inequality due to less expensive rents for those most financially vulnerable. These potential changes wouldn't exclusively benefit Facebook's peripheral communities, as significant benefits for Facebook itself would emerge. With more abundant housing options for employees, the company would become more attractive to potential employees, while also deepening employee ties with the company, aiding the retention of talent. Additionally, the probable improvement of the company image, due to more responsive corporate social responsibility (CSR), could work to attract more employees and reduce tensions between Facebook and existing communities. One major contributing factor to evictions are the job-losses which vulnerable tenants may face (Desmond & Gershenson, 2017; Desmond & Shollenberger 2015) as a result of commercial gentrification. Another potential solution, then, would be to offer the new jobs of Willow Village to community residents. This would be effective in enabling some to cope better with both the inevitable commercial and residential gentrification of Menlo Park.

While in early planning stages, Facebook should also actively include community

feedback and discourse in order to foster a more efficient placemaking process, especially in the development of Willow Village. This comes as a potential solution in tandem with other proposals, as it is recognized that a more developed sense of place brings two large benefits. First is that positive place perceptions buffer the effects of gentrification in terms of mental health (Fong, et al., 2019), reducing some of the socio-health impacts of Facebook campus developments. Second is the benefits to collaboration and knowledge production from community connections (Stehlin, 2015), which pose a benefit to Facebook, as local talent is fostered and can be acquired by the company, standing as an investment in human-capital.

Finally, the lowest cost and most feasible solution would be to incentivise working from home, reducing the needs for further campus expansion- saving capital- and potentially seeing productivity rise by up to 13% (Bloom, et al., 2013).

Feasibility

The changes proposed come at varying levels of feasibility, with each potential solution varying in investment, attractiveness and potential return for Facebook. The feasibility argued here is a product of speculation and opinion, in order to highlight that the previously argued solutions, or ones similar to them, must be explored by Facebook. Seeing Facebook's \$350bn valuation in 2016 (Levin, 2016) and with gargantuan projects such as Willow Village, Facebook has demonstrated financial ability to make these large investments.

With 3,000 new dwellings needing to be constructed in order to meet demand met by incoming employees from the Willow Village development, two things would be key: housing density and purchasing/ repurposing

property. Although Menlo Park sees very little high-rise development and future high-rise developments would most likely require rezoning by local government, this could be an avenue for exploration. With the construction of MK-21 (the largest building on Facebook's West Campus) having required Facebook to collaborate with Menlo Park City Government in order to rezone land for office use (Pertara, n.d.), rezoning for corporate needs is not unprecedented. When it comes to procuring more properties, however, the issue of economic inaccessibility scales up to the corporate level. As 60 properties can cost \$2.1bn (Kendall, 2019), the toll for Facebook could become huge. Considering this, alongside the need to increase offerings of affordable housing, this solution could become financially unviable.

Despite the more substantial financial investments required for the previously outlined solutions, the open inclusion of campus neighbours and employing talent from local communities would be less reliant on monetary investment, instead needing some level of event planning and employment coordination. Finally, encouraging remote working is becoming increasingly more feasible, with the COVID-19 pandemic moving the job market in such a direction already, company practices could follow successful moves by other industry leaders. Although, for campuses to still be effective in attracting employees and retaining their own worth, work-at-home policies would have to be rather extensively devised.

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Less is more: H&M's path towards sustainable fashion

Yashriya Lohchav

Abstract

Fast fashion companies have notoriously been organizations that make low-quality clothing quickly, in abundance and with little regard for the environment. Therefore, now that organizations have indicated a desire to improve their practices, it is essential to analyze the basis of the core issues and the presented solutions' efficiency. The purpose of this analysis is to consider the environmental impacts of H&M's practices, analyze the solutions proposed by the company, and present recommendations for better practices in the future. The lens taken is geographical, finds that indicated initiatives by H&M are not severe enough, and that the paths towards sustainability should include an investment in durable clothing and decrease production cycles. This finding is significant as it suggests a need for a fundamental change in the fast-fashion model, an undertaking that is far more drastic than current initiatives. This view is also novel in its view that despite the common perception of conflicts between profitability and sustainability, these business model changes could potentially provide significant growth for the company, given strategic execution.

Introduction

To minimize the company's environmental impacts and decrease large-scale clothing waste, Hennes & Mauritz (H&M) should invest in durable clothing and decrease production cycles. This feasible solution creates long-lasting products, cuts down on waste in several ways, and improves the company's reputation.

H&M is a clothing retailer that follows the fast fashion business model, meaning clothing is made quickly, in abundance and is generally low in quality. As a result, consumers are continuously buying new clothing to keep up with new trends in fashion and to replace their deteriorating supply, which creates enormous amounts of waste. There are major environmental impacts in several areas throughout the clothing production process, from the cotton production to the making of the garments and the distribution of the finished products (Brooks, 2015). In addition, H&M was known to burn unsold clothing in the past (Lieber, 2018). While the company has started opting for more sustainable cotton sources (i.e., cotton that can be produced in large quantities with minimal environmental impacts) and has established a recycling program, not enough is being done to mitigate the harms from the abundance of clothing waste associated with short clothing lifespans (Deeley et al., 2020). To reduce the need for increased production and consumption, H&M should improve the quality of their clothing so that consumers do not have to replace them as often. The company should also increase the duration products are displayed in stores and on their website

before being replaced by new products in order to prevent waste from unsold clothing and limit the cost of designing and manufacturing new products.

To substantiate this argument and examine the fast fashion ethical issue, the analysis presented in this poster will use an international geographic approach to situate H&M's scaled processes within the global economy. In addition, the current process of clothing production will be mapped, highlighting the geography and scale of fast fashion. From there, the work of contemporary geographers will be used to address 1) the proposed changes in H&M's business model to mitigate the company's ethical issues, 2) the benefits of the proposed changes compared to the advantages of the company's current practices and 3) the proposal's feasibility and its challenges.

H&M's scaled processes and common practices

The ethical impacts of fast fashion can be viewed by mapping the fast fashion industry's scaled processes and characterising common practices within those processes. The following analysis will look at the supply-chain of jean production:

Design: Each pair of jeans begins as a design. Companies like H&M have the capability to have clothing go from a designer's idea to the rack in a matter of weeks (Wood, 2019).

Cotton Growing and Denim Weaving: The source of the cotton used for jean production is difficult to map, as one pair of jeans can have fibers that come from multiple areas of the world. Cotton is mostly grown in monocultures and is a pesticide-intensive crop. These pesticides are often washed into groundwater and rivers, compromising water quality (Brooks, 2015).

Manufacturing: Component parts of jeans often need to be shipped from places like China to Cambodia, due to varying labour costs. This process is associated with high levels of emissions from shipping, thus increasing green house gases (GHGs) in the atmosphere. This process also results in the dumping of microfibers into water sources, which spread through the food chain (Brooks, 2015).

Advertising and Retail: Advertising has made shopping for products like jeans a reflex, where casually picking up a pair of jeans has become almost routine. The average U.S. consumer now owns 6.7 pairs of jeans, which amplifies all the aforementioned environmental harms of clothing production (Brooks, 2015). Therefore, short turnover, paired with high levels of advertising, means that individuals are incentivised to buy more and what is not sold goes through other methods of distribution. Regardless of what is done with the clothing, it will all eventually end up as waste (Wood, 2019).

What does the geographical approach show?

Taking a geographical approach to analysing the process of clothing creation is useful in showing the scale and breadth of the negative environmental effects of each garment. The approach has shown several issues associated with clothing production, such as waste creation, pesticide usage in monocultures (e.g., cotton), GHG emissions from transportation, and the disposal of microfibers. All these aspects are intensified by the consumer culture created by modern day advertising and the fast fashion business model. This scale of environmental impact has two implications for H&M. First, there are clearly environmental issues that H&M

needs to contend with. Second, the company must reduce consumption all together because targeting one area of the mapped process leaves the other areas untouched and would therefore be an incomplete solution. Furthermore, the geographic analysis presented above only considered the process of producing jeans, but the more materials that are considered, the greater number of issues that arise. While the full impacts of the proposed changes to H&M's business model will be considered later in this poster, it is important to keep in mind the issues outlined within the geographical approach as the analysis considers why H&M's clothing production status quo exists, and why it needs to be changed.

Current action plans and inefficiencies:

H&M has claimed to support sustainable clothing solutions; however, the effectiveness of these solutions is debatable. Overall, there are three impacts:

Sustainable Materials: H&M has a target of using 100% sustainable or recycled materials by 2030 for its clothing production. However, this is only a target and not a complete supply chain solution (Petter, 2020). Sustainable materials still are resource intensive and their use perpetuates the issues associated with the production and shipping of clothing.

In-Store Recycling Program: H&M's clothing recycling program slightly reduces the amount of clothing in landfills. However, similarly to the sustainable materials solution, it does not solve the environmental issues created with the overproduction of clothing (Petter, 2020).

Marketing: Overall H&M's marketing as a green company is misaligned with the scale of

its actions, indicating that more needs to be done.

These actions lead to the question: If current initiatives are so ineffective, why hasn't there been a change?

Location and scale: The advantages of the status quo:

The main reason why the clothing industry acts in this unsustainable way is to increase revenue. This profit model is directly related to the location and scale of the industry.

Location: Like most of fast-fashion retailers, H&M takes advantage of low labour costs and lax regulations in countries with high levels of production, perpetuating transportation emissions. This allows the company to create relatively inexpensive products that are often very low-quality (Innovation, Science and Economic Development Canada, 2017). Due to their poor quality of this clothing, H&M must convince consumers to engage in a cycle of buying while preventing them from choosing more expensive but longer lasting alternatives (Calvo, 2016).

Scale: Large levels of production create economies of scale that allow H&M to keep prices low, which support its business model (Calvo, 2016). These low prices improve the company's margins, creating greater profit.

Impacts of proposal on the environment

Fashion is a major contributor to global emissions (Fig. 1), and H&M owns a major market share of the fashion industry. By increasing the quality of their clothing and slowing down the clothing turnover cycle, H&M would prevent the cycle of perpetual

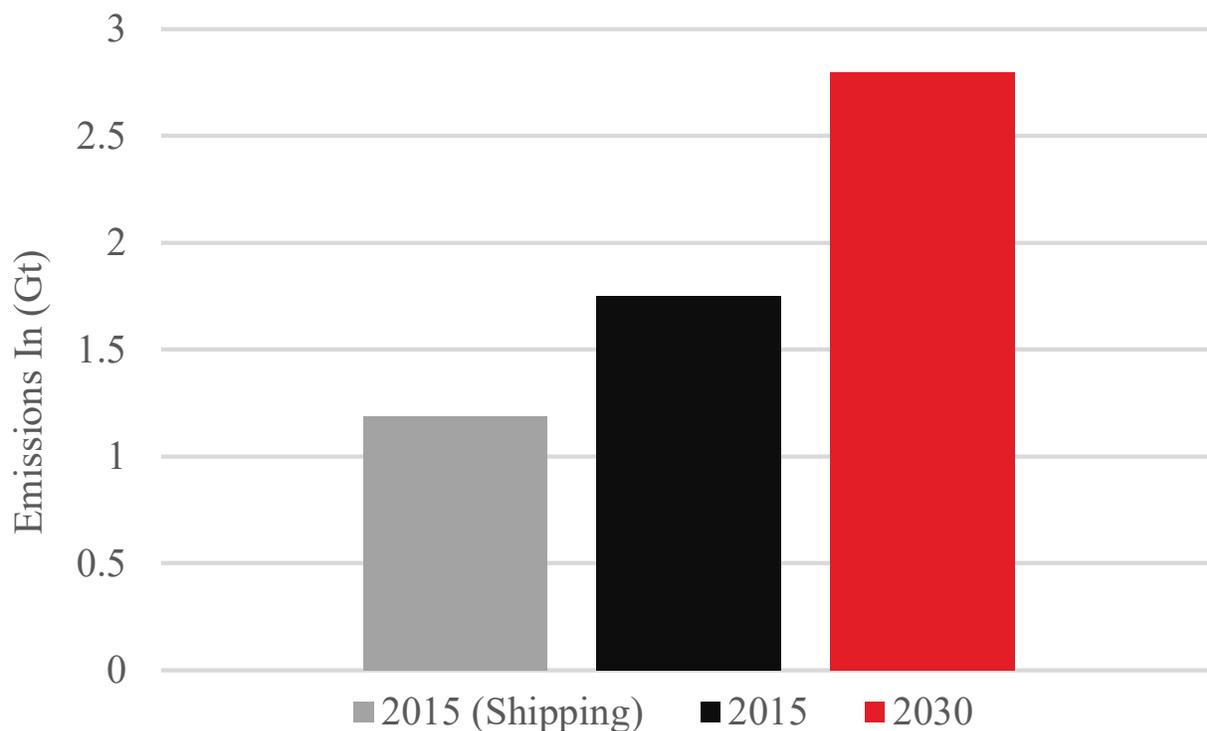


Figure 1. Expectations of large clothing-related carbon emissions growth. Adapted from The Journal of Cleaner Productions (Naidoo, 2018).

consumption and lower the company's carbon footprint.

Societal and environmental benefits:

The main societal and environmental benefits of the proposal include:

1. Lowering of GHG emissions, which combats against rising temperatures and sea levels, helps prevent climate change-related natural disasters and works towards leaving the earth habitable for future generations (Chang, 2020).
2. The preservation of rivers and the prevention of biologically-dead zones with cancer-causing cells which have been found in countries such as China, India

and Bangladesh (Carlson, 2018).

3. The prevention of microfiber-release during laundry and transportation into food and water supplies, which causes bioaccumulation and biomagnification (Chua, 2019). These fibers have been found as far as the Arctic Ocean (Simon, 2021).

Impacts of proposal on the company growth

Recent consumer trends have pushed away from fast fashion and consequently H&M has been experiencing declining sales for the past few years. In 2018, it was reported that the company had over \$4.3 billion in unsold inventory and sales fell 62% in the first

quarter of 2018 and have continued to be poor going into 2020. The company's stock price has fallen over \$100 in the past 5 years with no signs of significant improvement (Paton, 2018).

This can be explained in part by the shift in consumer desire to pay more for better quality clothing with a longer lifespan and to act in a more sustainable manner (Naidoo, 2018).

By changing the quality of its clothing, and therefore its sustainability practices, H&M could bring consumers back to the brand. An example of a company that has benefited from a sustainable image is Patagonia, a fashion company that has received the UN Champion of the Earth award, an annual award given to public and private organizations who have demonstrated outstanding environmental leadership.

The company produces high quality clothing with long lifespans and has recently seen steady growth. Patagonia is not the exception to the rule as studies have found that the industry for sustainable fashion is growing (Fig. 2) (Niinimäki, Peters, Dahlbo, et al., 2020).

Considering its negative profitability trends and the projected growth in the sustainable fashion industry (Fig. 2), H&M could benefit from transitioning away from its current fast fashion business model. In addition to the environmental benefits, H&M could improve their consumer image and increase their revenue in the long-term.

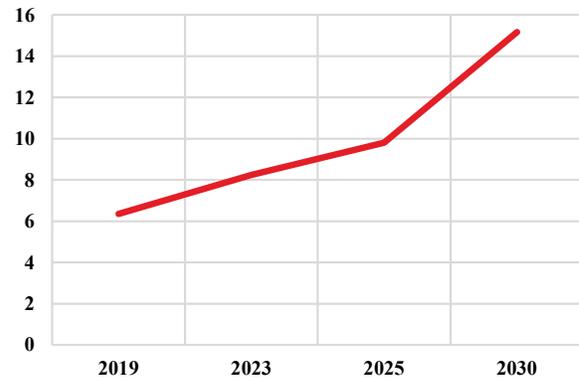


Figure 2. Expectations of growth in the sustainable fashion industry. Adapted from The Business Research Company, 2020.

Feasibility

It is important here to note that an increase in clothing quality would mean an increase in price to maintain profits. There are two questions that need to be asked to evaluate the feasibility of this proposal.

1. Is there a market for the suggested model?

The data shown in Fig. 2 demonstrates that there is a steadily growing market for sustainable fashion. It is important to note that most players in the sustainable fashion industry are relatively small and so by entering the playing field early, a major corporation like H&M could have a strong competitive advantage.

2. Can H&M implement a major shift in its business model?

The shift proposed would be a major capital investment. It would cause H&M to shift suppliers, adopt higher pricing that may push away loyal consumers, change the way that the company markets to consumers and expend significant human resources to make this change (Książak, 2017). However, there are key aspects that make the changes worth the risk.

As stated before, H&M is on a downward spiral and a significant change is needed to ensure a long future for the company. No action is going to make as significant of a difference as a widescale reduction in the amount of clothing produced. The reason that individuals purchase H&M products is less related to brand loyalty and more related to the product they offer. This means that it is crucial for the company that they are on the cusp of consumer desires (Naidoo, 2018). The size of H&M puts it in a position where major shifts are more attainable than they would be for smaller competitors (Bick, Halsey, & Ekenga, 2018).

Overall, the proposed changes would be a major venture with risks, but it would be feasible and could provide great benefit.

Challenges and mitigation

Key challenges include:

Convincing all business executives to implement the proposal.

Mitigation: Clear communication on how the program will be beneficial and demonstrations of the model in test markets (Książak, 2017).

An inability to finance the changes.

Response: This is very unlikely as despite heavy decline in revenue H&M is still highly profitable.

Difficulties in creating new supply chain processes and supplier relations.

Mitigation: While this challenge may be costly in the short term, the market share that H&M currently holds is significant enough for the company to leverage new supplier relations. Its factories are also designed to

be restructured easily which will allow for changes to be made (Książak, 2017).

Conclusion

Overall, if H&M wants to be more ethical in its practices, it needs to go beyond its current practices and target the entire supply chain to produce less clothing but increase its quality. This solution has strong environmental and social impacts, is good for the company's image, is feasible, and has risks that can be mitigated to sustain the company's profits.

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Introduction

To minimize the company's environmental impacts and decrease large-scale clothing waste, Hennes & Mauritz (H&M) should invest in durable clothing and decrease production cycles. This feasible solution creates long-lasting products, cuts down on waste in several ways, and improves the company's reputation.

H&M is a clothing retailer that follows the fast fashion business model, meaning clothing is made quickly, in abundance and is generally low in quality. As a result, consumers are continuously buying new clothing to keep up with new trends in fashion and to replace their deteriorating supply, which creates enormous amounts of waste. There are major environmental impacts in several areas throughout the clothing production process, from the cotton production to the making of the garments and the distribution of the finished products (Brooks, 2015). In addition, H&M was known to burn unsold clothing in the past (Lieber, 2018). While the company has started opting for more sustainable cotton sources (i.e., cotton that can be produced in large quantities with minimal environmental impacts) and has established a recycling program, not enough is being done to mitigate the harms from the abundance of clothing waste associated with short clothing lifespans (Deeley et al., 2020). To reduce the need for increased production and consumption, H&M should improve the quality of their clothing so that consumers do not have to replace them as often. The company should also increase the duration products are displayed in stores and on their website before being replaced by new products in order to prevent waste from unsold clothing and limit the cost of designing and manufacturing new products.

To substantiate this argument and examine the fast fashion ethical issue, the analysis presented in this poster will use an international geographic approach to situate H&M's scaled processes within the global economy. In addition, the current process of clothing production will be mapped, highlighting the geography and scale of fast fashion. From there, the work of contemporary geographers will be used to address 1) the proposed changes in H&M's business model to mitigate the company's ethical issues, 2) the benefits of the proposed changes compared to the advantages of the company's current practices and 3) the proposal's feasibility and its challenges.

H&M's Scaled Processes and Common Practices

The ethical impacts of fast fashion can be viewed by mapping the fast fashion industry's scaled processes and characterising common practices within those processes. The following analysis will look at the supply-chain of jean production:

- Design:** Each pair of jeans begins as a design. Companies like H&M have the capability to have clothing go from a designer's idea to the rack in a matter of weeks (Wood, 2019).
- Cotton Growing and Denim Weaving:** The source of the cotton used for jean production is difficult to map, as one pair of jeans can have fibers that come from multiple areas of the world. Cotton is mostly grown in monocultures and is a pesticide-intensive crop. These pesticides are often washed into groundwater and rivers, compromising water quality (Brooks, 2015).
- Manufacturing:** Component parts of jeans often need to be shipped from places like China to Cambodia, due to varying labour costs. This process is associated with high levels of emissions from shipping, thus increasing green house gases (GHGs) in the atmosphere. This process also results in the dumping of microfibers into water sources, which spread through the food chain (Brooks, 2015).
- Advertising and Retail:** Advertising has made shopping for products like jeans a reflex, where casually picking up a pair of jeans has become almost routine. The average U.S consumer now owns 6.7 pairs of jeans, which amplifies all the aforementioned environmental harms of clothing production (Brooks, 2015). Therefore, short turnover, paired with high levels of advertising, means that individuals are incentivised to buy more and what is not sold goes through other methods of distribution. Regardless of what is done with the clothing, it will all eventually end up as waste (Wood, 2019).

What Does the Geographical Approach Show?

Taking a geographical approach to analysing the process of clothing creation is useful in showing the scale and breadth of the negative environmental effects of each garment. The approach has shown several issues associated with clothing production, such as waste creation, pesticide usage in monocultures (e.g., cotton), GHG emissions from transportation, and the disposal of microfibers. All these aspects are intensified by the consumer culture created by modern day advertising and the fast fashion business model. This scale of environmental impact has two implications for H&M. First, there are clearly environmental issues that H&M needs to contend with. Second, the company must reduce consumption all together because targeting one area of the mapped process leaves the other areas untouched and would therefore be an incomplete solution. Furthermore, the geographic analysis presented above only considered the process of producing jeans, but the more materials that are considered, the greater number of issues that arise. While the full impacts of the proposed changes to H&M's business model will be considered later in this poster, it is important to keep in mind the issues outlined within the geographical approach as the analysis considers why H&M's clothing production status quo exists, and why it needs to be changed.

Current Action Plans and Inefficiencies:

H&M has claimed to support sustainable clothing solutions; however, the effectiveness of these solutions is debatable. Overall, there are three impacts:

- Sustainable Materials:** H&M has a target of using 100% sustainable or recycled materials by 2030 for its clothing production. However, this is only a target and not a complete supply chain solution (Petter, 2020). Sustainable materials still are resource intensive and their use perpetuates the issues associated with the production and shipping of clothing.
- In-Store Recycling Program:** H&M's clothing recycling program slightly reduces the amount of clothing in landfills. However, similarly to the sustainable materials solution, it does not solve the environmental issues created with the overproduction of clothing (Petter, 2020).
- Marketing:** Overall H&M's marketing as a green company is misaligned with the scale of its actions, indicating that more needs to be done.

These actions lead to the question: **If current initiatives are so ineffective, why hasn't there been a change?**

Location and Scale: The Advantages of the Status Quo:

The main reason why the clothing industry acts in this unsustainable way is to increase revenue. This profit model is directly related to the location and scale of the industry.

Location: Like most of fast-fashion retailers, H&M takes advantage of low labour costs and lax regulations in countries with high levels of production, perpetuating transportation emissions. This allows the company to create relatively inexpensive products that are often very low-quality (Innovation, Science and Economic Development Canada, 2017). Due to their poor quality of this clothing, H&M must convince consumers to engage in a cycle of buying while preventing them from choosing more expensive but longer lasting alternatives (Calvo, 2016).

Scale: Large levels of production create economies of scale that allow H&M to keep prices low, which support its business model (Calvo, 2016). These low prices improve the company's margins, creating greater profit.

Less is More: H&M's Path Towards Sustainable Fashion

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Impacts of Proposal on the Environment

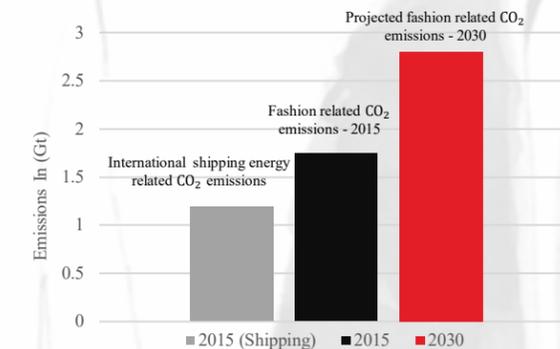


Figure 1. Expectations of large clothing-related carbon emissions growth. Adapted from The Journal of Cleaner Productions (Naidoo, 2018).

Fashion is a major contributor to global emissions (Fig. 1), and H&M owns a major market share of the fashion industry. By increasing the quality of their clothing and slowing down the clothing turnover cycle, H&M would prevent the cycle of perpetual consumption and lower the company's carbon footprint.

Societal and Environmental Benefits:

The main societal and environmental benefits of the proposal include:

- A) Lowering of GHG emissions, which combats against rising temperatures and sea levels, helps prevent climate change-related natural disasters and works towards leaving the earth habitable for future generations (Chang, 2020).
- B) The preservation of rivers and the prevention of biologically-dead zones with cancer-causing cells which have been found in countries such as China, India and Bangladesh (Carlson, 2018).
- C) The prevention of microfiber-release during laundry and transportation into food and water supplies, which causes bioaccumulation and biomagnification (Chua, 2019). These fibers have been found as far as the Arctic Ocean (Simon, 2021).

Impacts of Proposal on the Company Growth

Recent consumer trends have pushed away from fast fashion and consequently H&M has been experiencing declining sales for the past few years. In 2018, it was reported that the company had over \$4.3 billion in unsold inventory and sales fell 62% in the first quarter of 2018 and have continued to be poor going into 2020. The company's stock price has fallen over \$100 in the past 5 years with no signs of significant improvement (Paton, 2018).

This can be explained in part by the shift in consumer desire to pay more for better quality clothing with a longer lifespan and to act in a more sustainable manner (Naidoo, 2018).

By changing the quality of its clothing, and therefore its sustainability practices, H&M could bring consumers back to the brand. An example of a company that has benefited from a sustainable image is Patagonia, a fashion company that has received the UN Champion of the Earth award, an annual award given to public and private organizations who have demonstrated outstanding environmental leadership.



The company produces high quality clothing with long lifespans and has recently seen steady growth. Patagonia is not the exception to the rule as studies have found that the industry for sustainable fashion is growing (Fig. 2) (Niinimäki, Peters, Dahlbo, et al., 2020).

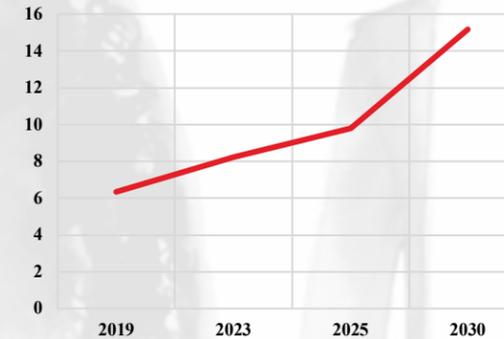


Figure 2. Expectations of growth in the sustainable fashion industry. Adapted from The Business Research Company, 2020.

Considering its negative profitability trends and the projected growth in the sustainable fashion industry (Fig. 2), H&M could benefit from transitioning away from its current fast fashion business model. In addition to the environmental benefits, H&M could improve their consumer image and increase their revenue in the long-term.

Feasibility

It is important here to note that an increase in clothing quality would mean an increase in price to maintain profits. There are two questions that need to be asked to evaluate the feasibility of this proposal.

- Is there a market for the suggested model?**
The data shown in Fig. 2 demonstrates that there is a steadily growing market for sustainable fashion. It is important to note that most players in the sustainable fashion industry are relatively small and so by entering the playing field early, a major corporation like H&M could have a strong competitive advantage.
- Can H&M implement a major shift in its business model?**
The shift proposed would be a major capital investment. It would cause H&M to shift suppliers, adopt higher pricing that may push away loyal consumers, change the way that the company markets to consumers and expend significant human resources to make this change (Książak, 2017). However, there are key aspects that make the changes worth the risk.

As stated before, H&M is on a downward spiral and a significant change is needed to ensure a long future for the company. No action is going to make as significant of a difference as a widescale reduction in the amount of clothing produced. The reason that individuals purchase H&M products is less related to brand loyalty and more related to the product they offer. This means that it is crucial for the company that they are on the cusp of consumer desires (Naidoo, 2018). The size of H&M puts it in a position where major shift are more attainable than they would be for smaller competitors (Bick, Halsey, & Ekenga, 2018).

Overall, the proposed changes would be a major venture with risks, but it would be feasible and could provide great benefit.

Challenges and Mitigation:

Key challenges include:

- Convincing all business executives to implement the proposal.**

Mitigation: Clear communication on how the program will be beneficial and demonstrations of the model in test markets (Książak, 2017).

2. **An inability to finance the changes.**
Response: This is very unlikely as despite heavy decline in revenue H&M is still highly profitable.

3. **Difficulties in creating new supply chain processes and supplier relations.** Mitigation: While this challenge may be costly in the short term, the market share that H&M currently holds is significant enough for the company to leverage new supplier relations. Its factories are also designed to be restructured easily which will allow for changes to be made (Książak, 2017).

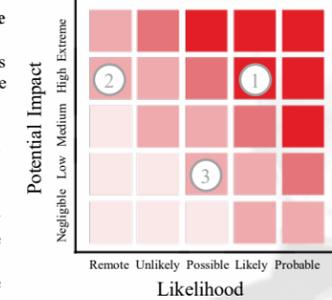


Figure 3. Potential impacts and likelihood of overcoming the key challenges associated with a shift in business model.

Conclusion

Overall, if H&M wants to be more ethical in its practices, it needs to go beyond its current practices and target the entire supply chain to produce less clothing but increase its quality. This solution has strong environmental and social impacts, is good for the company's image, is feasible, and has risks that can be mitigated to sustain the company's profits.

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Ethical voluntourism: Rethinking orphanage tourism

Nicole Robb

Introduction

TravellersQuest is a Texas-based company that promotes overseas travel and volunteer programs by providing resources, tools and networking opportunities for travelers who wish to make a positive impact in the world or gain valuable volunteer experience. TravellersQuest's volunteer programs are promoted as exciting opportunities for volunteers to better themselves and help developing countries; however, in practice, these programs can have devastating ethical implications, including social/economic loss and mental/physical harm within the communities they are intended to help. By reviewing TravellersQuest's current practices, case studies, reports, and my own experiences with voluntourism, we will explore why TravellersQuest must modify their orphanage volunteer promotions to include extensive and careful screening of the orphanages they promote, and why they must also promote global awareness of ethical voluntourism on their public interfaces. We will discuss the feasibility of these changes and how, once implemented, these measures will help transform TravellersQuest into a conduit for skilled volunteer work, a positive contributor to developing economies, and a global leader in the growing area of ethical voluntourism.

“Voluntourism” is a term growing in popularity to describe travelers who conduct short-term volunteer activities such as wildlife conservation, home/school building, or orphanage assistance in developing countries (Gillett, 2016). There are many companies and organizations that help facilitate these volunteer programs. As a general practice, higher numbers of volunteer programs result in more clients and thus higher profits for these companies. Most companies, including TravellersQuest, profit by charging volunteers a fee for their volunteer experience. Volunteers gladly pay this fee for the experience of helping those less fortunate or for other benefits of volunteer experience (Guiney, 2015). Unfortunately, these attempts to help developing countries often have negative implications. In most cases, voluntourists are unaware of the negative implications their actions may have (McGloin & Georgeou, 2016). Specifically, mismanaged voluntourism at orphanages can contribute to local economic hardship, can enhance western misconceptions of developing countries, and can cause ongoing physical/emotional harm to orphan children who may become viewed as merely a source of donation revenue (Kushner, 2016). Geographically, these impacts propagate stereotyping of developing countries, specifically those in Asia, Africa and parts of the South Pacific, thus furthering racial, economic and social divide and promoting a perception of western superiority. This outcome is in direct conflict with what most volunteers are trying to achieve.

TravellersQuest's current practices

TravellersQuest promotes worldwide travel, volunteer, teaching and other opportunities by offering a large directory of programs available to aspiring travelers. Interested clients, typically targeted as those from developed, “western” countries, may register with TravellersQuest to receive tools, resources, contact information and advice to make their volunteer and travel plans a reality. By tabulating the information throughout TravellersQuest's website, I have calculated that TravellersQuest offers 167 searchable volunteer programs in 22 countries. Programs include dozens of potential volunteer activities such as teaching, orphanage assistance, painting/building, education and wildlife/environmental conservation. This information is summarized in Figure 1 below.

Orphanage voluntourism accounts for a large portion of TravellerQuest's searchable volunteer database. Almost one third of TravellersQuest's volunteer programs are directed at orphanages and, as seen in Table 1 below, most of these programs are located in developing countries throughout Africa, Asia, and South America.

Like most modern companies, the primary interface between TravellersQuest and its potential clients is its website. With regards to orphanage voluntourism, the website contains several article pages that promote the benefits of volunteering at orphanages; specifically, the self-improvement benefits to the volunteer. It merely alludes to studies showing the benefits of these programs to orphaned children, and these statements do not provide a citation or link to the original data (TravellersQuest, 2020). Overall, the website lacks any type of ethical component that would bring awareness to potential orphanage volunteers of the contentious issues they must try to avoid or

else risk contributing to. These ethical issues are discussed in detail below.

Ethical issues with orphanage voluntourism

Harnng et al. (2015) describe the growing phenomenon of voluntourism, its general social implications and various impacts on social justice and political issues including economic development, poverty, and its role in the neo-liberal agenda. For our discussion about orphanage voluntourism, we will focus on three ethical issues in particular:

Perpetuating geographical stereotypes and misunderstandings

In a study of orphanage voluntourism in Malawi, Andrea Friedus (2016) reported that many American voluntourists' perceptions were influenced by misunderstandings of African culture and poverty. This caused the voluntourists to miss opportunities to identify cross-cultural connections and similarities between Africa and America, thus perpetuating a divide and sense of western superiority with regards to poverty. Ultimately, the volunteer experience resulted in no cross-cultural experience, despite the anticipation that it would.

Additionally, Sharon McLennan (2019) discusses how voluntourists' expected and perceived outcomes from their voluntourism experiences are not representative of the actual experiences they encountered. This is a result, again, of perpetuated misconceptions and the attitude of “saving” the country by gallant westerners and promotion of this ideology through misinformation or lack of adequate research or access to credible information. Unfortunately, this contributes to stereotypes held by the voluntourists prior to and after their visit, creating further social divide when those voluntourists hope to

return home as “worldly experts” about the developing country they visited. Ultimately, this cycle contributes to systemic racism and inequality throughout the world by continuing the cycle of misinformation and misconceptions about developing countries requiring western saviours.

As a personal example, I recall my own experience with orphanage voluntourism in Uganda in 2012, where the volunteer organization described the children as “illiterate”, “having no education” and “needing a lot of help with letters.” I was quite surprised when I told a young child my name (Nicole), and, as shown in Image 1 below, he immediately wrote it correctly on a chalk board for me. This is an example of a misperception over education and literacy, perpetuated by a volunteer organization prior to my arrival in the country.

2. Emotional and Mental Impacts on Orphaned Children

As mentioned, voluntourists often pay for their volunteer experience. Thus, orphanages and volunteer programs rarely pick voluntourists based on actual skill or background in childcare. Rather, these institutions will accept any tourist willing to pay money for their experience. In “The political economy of orphanage tourism in Cambodia”, Guiney and Mostafanezhad (2015) study the anti-voluntourism movement in Cambodia and highlight the lack of skills or screening required and lack of appropriate training for tourists to volunteer in Cambodian orphanages.

Multiple articles, including Rosenberg’s “The business of voluntourism: do western do-gooders actually do harm?” (2018) outline the dangers of human trafficking, sexual

exploitation, abuse, malnourishment and deplorable living conditions identified at mismanaged orphanages when investigated by various organizations.

In “Benevolent harm: Orphanages, voluntourism and child sexual exploitation in south-east Asia”, Lyneham and Facchini (2019) discuss the instances of child sexual abuse that occur in institutions such as orphanages and warn of the increased potential of sexual abuse by predatory volunteers who are not adequately screened prior to their visit. Additionally, in its advocacy article, Hope and Homes for Children (2020) further explains the mental and emotional trauma to children who grow up in an institution where they are deprived of love, constant companionship and genuine relationships, and instead experience the trauma of losing people (voluntourists) who care for them intently and then leave abruptly.

Anecdotally, orphaned children eventually learn to associate volunteers with material goods and money, thus perpetuating an unhealthy, unrealistic and unsustainable relationship and perception between western societies and those of developing countries where orphanage tourism is prominent (Mednick, 2017).

Motives behind voluntourism are complicated, and, while most voluntourists intend to do good in the world, this can sometimes be overshadowed by their desire to obtain impressive volunteer experience or to be seen as “worldly experts” by their peers after returning home. Adequate research and credible information is crucial, so that prospective voluntourists can evaluate their motives, the impacts of their decisions, and make informed and ethical volunteer choices accordingly.

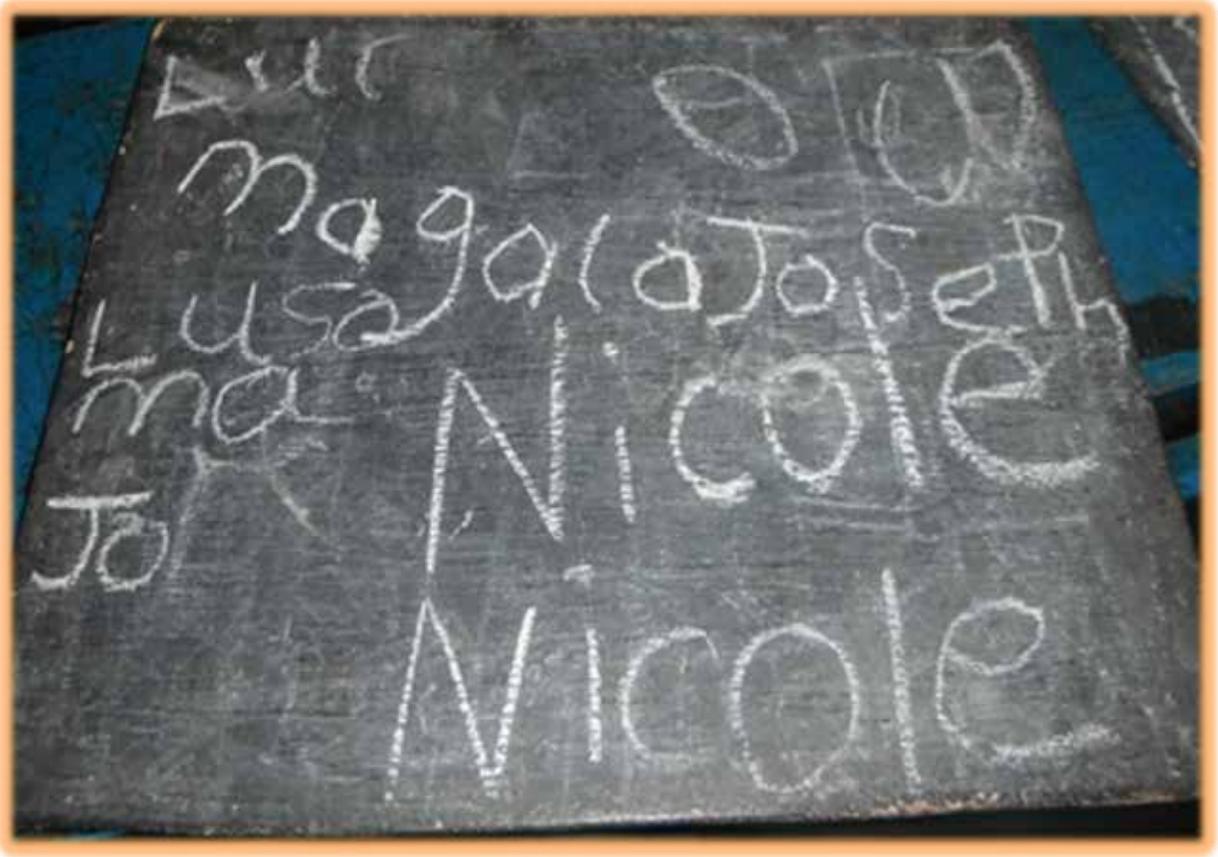


Figure 1. Children at a Uganda orphanage spelled and printed my name on chalk board (Robb, 2012).

3. Local Political and Economic Hardship

In “The political economy of orphanage tourism in Cambodia”, Guiney and Mostafanezhad (2015), describe the underlying political and economic corruption that may drive some orphanages to mismanage volunteer funds, and worse, force children with living relatives into orphanages based on their financial draw from tourists and volunteers. The case studies and interviews within this report highlight how children are used merely for financial profit, with little regard for their wellbeing. In some cases, orphanages are opened solely for the purpose of making profits.

For example, there are 248 privately run orphanages in Cambodia. They rely heavily on tourist and volunteer donations for their operation. Though the number of legal orphans in Cambodia has decreased over the past few decades, the number of orphanages continues to increase, with speculation that these orphanages operate on an opportunistic and capitalistic basis (Guiney and Mostafanezhad, 2015). Tourism is Cambodia’s second largest contributor, accounting for 16% of its GDP (Tess, 2012). This information is highlighted by the news article “The business of voluntourism: do western do-gooders actually do harm?” which highlights the large sums of money received by various orphanages around the world, and thus operate opportunistically rather than out

“How marginalized groups are incorporated into resilience systems through volunteerism may determine whether volunteerism is empowering or disempowering”

-United Nations (2018).

of necessity for the institution (Rosenberg, 2018) .

For comparison, similar ethical issues arise in the medical voluntourism field, when unqualified voluntourists offer medical services with the intent to do good or focus on self-improvement, but instead cause the local community to become dependent on them, offer substandard care, and erode the local medical community in that area (Sullivan, 2019). It is not hard to imagine how devastating mismanaged medical tourism is for a local community; similar consequences happen with mismanaged orphanage voluntourism.

Proposed solutions

TravellersQuest can take two key initiatives to mitigate the ethical concerns described above.

Screen all orphanage volunteer programs for credibility

By focusing only on programs that operate legitimately, manage their funds appropriately and carefully screen their potential volunteers for suitability, skills, and adequate background checks, TravellersQuest can focus on promoting a smaller number of high-quality programs rather than a wide array

of programs that have not been screened. Legitimate, well screened orphanages will, in many cases, focus on volunteer activities that empower local communities to teach and parent the children, rather than subjecting the children to fleeting affection from unskilled travelers who abruptly leave once their volunteer commitments are complete.

Provide important information about these ethical issues on your company’s website

Most volunteers genuinely want to do good in the world. To do this, volunteers must be able to conduct adequate research about the volunteer programs they wish to engage. By making potential voluntourists aware of the ethical consequences associated with voluntourism, specifically orphanage voluntourism, these volunteers can mitigate the issues and/or make their volunteer program choices accordingly. This information may also help guide potential volunteers who merely wish to add value to their resumes towards a different, less harmful path. The above actions address the ethical issues on two fronts: First, they address the issues directly by discontinuing support for illegitimate orphanages or orphanages that cause harm. Second, these actions help mitigate the economic harm to the local community and help reduce geographical

stereotyping by empowering volunteers to continue making ethical choices throughout their entire volunteer experience.

Implementation, challenges, and feasibility

To screen potential volunteer programs, TravellersQuest must first develop a set of criteria that supports an ethical approach to orphanage volunteerism, allowing them to cull any programs from their database that do not meet these requirements. Developing a screening system may seem daunting and challenging, but many other companies and organizations have already done this and have made their requirements publicly available. Of the most reputable of these organizations is the United Nations-- a highly successful organization that includes volunteers. In 2018, they directly deployed over 7,000 overseas volunteers across the globe, 69% of which were in Africa or Asia (United Nations, 2020). The United Nations has already developed a detailed and thorough code of ethics for its volunteers, which includes direct and explicit codes of conduct with regards to sexual exploitation, financial conflicts of interest, fraud, discrimination, and guidelines for making ethical decisions. These, and other issues, can apply directly to the orphanage tourism market (United Nations, October 2017). This information is available on the United Nation's website and could be used as a guide for TravellersQuest to develop its own code of ethics for its volunteers and to screen potential volunteer programs over the next 3-5 years. A geographer can also incorporate aspects that deal with social divide including systemic racism and western perceptions, offering a geographical lens that addresses multiple social justice issues with this code of ethics and screening process.

TravellersQuest's website can be modified by updating existing articles to incorporate

ethical issues and ways to mitigate them. Several high-profile travel companies, including Intrepid Travel, already do this by publishing their vision and their sustainable approach to tourism online (Intrepid Group, 2020). While it may seem counterintuitive to include negative perceptions of voluntourism on a volunteer website, companies such as Intrepid Travel are leaders in the travel industry with a valued ethical reputation amongst avid travelers. Intrepid is one example; there are many other credible organizations with online tips, articles, and mission statements that can help TravellersQuest develop a vision, code of ethics and sustainable/ethical tourism articles that are informative and reflect its values and the values of its potential customers. Additionally, a geographer can conduct research with place-specific focus that reflects the human values of the company, its volunteers, and the people it serves, to create a draw for ethical, responsible volunteers who want to work with a company that holds the same values as them.

Approach and anticipated results

Inversini et al. (2019) reported the lack of adequate representation of tourism and volunteering on the internet. They describe this misrepresentation as a disservice that prevents prospective volunteers from gaining a complete picture of the country they wish to visit, thus forming preconceived opinions about that country that may not be accurate. The internet is, clearly, an important platform for change and reliable information, and it is crucial that potential voluntourists be able to trust their potential volunteer programs to provide accurate and complete information on this platform, to enable them to make ethical choices. It can therefore be anticipated that modifications to TravellersQuest's website, combined with adequate screening

of orphanage volunteer programs, will allow TravellersQuest to maximize their online potential by attracting clients and customers who seek ethical and sustainable opportunities to volunteer and who seek credible programs with good reputations among trusted organizations.

By taking a geographical approach to this problem, TravellersQuest can address global issues including racism and socio/economic divides that exist due to western misconceptions about developing countries (specifically in Asia and Africa, where orphanage voluntourism is most prominent) and the ongoing negative impacts that orphanage voluntourism has on these places. From my own experience, information is a powerful tool; myself and potential volunteers often use website information to make ethical choices. This is a key factor when attracting volunteers—and consequently, paying customers-- as these clients will naturally migrate to the programs/companies that they deem ethical and that align with their own agendas to make the world a fair and more ethical place.

By implementing these changes, TravellersQuest will be one step closer to becoming a conduit for skilled volunteer work and a leader in ethical voluntourism.

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Images

Background Image: Robb, N. (2012). [Children playing at an orphanage in Eastern Africa].

Image 1: Robb, N. (2012). [Writing my name on a chalk board].

Introduction

TravellersQuest is a Texas-based company that promotes overseas travel and volunteer programs by providing resources, tools and networking opportunities for travelers who wish to make a positive impact in the world or gain valuable volunteer experience. TravellersQuest's volunteer programs are promoted as exciting opportunities for volunteers to better themselves and help developing countries; however, in practice, these programs can have devastating ethical implications, including social/economic loss and mental/physical harm within the communities they are intended to help. By reviewing TravellersQuest's current practices, case studies, reports, and my own experiences with voluntourism, we will explore why TravellersQuest must modify their orphanage volunteer promotions to include extensive and careful screening of the orphanages they promote, and why they must also promote global awareness of ethical voluntourism on their public interfaces. We will discuss the feasibility of these changes and how, once implemented, these measures will help transform TravellersQuest into a conduit for skilled volunteer work, a positive contributor to developing economies, and a global leader in the growing area of ethical voluntourism.

"Voluntourism" is a term growing in popularity to describe travelers who conduct short-term volunteer activities such as wildlife conservation, home/school building, or orphanage assistance in developing countries (Gillett, 2016). There are many companies and organizations that help facilitate these volunteer programs. As a general practice, higher numbers of volunteer programs result in more clients and thus higher profits for these companies. Most companies, including TravellersQuest, profit by charging volunteers a fee for their volunteer experience. Volunteers gladly pay this fee for the experience of helping those less fortunate or for other benefits of volunteer experience (Guiney, 2015). Unfortunately, these attempts to help developing countries often have negative implications. In most cases, voluntourists are unaware of the negative implications their actions may have (McGloin & Georgeou, 2016). Specifically, mismanaged voluntourism at orphanages can contribute to local economic hardship, can enhance western misconceptions of developing countries, and can cause ongoing physical/emotional harm to orphan children who may become viewed as merely a source of donation revenue (Kushner, 2016). Geographically, these impacts propagate stereotyping of developing countries, specifically those in Asia, Africa and parts of the South Pacific, thus furthering racial, economic and social divide and promoting a perception of western superiority. This outcome is in direct conflict with what most volunteers are trying to achieve.

TravellersQuest's Current Practices

TravellersQuest promotes worldwide travel, volunteer, teaching and other opportunities by offering a large directory of programs available to aspiring travelers. Interested clients, typically targeted as those from developed, "western" countries, may register with TravellersQuest to receive tools, resources, contact information and advice to make their volunteer and travel plans a reality. By tabulating the information throughout TravellersQuest's website, I have calculated that TravellersQuest offers 167 searchable volunteer programs in 22 countries. Programs include dozens of potential volunteer activities such as teaching, orphanage assistance, painting/building, education and wildlife/environmental conservation. This information is summarized in Figure 1 below.

Orphanage voluntourism accounts for a large portion of TravellerQuest's searchable volunteer database. Almost one third of TravellersQuest's volunteer programs are directed at orphanages and, as seen in Table 1 below, most of these programs are located in developing countries throughout Africa, Asia, and South America.



Like most modern companies, the primary interface between TravellersQuest and its potential clients is its website. With regards to orphanage voluntourism, the website contains several article pages that promote the benefits of volunteering at orphanages; specifically, the self-improvement benefits to the volunteer. It merely alludes to studies showing the benefits of these programs to orphaned children, and these statements do not provide a citation or link to the original data (TravellersQuest, 2020). Overall, the website lacks any type of ethical component that would bring awareness to potential orphanage volunteers of the contentious issues they must try to avoid or else risk contributing to. These ethical issues are discussed in detail below.

Country	Total Volunteer Programs	#!/% Orphanage Programs
Rwanda	1	1 / 100%
Argentina	8	4 / 50%
Brazil	6	3 / 50%
Zimbabwe	4	2 / 50%
Ecuador	9	4 / 44%
Guatemala	7	3 / 43%
Morocco	5	2 / 40%
Peru	10	4 / 40%
Tanzania	10	4 / 40%
Cambodia	9	3 / 33%
Ghana	9	3 / 33%

Country	Total Volunteer Programs	#!/% Orphanage Programs
India	9	3 / 33%
Kenya	9	3 / 33%
Uganda	9	3 / 33%
Costa Rica	9	2 / 22%
Thailand	9	2 / 22%
Nepal	12	2 / 17%
Sri Lanka	12	2 / 17%
China	7	0 / 0%
Indonesia	7	0 / 0%
Mexico	5	0 / 0%
Namibia	1	0 / 0%
TOTAL	167	50 / 30%

Table 1: The distribution of TravellerQuest's volunteer programs showing the proportion of orphanage volunteer programs in each country. Most of TravellersQuest's orphanage programs are in developing countries in Africa, Asia or South America. Information was tabulated from various pages throughout TravellersQuest's website, www.travellersquest.com.

Ethical Issues with Orphanage Voluntourism

Hargn et al. (2015) describe the growing phenomenon of voluntourism, its general social implications and various impacts on social justice and political issues including economic development, poverty, and its role in the neo-liberal agenda. For our discussion about orphanage voluntourism, we will focus on three ethical issues in particular:

1. Perpetuating geographical stereotypes and misunderstandings

In a study of orphanage voluntourism in Malawi, Andrea Friedus (2016) reported that many American voluntourists' perceptions were influenced by misunderstandings of African culture and poverty. This caused the voluntourists to miss opportunities to identify cross-cultural connections and similarities between Africa and America, thus perpetuating a divide and sense of western superiority with regards to poverty. Ultimately, the volunteer experience resulted in no cross-cultural experience, despite the anticipation that it would.



TravellersQuest

Meaningful Travel Resources & Reviews

Ethical Voluntourism: Rethinking Orphanage Tourism

Presentation by Nicole Robb to TravellersQuest

Additionally, Sharon McLennan (2019) discusses how voluntourists' expected and perceived outcomes from their voluntourism experiences are not representative of the actual experiences they encountered. This is a result, again, of perpetuated misconceptions and the attitude of "saving" the country by gallant westerners and promotion of this ideology through misinformation or lack of adequate research or access to credible information. Unfortunately, this contributes to stereotypes held by the voluntourists prior to and after their visit, creating further social divide when those voluntourists hope to return home as "worldly experts" about the developing country they visited. Ultimately, this cycle contributes to systemic racism and inequality throughout the world by continuing the cycle of misinformation and misconceptions about developing countries requiring western saviours.

As a personal example, I recall my own experience with orphanage voluntourism in Uganda in 2012, where the volunteer organization described the children as "illiterate", "having no education" and "needing a lot of help with letters." I was quite surprised when I told a young child my name (Nicole), and, as shown in Image 1 below, he immediately wrote it correctly on a chalk board for me. This is an example of a misperception over education and literacy, perpetuated by a volunteer organization prior to my arrival in the country.

2. Emotional and Mental Impacts on Orphaned Children

As mentioned, voluntourists often pay for their volunteer experience. Thus, orphanages and volunteer programs rarely pick voluntourists based on actual skill or background in childcare. Rather, these institutions will accept any tourist willing to pay money for their experience. In "The political economy of orphanage tourism in Cambodia", Guiney and Mostafanezhad (2015) study the anti-voluntourism movement in Cambodia and highlight the lack of skills or screening required and lack of appropriate training for tourists to volunteer in Cambodian orphanages.

Multiple articles, including Rosenberg's "The business of voluntourism: do western do-gooders actually do harm?" (2018) outline the dangers of human trafficking, sexual exploitation, abuse, malnourishment and deplorable living conditions identified at mismanaged orphanages when investigated by various organizations.

In "Benevolent harm: Orphanages, voluntourism and child sexual exploitation in south-east Asia", Lyneham and Faccchini (2019) discuss the instances of child sexual abuse that occur in institutions such as orphanages and warn of the increased potential of sexual abuse by predatory volunteers who are not adequately screened prior to their visit. Additionally, in its advocacy article, Hope and Homes for Children (2020) further explains the mental and emotional trauma to children who grow up in an institution where they are deprived of love, constant companionship and genuine relationships, and instead experience the trauma of losing people (voluntourists) who care for them intently and then leave abruptly.

Anecdotally, orphaned children eventually learn to associate volunteers with material goods and money, thus perpetuating an unhealthy, unrealistic and unsustainable relationship and perception between western societies and those of developing countries where orphanage tourism is prominent (Mednick, 2017).

Motives behind voluntourism are complicated, and, while most voluntourists intend to do good in the world, this can sometimes be overshadowed by their desire to obtain impressive volunteer experience or to be seen as "worldly experts" by their peers after returning home. Adequate research and credible information is crucial, so that prospective voluntourists can evaluate their motives, the impacts of their decisions, and make informed and ethical volunteer choices accordingly.

3. Local Political and Economic Hardship

In "The political economy of orphanage tourism in Cambodia", Guiney and Mostafanezhad (2015), describe the underlying political and economic corruption that may drive some orphanages to mismanage volunteer funds, and worse, force children with living relatives into orphanages based on their financial draw from tourists and volunteers. The case studies and interviews within this report highlight how children are used merely for financial profit, with little regard for their wellbeing. In some cases, orphanages are opened solely for the purpose of making profits.

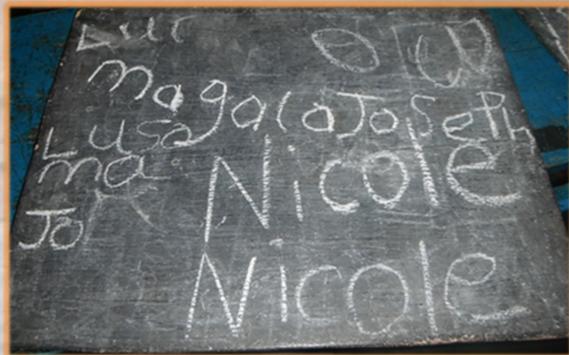


Image 1: Children at a Uganda orphanage spelled and printed my name on a chalk board (Robb, 2012).

For example, there are 248 privately run orphanages in Cambodia. They rely heavily on tourist and volunteer donations for their operation. Though the number of legal orphans in Cambodia has decreased over the past few decades, the number of orphanages continues to increase, with speculation that these orphanages operate on an opportunistic and capitalistic basis (Guiney and Mostafanezhad, 2015). Tourism is Cambodia's second largest contributor, accounting for 16% of its GDP (Tess, 2012). This information is highlighted by the news article "The business of voluntourism: do western do-gooders actually do harm?" which highlights the large sums of money received by various orphanages around the world, and thus operate opportunistically rather than out of necessity for the institution (Rosenberg, 2018).

For comparison, similar ethical issues arise in the medical voluntourism field, when unqualified voluntourists offer medical services with the intent to do good or focus on self-improvement, but instead cause the local community to become dependent on them, offer substandard care, and erode the local medical community in that area (Sullivan, 2019). It is not hard to imagine how devastating mismanaged medical tourism is for a local community; similar consequences happen with mismanaged orphanage voluntourism.

"How marginalized groups are incorporated into resilience systems through volunteerism may determine whether volunteerism is empowering or disempowering"

-United Nations (2018).

-United Nations (2018).

Proposed Solutions

TravellersQuest can take two key initiatives to mitigate the ethical concerns described above.

1. Screen all orphanage volunteer programs for credibility

By focusing only on programs that operate legitimately, manage their funds appropriately and carefully screen their potential volunteers for suitability, skills, and adequate background checks, TravellersQuest can focus on promoting a smaller number of high-quality programs rather than a wide array of programs that have not been screened. Legitimate, well screened orphanages will, in many cases, focus on volunteer activities that empower local communities to teach and parent the children, rather than subjecting the children to fleeting affection from unskilled travelers who abruptly leave once their volunteer commitments are complete.

2. Provide important information about these ethical issues on your company's website

Most volunteers genuinely want to do good in the world. To do this, volunteers must be able to conduct adequate research about the volunteer programs they wish to engage. By making potential voluntourists aware of the ethical consequences associated with voluntourism, specifically orphanage voluntourism, these volunteers can mitigate the issues and/or make their volunteer program choices accordingly. This information may also help guide potential volunteers who merely wish to add value to their resumes towards a different, less harmful path. The above actions address the ethical issues on two fronts: First, they address the issues directly by discontinuing support for illegitimate orphanages or orphanages that cause harm. Second, these actions help mitigate the economic harm to the local community and help reduce geographical stereotyping by empowering volunteers to continue making ethical choices throughout their entire volunteer experience.

Implementation, Challenges & Feasibility

To screen potential volunteer programs, TravellersQuest must first develop a set of criteria that supports an ethical approach to orphanage volunteerism, allowing them to cull any programs from their database that do not meet these requirements. Developing a screening system may seem daunting and challenging, but many other companies and organizations have already done this and have made their requirements publicly available. Of the most reputable of these organizations is the United Nations-- a highly successful organization that includes volunteers. In 2018, they directly deployed over 7,000 overseas volunteers across the globe, 69% of which were in Africa or Asia (United Nations, 2020). The United Nations has already developed a detailed and thorough code of ethics for its volunteers, which includes direct and explicit codes of conduct with regards to sexual exploitation, financial conflicts of interest, fraud, discrimination, and guidelines for making ethical decisions. These, and other issues, can apply directly to the orphanage tourism market (United Nations, October 2017). This information is available on the United Nation's website and could be used as a guide for TravellersQuest to develop its own code of ethics for its volunteers and to screen potential volunteer programs over the next 3-5 years. A geographer can also incorporate aspects that deal with social divide including systemic racism and western perceptions, offering a geographical lens that addresses multiple social justice issues with this code of ethics and screening process.

TravellersQuest's website can be modified by updating existing articles to incorporate ethical issues and ways to mitigate them. Several high-profile travel companies, including Intrepid Travel, already do this by publishing their vision and their sustainable approach to tourism online (Intrepid Group, 2020). While it may seem counterintuitive to include negative perceptions of voluntourism on a volunteer website, companies such as Intrepid Travel are leaders in the travel industry with a valued ethical reputation amongst avid travelers. Intrepid is one example; there are many other credible organizations with online tips, articles, and mission statements that can help TravellersQuest develop a vision, code of ethics and sustainable/ethical tourism articles that are informative and reflect its values and the values of its potential customers. Additionally, a geographer can conduct research with place-specific focus that reflects the human values of the company, its volunteers, and the people it serves, to create a draw for ethical, responsible volunteers who want to work with a company that holds the same values as them.

Approach & Anticipated Results

Inversini et al. (2019) reported the lack of adequate representation of tourism and volunteering on the internet. They describe this misrepresentation as a disservice that prevents prospective volunteers from gaining a complete picture of the country they wish to visit, thus forming preconceived opinions about that country that may not be accurate. The internet is, clearly, an important platform for change and reliable information, and it is crucial that potential voluntourists be able to trust their potential volunteer programs to provide accurate and complete information on this platform, to enable them to make ethical choices. It can therefore be anticipated that modifications to TravellersQuest's website, combined with adequate screening of orphanage volunteer programs, will allow TravellersQuest to maximize their online potential by attracting clients and customers who seek ethical and sustainable opportunities to volunteer and who seek credible programs with good reputations among trusted organizations.

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By implementing these changes, TravellersQuest will be one step closer to becoming a conduit for skilled volunteer work and a leader in ethical voluntourism.

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Images

Background Image: Robb, N. (2012). [Children playing at an orphanage in Eastern Africa].

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ExxonMobil to offset greenhouse gas emissions through wind and solar energy investments

Olivia DeDecker

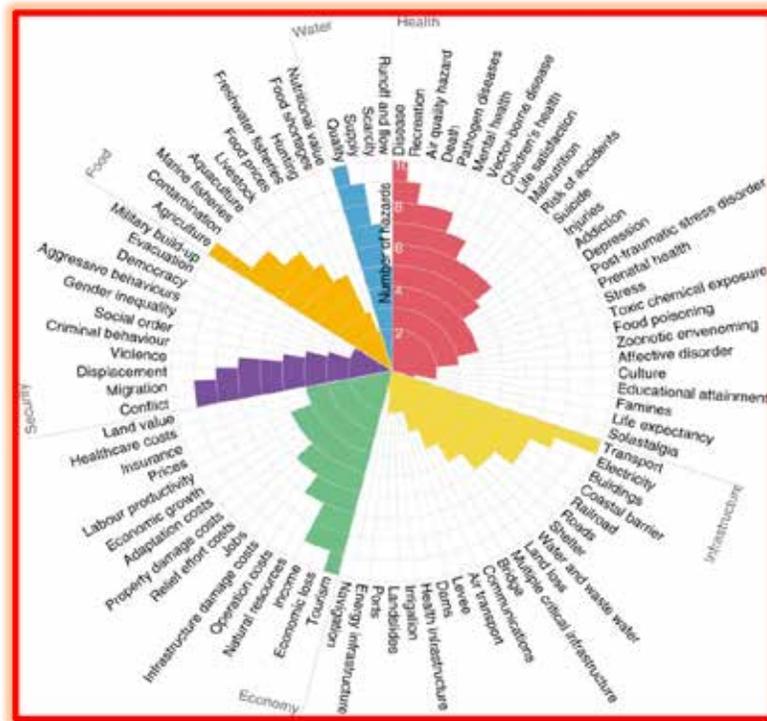


Figure 1. Effects of Climate Change. Mora, C., Spirandelli, D., Franklin, E.C., Lynham, J., Kantar, M. B., Miles, W., ... Hunter, C. L. (2018).

Introduction

Oil refineries are responsible for considerable amounts of carbon dioxide and other greenhouse gas (GHG) emissions (Comodi, Renzi, Rossi, 2016). This is because the process of refining crude oil releases pollutants such as nitrogen oxides, volatile organic compounds, and sulfur oxides into the air (Hadidi, AlDosary, Al-Matar, Mudallah, 2016), which makes oil refineries contributors to global warming and climate changes (Hadidi et al, 2016). Climate change is responsible for many negative effects on the earth such as severe weather events, rising sea levels, forced animal migrations and even decreases in certain animal populations (“Effects of Global Warming,” 2020). Global warming and climate change are becoming increasingly important issues in our world today and oil companies are beginning to step up and take their place to combat global warming by targeting their greenhouse gas emissions (Worland, 2020). In the past, ExxonMobil has been described as “overtly hostile” towards the debate regarding oil companies and climate change (MacKay, Iain, 2012). It is time for ExxonMobil to step up and take a step towards becoming a leader in combatting climate change, one step at a time.

Ethical concern

In order to see the need for these proposed changes, it is important to really understand the consequences that are a result of global warming and climate change, especially with regards to oil refineries. By the year 2017, Canada's GHG emissions were rated at 19.5 tonnes per capita (Statistics Canada, 2020). Oil and gas were the top contributors to this number, contributing 27% towards the total GHG emissions in Canada (2020). Given that Exxon extracts crude oil from the Alberta Oil sands (ExxonMobil, 2020), it is important to look at the effects of climate change in Canada specifically. The severe weather events that occur due to climate change impact natural systems and human systems (Macdonald & Birchall, 2020). In Canada's Arctic region the temperatures are warming two to three times faster than the global average, leaving the conditions of sea ice vulnerable and causing coastal erosion (MacDonald & Birchall, 2020). It is important to note that Arctic communities in Canada consist mostly of indigenous populations (Macdonald & Birchall, 2020), leading to an ethical concern to protect and consider Indigenous populations. Arctic regions see a decrease in hunting grounds as a result (Mora et al., 2018), and Indigenous communities are reliant on hunting. Globally, climate change has an impact on food systems. This is seen through a decline in fish populations and also increase in mercury levels in fish due to heavy metal runoff from floods (Mora et al. 2018). Human health can also be affected. For example, the number of ticks near human populations is increasing leading to more cases of Lyme disease (Mora et al., 2018). Crops are impacted through floods and weather changes, leading to potential contamination of crops, loss of nutrients, and physical agricultural loss (Mora et al., 2018). All of this points to that fact that GHG

emissions, contributing to climate change, need to be eliminated. Exxon can begin contribute to their elimination by offsetting their emissions with wind and solar fields.

Proposal

Through investments in wind and solar fields, ExxonMobil will be able to offset their CO2 emissions and therefore lower overall greenhouse gas emissions that contribute towards global warming. Currently, Exxon is among the top twenty fossil fuel corporations connected to one third of all GHG emissions due to exploitation of oil reserves (Taylor, Watts, 2019). Seeing as GHG emissions lead to warming of the earth, affecting weather, wildlife, crops, and more (Mora et al., 2018), Exxon should begin to focus on making key changes in order to combat global warming. It is understandable for Exxon to desire to focus solely on oil extraction and refinement while there is still money to be made from that operation. However, there are other perks to encourage a shift into green energy. Investing in wind and solar allows profit from the sale of clean energy while not affecting the sale of their refined petroleum products and it begins to prepare the company for the day when fossil fuels are less desirable. Already, the demand for fossil fuels is unclear as governments seek to meet the demands of the Paris agreement (Reed, 2020). But most importantly, investing in wind and solar energy allows Exxon to put clean energy into the grid which will lessen the production load for electrical companies allowing those companies to emit less GHG themselves. Therefore, Exxon will be able to continue operating as an oil refinery while combatting global warming through offsetting their GHG emissions, overall reducing the harmful emissions responsible for climate change.

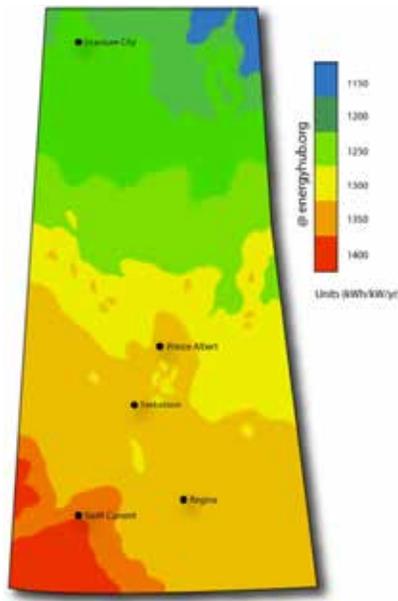


Figure 2. Saskatchewan’s solar potential. Retrieved from Solar Energy Maps Canada (Every Province). energyhub.org. (2020).

Methods and challenges

In order to include wind and solar energy as a portion Exxon’s products, appropriate land must be found with exceptional potential for wind and solar energy. Potential challenges are locating lands for purchase that do not interfere with Indigenous land claims. It is counter-productive and unethical to damage relationships with Indigenous people while trying to combat climate change to overall protect their land. Other challenges will be seeking locations within Canada where there is significant potential for wind and solar power year-round, and the cost of this investment to the company. Investing in wind and solar does not pose any significant challenges to the sale of petroleum products as Exxon will be able to continue their crude oil extraction and refinement while also beginning the journey into clean, renewable energy.

Solar Energy Challenges:

Generating electricity with solar technology is expensive, with photovoltaic systems run at \$3500/KW as of 2017 (Hayat, Ali, Monyake, Alagha & Ahmed, 2018). Also, solar power will not be possible in all Canadian regions to due snowfall and other natural elements like cloud coverage. Saskatchewan has the highest potential for solar energy with an annual average “equivalent of full sunlight hours” rating of 1330 kWh/kW/yr, with Alberta coming in next at 1276 kWh/kW/yr (Solar Energy Maps Canada (Every Province), 2020).

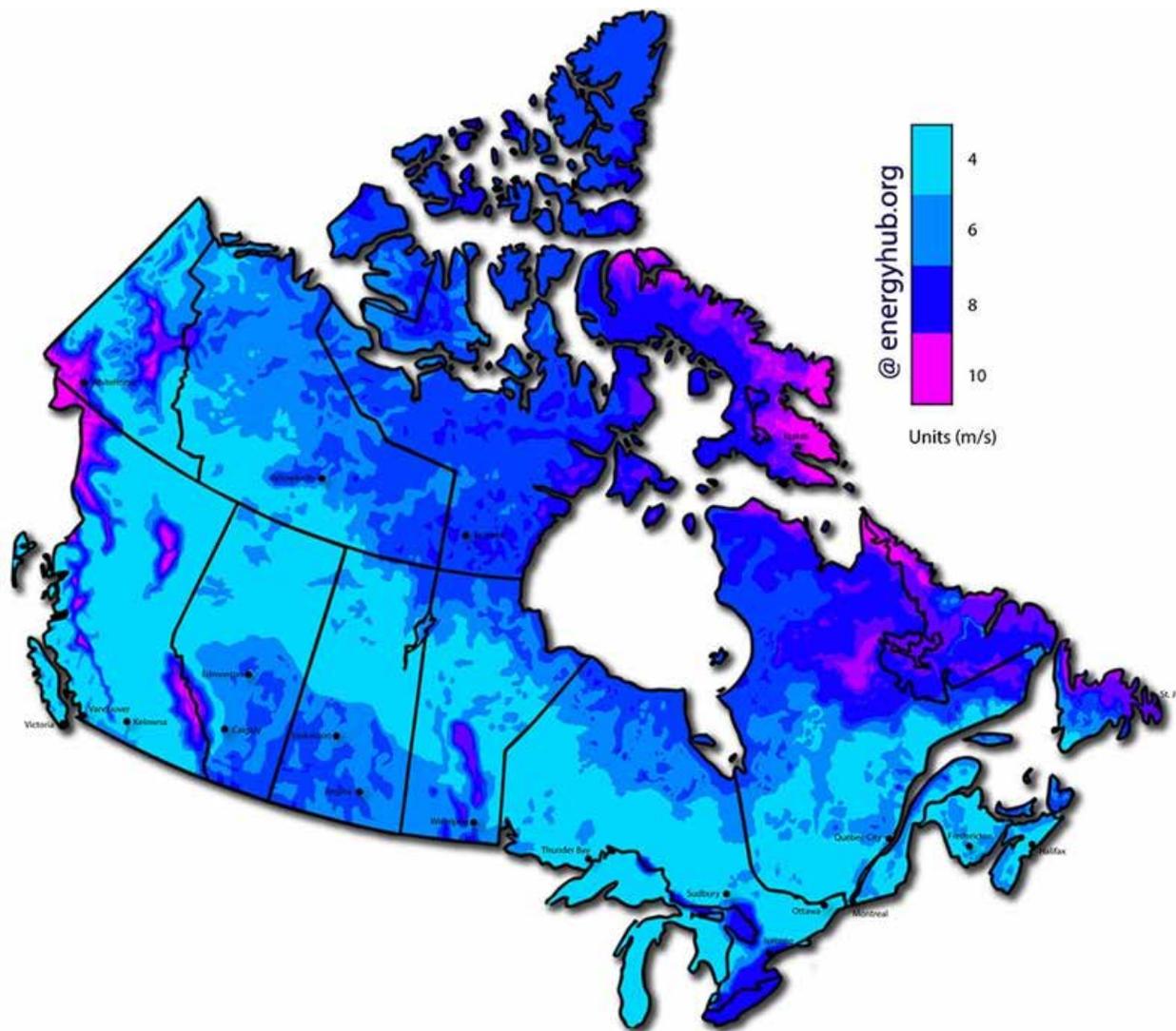


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Extensive research on migration patterns of birds must be done prior to wind farm construction as windmills pose a life-threatening risks to birds when they collide with the windmills (Dai, Bergot, Liang, Xiang & Huang, 2015).

Common Oil Company Challenges:

In Canada, oil companies face the challenge of pressure to make use of the oil sands while also being held accountable to lower their emissions. This is a difficult balance as the world still relies on oil for many products, but the world also expects companies to be held responsible for their GHG emissions and actively try to lower them to keep up with the expectations of the Paris agreement.

Seeing as Alberta has the third largest oil reserves in the world, there is a push from the government to expand the operation to increase royalties and tax revenue earned from the operation (Leahy, 2019). But there is also a push from the Canadian government to lower emissions to please environmentalists and meet requirements for the Paris agreement (Leahy 2019)

Common practices and advantages

Other oil companies have already begun the process of shifting into green energy. In 2019 the energy industry was the lowest performing category in the S&P 500 index (Worland, 2020). With that fact, and the pressure from environmentalists to turn to green energy, oil companies are changing their operations. One competitor, Shell, is beginning to adjust to new ideas by branching out to electrical power (Worland, 2020). The company is also setting personal goals to reduce their emissions by 3% by 2021 and hopefully 50% by 2050 (Worland, 2020). Another competitor, BP, has pledged to lower their emissions to net zero by 2050 but hopefully even sooner (Reed, 2020). There are significant advantages to making these kind of changes. The company is currently still able to profit from the oil industry while also profiting from their new operations (Worland, 2020). Also, by expanding to green energy, the company will be able to make significant changes to their personal carbon emissions. This is the most beneficial aspect of these changes, as lowering carbon emissions is crucial for combatting climate change and global warming. These changes also have potential to greatly improve the companies' overall image as the company strives to prove its worth and adaptability in a world constantly demanding positive change. Petroleum products have long been a part of Canada's identity, and climate change

is causing "the basic configuration of that map to change in ways that are starting to upset traditional geopolitical calculations" (Dalby, 2019). If Canada does not want to be negatively viewed as a climate change hot spot on the map, oil companies need to make changes as best as they can, one step at a time, to change this. Finally, another advantage to slowly beginning to shift away from oil products is no longer being susceptible to oil wars.

Feasibility

It simply does not seem financially feasible to request that Exxon make the switch from burning fossil fuels to burning biofuels in their operation. Though the idea of carbon capture sounds promising, it does not prove itself as a feasible solution as of yet. Carbon capture technology comes at a significant cost to the company. Also, in order to make carbon capture technology truly feasible, further research is required as well as advancements in the technology and more effective policy support to declare its economical feasibility (Yao, Marano, Morrow & Masanet, 2018). For an initial step towards lowering their emissions to combat climate change, investing in wind and solar energy seems to be the most feasible option. There are costs to start up this process. But, it allows the company to profit, as per usual, from the sale of their petroleum products and also allows the sale of clean energy therefore earning the company a profit from this new investment.

Conclusion

Currently, Exxon's position implies that the company is unwilling to set long-term, progressive goals to decrease their emissions and the company is viewed as "positioning themselves to squeeze the last lucrative years from the oil economy" (Worland, 2020). In

order to meet the temperature goal of the Paris agreement and avoid further increases in climate change and the uncertainty that comes along with it, large fossil fuel burning companies need to begin to make changes to their companies to help reach these goals. Exxon can take their next step towards ending climate change by offsetting their total emissions through investments in wind and solar energy. Though this immediately does not lower emissions from their petroleum products operation, the company can distribute clean energy back into the grid, lowering the amount of emissions from electrical companies. The world is demanding change from these companies and Exxon should do its part to make a positive environmental change. Questions are being asked regarding the negative effects that fossil fuel burning productions have on climate change. Wim Carton questions, “why despite the overwhelming evidence on the catastrophic impacts of climate change, including but certainly not only for capital, fossil fuel-dependent production processes are able to persist” (2019). Exxon should take pride in their work while making strides towards ending climate change and global warming. Thus, inviting the population to also take pride in the company and take a firm stance, together, towards ending climate change.

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Introduction

Oil refineries are responsible for considerable amounts of carbon dioxide and other greenhouse gas (GHG) emissions (Comodi, Renzi, Rossi, 2016). This is because the process of refining crude oil releases pollutants such as nitrogen oxides, volatile organic compounds, and sulfur oxides into the air (Hadidi, AlDosary, Al-Matar, Mudallah, 2016), which makes oil refineries contributors to global warming and climate changes (Hadidi et al, 2016). Climate change is responsible for many negative effects on the earth such as severe weather events, rising sea levels, forced animal migrations and even decreases in certain animal populations ("Effects of Global Warming," 2020). Global warming and climate change are becoming increasingly important issues in our world today and oil companies are beginning to step up and take their place to combat global warming by targeting their greenhouse gas emissions (Worland, 2020). In the past, ExxonMobil has been described as "overtly hostile" towards the debate regarding oil companies and climate change (MacKay, Iain, 2012). It is time for ExxonMobil to step up and take a step towards becoming a leader in combatting climate change, one step at a time.

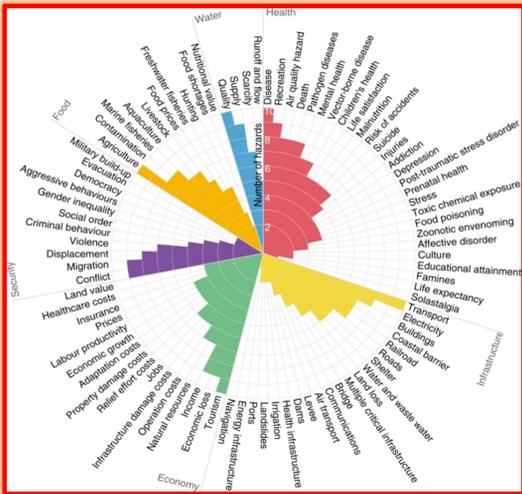


Figure 1. Effects of Climate Change. Mora, C., Spirandelli, D., Franklin, E.C., Lynham, J., Kantar, M.B., Miles, W., ... Hunter, C.L. Broad threat to humanity from cumulative climate hazards intensified by greenhouse gas emissions. *Nature Clim Change*, 8, 1062–1071 (2018). <https://doi.org/proxy.queensu.ca/10.1038/s41558-018-0315-6>

Ethical Concern

In order to see the need for these proposed changes, it is important to really understand the consequences that are a result of global warming and climate change, especially with regards to oil refineries. By the year 2017, Canada's GHG emissions were rated at 19.5 tonnes per capita (Statistics Canada, 2020). Oil and gas were the top contributors to this number, contributing 27% towards the total GHG emissions in Canada (2020). Given that Exxon extracts crude oil from the Alberta Oil sands (ExxonMobil, 2020), it is important to look at the effects of climate change in Canada specifically. The severe weather events that occur due to climate change impact natural systems and human systems (Macdonald & Birchall, 2020). In Canada's Arctic region the temperatures are warming two to three times faster than the global average, leaving the conditions of sea ice vulnerable and causing coastal erosion (MacDonald & Birchall, 2020). It is important to note that Arctic communities in Canada consist mostly of indigenous populations (Macdonald & Birchall, 2020), leading to an ethical concern to protect and consider Indigenous populations. Arctic regions see a decrease in hunting grounds as a result (Mora et al., 2018), and Indigenous communities are reliant on hunting. Globally, climate change has an impact on food systems. This is seen through a decline in fish populations and also increase in mercury levels in fish due to heavy metal runoff from floods (Mora et al. 2018). Human health can also be affected. For example, the number of ticks near human populations is increasing leading to more cases of Lyme disease (Mora et al., 2018). Crops are impacted through floods and weather changes, leading to potential contamination of crops, loss of nutrients, and physical agricultural loss (Mora et al., 2018). All of this points to that fact that GHG emissions, contributing to climate change, need to be eliminated. Exxon can begin contribute to their elimination by offsetting their emissions with wind and solar fields.

ExxonMobil to Offset Greenhouse Gas Emissions

through Wind and Solar Energy Investments

Olivia DeDecker
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Queens University Kingston, Ontario Canada

Proposal

Through investments in wind and solar fields, ExxonMobil will be able to offset their CO₂ emissions and therefore lower overall greenhouse gas emissions that contribute towards global warming. Currently, Exxon is among the top twenty fossil fuel corporations connected to one third of all GHG emissions due to exploitation of oil reserves (Taylor, Watts, 2019). Seeing as GHG emissions lead to warming of the earth, affecting weather, wildlife, crops, and more (Mora et al., 2018), Exxon should begin to focus on making key changes in order to combat global warming. It is understandable for Exxon to desire to focus solely on oil extraction and refinement while there is still money to be made from that operation. However, there are other perks to encourage a shift into green energy. Investing in wind and solar allows profit from the sale of clean energy while not affecting the sale of their refined petroleum products and it begins to prepare the company for the day when fossil fuels are less desirable. Already, the demand for fossil fuels is unclear as governments seek to meet the demands of the Paris agreement (Reed, 2020). But most importantly, investing in wind and solar energy allows Exxon to put clean energy into the grid which will lessen the production load for electrical companies allowing those companies to emit less GHG themselves. Therefore, Exxon will be able to continue operating as an oil refinery while combatting global warming through offsetting their GHG emissions, overall reducing the harmful emissions responsible for climate change.



Figure 2. Pixabay. (2016). [Iceberg during daytime] [photograph]. <https://www.pexels.com/photo/iceberg-during-daytime-53389/>

Method and Challenges

In order to include wind and solar energy as a portion Exxon's products, appropriate land must be found with exceptional potential for wind and solar energy. Potential challenges are locating lands for purchase that do not interfere with Indigenous land claims. It is counter-productive and unethical to damage relationships with Indigenous people while trying to combat climate change to overall protect their land. Other challenges will be seeking locations within Canada where there is significant potential for wind and solar power year-round, and the cost of this investment to the company. Investing in wind and solar does not pose any significant challenges to the sale of petroleum products as Exxon will be able to continue their crude oil extraction and refinement while also beginning the journey into clean, renewable energy.

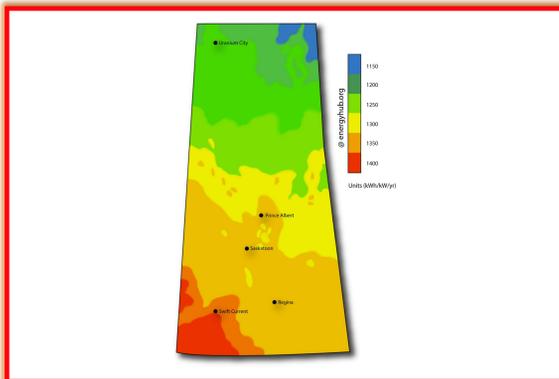


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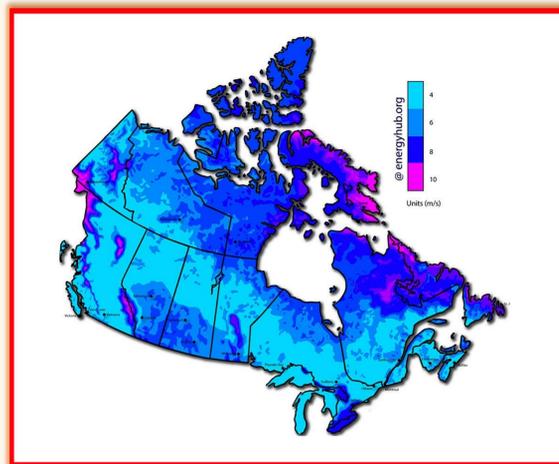


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Common Practices & Advantages

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Feasibility

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Figure 5. Pixabay. (2016). [Gray industrial machine during golden hour] [photograph] Pexels. <https://www.pexels.com/photo/gray-industrial-machine-during-golden-hour-162568/>

ExxonMobil

Energy lives here™

Figure 6. Find Oil Jobs. (2019, March 27). ExxonMobil. Find Oil Jobs. <https://findoiljobs.com/exxonmobil/>

Conclusion

Currently, Exxon's position implies that the company is unwilling to set long-term, progressive goals to decrease their emissions and the company is viewed as "positioning themselves to squeeze the last lucrative years from the oil economy" (Worland, 2020). In order to meet the temperature goal of the Paris agreement and avoid further increases in climate change and the uncertainty that comes along with it, large fossil fuel burning companies need to begin to make changes to their companies to help reach these goals. Exxon can take their next step towards ending climate change by offsetting their total emissions through investments in wind and solar energy. Though this immediately does not lower emissions from their petroleum products operation, the company can distribute clean energy back into the grid, lowering the amount of emissions from electrical companies. The world is demanding change from these companies and Exxon should do its part to make a positive environmental change. Questions are being asked regarding the negative effects that fossil fuel burning productions have on climate change. Wim Carton questions, "why despite the overwhelming evidence on the catastrophic impacts of climate change, including but certainly not only for capital, fossil fuel-dependent production processes are able to persist" (2019). Exxon should take pride in their work while making strides towards ending climate change and global warming. Thus, inviting the population to also take pride in the company and take a firm stance, together, towards ending climate change.

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The deadly consequences of fast fashion

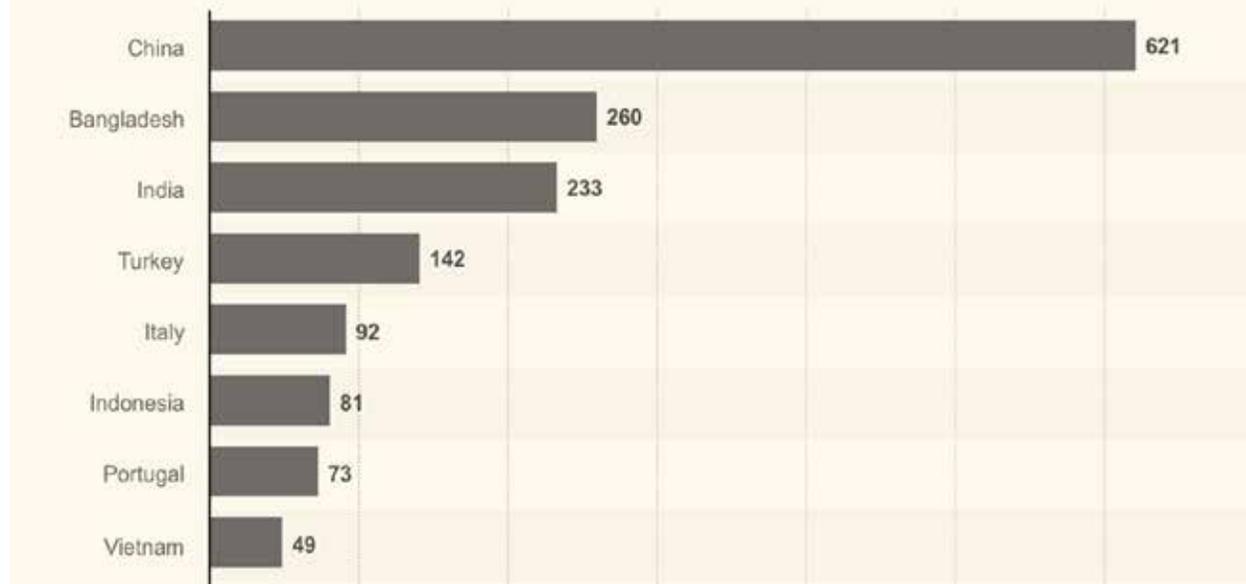
Danielle Pinder

Abstract

The fashion apparel industry continues to shift towards the fading of mass production and an increase in the number of fashion seasons. Like many large retail companies, H&M employs extreme targets and cheap labour to keep this fast fashion practice alive. This poster discusses the unfair working conditions endorsed by H&M, relates them to common industry practices, and offers a solution to this ethical dilemma. It is proposed that H&M employ transparent labour policies, pay a fair living wage, and implement empowerment initiatives. The benefits of this proposal include a better company image, increased productivity, an increase in sales, and potentially a more ethical fashion industry overall. The feasibility of this proposal is discussed and proven through referencing the work done by other fashion retailers. Lastly, the challenges of this proposal are acknowledged and include the threat to lower labour cost countries, the retailer's ignorance over the state of their supply chains, and the lack of accurate auditing. Despite these challenges, this proposal offers a way to bridge the gap between H&M's ethical intent and its reality.

Current situation

H&M is currently the second-largest retailer and one of the most recognisable fast fashion brands in the world (Guilbert, 2018). Like many large retail companies, H&M employs extreme targets to keep their fast fashion practice alive. As a result, their products are often produced in countries with cheap labour, like Bangladesh and China (Can, 2017). This practice of outsourcing employs workers with unfair wages and working conditions. The exhaustion and ill health experienced by these workers are shaped by the dynamics of the global supply chains (Prentice et al., 2018). According to a study conducted in 2019, this has long-term effects on the workers' quality of life, which differs between genders (Quadir et al., 2019). In an interview conducted in 2017 with 20 female garment workers in a low-income neighbourhood of Istanbul, the gendered and sexualised work atmosphere of garment factories was revealed (Can, 2017). These workers endure countless injustices when meeting the extreme deadlines of this industry. The pressure to match the pace of fashion trends directly impacts the employees' working conditions and income (Can, 2017). This is further evidenced in Bangladesh, as there is a proven correlation between gender-based violence and the pressures of H&M's fast-fashion industry (Hodal, 2018). H&M is aware of this situation and signed a pledge in 2013 to ensure garment workers who supply their chain are paid a fair, living wage (Guilbert, 2018). Yet, interviews conducted in 2018 with 62 garment workers in factories across Bulgaria, Turkey, India and Cambodia and none of them earned anything near this living wage. As a result, they are forced to work excessive hours in order to survive.



Common industry practices

The fashion apparel industry continues to shift towards the fading of mass production and an increase in the number of fashion seasons. These modified structural characteristics in the supply chain force retailers to desire low cost and flexibility in design, quality, delivery and speed to market (Bhardwaj et al., 2010). Fashion retailers compete with others by ensuring their ability to rapidly provide the fashion trends displayed on the runways (Bhardwaj et al., 2010). This causes a shorter life cycle and higher profit margins from the sale of fast selling merchandise and skips the markdown process altogether. Thus, extreme targets are employed to feed this cycle. In order to keep up with fast fashion demands, retail companies source their clothes from low labour cost countries, like China, Bangladesh, India, and Vietnam (Can, 2017). Therefore, it is common in this industry that products are produced in the Global South by workers with unfair wages and working conditions, a phenomenon known as the New International Division of Labour (Starosta, 2016). This

is mapped out in Figure 1, as it displays the locations in which the most H&M garment factories exist (Sabanoglu, 2020). These countries have high poverty rates, thus, more individuals are desperate for work and factory owners prey on this desperation (Can, 2017) The workers' state of poverty is advantageous to companies like H&M, as labour remains cheap and deadlines are met, enhancing profit. In doing so, the consumer's desire for low prices, variety and instant gratification is satisfied, thereby, perpetuating the success of these brands.

Proposal

To ensure fair working conditions in their factories overseas, I propose that H&M employ transparent labor policies, pay a fair living wage, and implement empowerment initiatives.

1) Transparent Labor Policies

H&M should follow in the steps of Patagonia and become a member of the Fair Labor Association. In doing so, H&M must adhere to the Workplace Code of Conduct. They

will be held accountable to comply with the Code's standard of decent and humane working conditions. As the FLA publishes reports on all assessments, complaints and investigations, transparency and accountability is ensured (Sethi et al., 2016). In doing so, H&M would publicly list its suppliers, as well as trace and audit its facilities. This will ensure the safety of workers and prevent disasters, like the Rana Plaza collapse, from occurring (Hossain, 2019).

Fair Living Wage

H&M should employ a third party, like Fair Trade USA, to ensure that the brand pays a premium to a workers fund (Theory of Change, 2020). In doing so, workers decide how to allocate the money based on a democratic process. In doing so, workers become key figures in financial decision-making, unionizing them in the process. Furthermore, a third party should be involved rather than just paying factory owners more. In doing so, this method ensures that the workers actually receive all of the finances and that they are adequately distributed.

3) Empowerment Initiatives

It is within H&M's corporate social responsibility to not just minimize harm, but to consider the work-life balance of their factory workers (Dutta, 2019). Despite low wages and poor working conditions, women in these factories have gained greater autonomy and self-awareness compared to their rural counterparts (Hossain, 2019). By following in the steps of companies, like Inditex, and implementing empowerment initiatives, H&M has the capability to transform these workers' quality of life (Nishimura, 2020). These initiatives should focus on discrimination, paid work and care, voice and representation, as well as leadership and skill development. Employee

empowerment can be achieved through in factory services or by partnering with other organizations on the global level who aim to eradicate gender-based discrimination in the workplace, like Gender at Work (Our Work, 2018).

Benefits and feasibility

As consumers become more knowledgeable about where their products are sourced, there is a growing pressure for major brands to improve working conditions across their global supply chains. By implementing empowerment initiatives, H&M has the capability to not only satisfy the consumers' needs but transform their workers' quality of life (Nishimura, 2020). In turn, improved working conditions will provide an increase in productivity (Perry et al., 2015). In fact, training female supervisors can increase factory productivity by up to 22% (Nhi, 2016). By implementing these changes, H&M's company image will be transformed into a more ethical fashion brand. This image will increase sales, as consumers will be more inclined to purchase from a company that aligns with their moral compass. As H&M has such a large platform, their actions will pave the way for a more equitable fashion industry. This proposal is very feasible, as even if the entire cost of paying living wages is passed onto consumers, it would only cost an extra 1% of the retail price (Hymann, 2019). Furthermore, other companies like Inditex and Patagonia have implemented these changes and remain very successful, further proving the feasibility (Nishimura, 2020). H&M is currently aware of this issue and welcomes any proposed initiatives to strengthen the human rights of women at work (Hodal, 2018). Thus, it is guaranteed that an empowerment initiative would receive the support of the entire company. These

changes will place H&M at the forefront of transforming the fast fashion industry into a more equitable and sustainable sector.

Challenges in the industry

As it is a cheaper alternative and it keeps up with the industry's extreme timeline, many retail companies source their clothes from lower labour cost countries (Can, 2017). However, cutting connections with these countries is too simplistic, as garment factory workers rely on this employment (Sarker, 2018). Furthermore, many fashion retailers may have their manufacturing done in hazardous factories without their knowledge by contractors who farm out orders. The fashion supply chain is very complex and it remains difficult for big brands to control every stage of production. This is evidenced by the collapse of the Cambodian factory on May 20, 2013, injuring 23 workers (Davis, 2013). H&M claimed that they were unaware that its products were sourced at this location. This unawareness of sources at the factory level reflects many retailers' lack of control over their supply chains. The physical distance, cultural distance, and time difference prove to be challenging for retailers to understand labor conditions in their sourcing factories around the world (Paton et al., 2019). Thus, fast fashion retailers largely trust their suppliers to adhere to certain rules and then verify that those policies are being followed. However, there are implications with this verification process. Auditors alert factories to their visits or only interview workers in the presence of their bosses, thus, noncompliance with these policies are easy to hide (Paton et al., 2019). Therefore, a gap between this industry's intent and reality exists.

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The Deadly Consequences of Fast Fashion

Danielle Pinder

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Current Situation

H&M is currently the second-largest retailer and one of the most recognisable fast fashion brands in the world (Guilbert, 2018). Like many large retail companies, H&M employs extreme targets to keep their fast fashion practice alive. As a result, their products are often produced in countries with cheap labour, like Bangladesh and China (Can, 2017). This practice of outsourcing employs workers with unfair wages and working conditions. The exhaustion and ill health experienced by these workers are shaped by the dynamics of the global supply chains (Prentice et al., 2018). According to a study conducted in 2019, this has long-term effects on the workers' quality of life, which differs between genders (Quadir et al., 2019). In an interview conducted in 2017 with 20 female garment workers in a low-income neighbourhood of Istanbul, the gendered and sexualised work atmosphere of garment factories was revealed (Can, 2017). These workers endure countless injustices when meeting the extreme deadlines of this industry. The pressure to match the pace of fashion trends directly impacts the employees' working conditions and income (Can, 2017). This is further evidenced in Bangladesh, as there is a proven correlation between gender-based violence and the pressures of H&M's fast-fashion industry (Hodal, 2018). H&M is aware of this situation and signed a pledge in 2013 to ensure garment workers who supply their chain are paid a fair, living wage (Guilbert, 2018). Yet, interviews conducted in 2018 with 62 garment workers in factories across Bulgaria, Turkey, India and Cambodia and none of them earned anything near this living wage. As a result, they are forced to work excessive hours in order to survive.

Figure 1: Number of supplier factories of the H&M Group as of February 2020, by country (Sabanoglu, 2020)



Common Industry Practices

The fashion apparel industry continues to shift towards the fading of mass production and an increase in the number of fashion seasons. These modified structural characteristics in the supply chain force retailers to desire low cost and flexibility in design, quality, delivery and speed to market (Bhardwaj et al., 2010). Fashion retailers compete with others by ensuring their ability to rapidly provide the fashion trends displayed on the runways (Bhardwaj et al., 2010). This causes a shorter life cycle and higher profit margins from the sale of fast selling merchandise and skips the markdown process altogether. Thus, extreme targets are employed to feed this cycle. In order to keep up with fast fashion demands, retail companies source their clothes from low labour cost countries, like China, Bangladesh, India, and Vietnam (Can, 2017). Therefore, it is common in this industry that products are produced in the Global South by workers with unfair wages and working conditions, a phenomenon known as the New International Division of Labour (Starosta, 2016). This is mapped out in Figure 1, as it displays the locations in which the most H&M garment factories exist (Sabanoglu, 2020). These countries have high poverty rates, thus, more individuals are desperate for work and factory owners prey on this desperation (Can, 2017). The workers' state of poverty is advantageous to companies like H&M, as labour remains cheap and deadlines are met, enhancing profit. In doing so, the consumer's desire for low prices, variety and instant gratification is satisfied, thereby, perpetuating the success of these brands.

Proposal

To ensure fair working conditions in their factories overseas, I propose that H&M employ transparent labor policies, pay a fair living wage, and implement empowerment initiatives.

1) Transparent Labor Policies

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2) Fair Living Wage

H&M should employ a third party, like Fair Trade USA, to ensure that the brand pays a premium to a workers fund (Theory of Change, 2020). In doing so, workers decide how to allocate the money based on a democratic process. In doing so, workers become key figures in financial decision-making, unionizing them in the process. Furthermore, a third party should be involved rather than just paying factory owners more. In doing so, this method ensures that the workers actually receive all of the finances and that they are adequately distributed.

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Benefits & Feasibility

As consumers become more knowledgeable about where their products are sourced, there is a growing pressure for major brands to improve working conditions across their global supply chains. By implementing empowerment initiatives, H&M has the capability to not only satisfy the consumers' needs but transform their workers' quality of life (Nishimura, 2020). In turn, improved working conditions will provide an increase in productivity (Perry et al., 2015). In fact, training female supervisors can increase factory productivity by up to 22% (Nhi, 2016). By implementing these changes, H&M's company image will be transformed into a more ethical fashion brand. This image will increase sales, as consumers will be more inclined to purchase from a company that aligns with their moral compass. As H&M has such a large platform, their actions will pave the way for a more equitable fashion industry. This proposal is very feasible, as even if the entire cost of paying living wages is passed onto consumers, it would only cost an extra 1% of the retail price (Hymann, 2019). Furthermore, other companies like Inditex and Patagonia have implemented these changes and remain very successful, further proving the feasibility (Nishimura, 2020). H&M is currently aware of this issue and welcomes any proposed initiatives to strengthen the human rights of women at work (Hodal, 2018). Thus, it is guaranteed that an empowerment initiative would receive the support of the entire company. These changes will place H&M at the forefront of transforming the fast fashion industry into a more equitable and sustainable sector.

Challenges in the Industry

As it is a cheaper alternative and it keeps up with the industry's extreme timeline, many retail companies source their clothes from lower labour cost countries (Can, 2017). However, cutting connections with these countries is too simplistic, as garment factory workers rely on this employment (Sarker, 2018). Furthermore, many fashion retailers may have their manufacturing done in hazardous factories without their knowledge by contractors who farm out orders. The fashion supply chain is very complex and it remains difficult for big brands to control every stage of production. This is evidenced by the collapse of the Cambodian factory on May 20, 2013, injuring 23 workers (Davis, 2013). H&M claimed that they were unaware that its products were sourced at this location. This unawareness of sources at the factory level reflects many retailers' lack of control over their supply chains. The physical distance, cultural distance, and time difference prove to be challenging for retailers to understand labor conditions in their sourcing factories around the world (Paton et al., 2019). Thus, fast fashion retailers largely trust their suppliers to adhere to certain rules and then verify that those policies are being followed. However, there are implications with this verification process. Auditors alert factories to their visits or only interview workers in the presence of their bosses, thus, noncompliance with these policies are easy to hide (Paton et al., 2019). Therefore, a gap between this industry's intent and reality exists.

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How does Bayer overcome the reputational blow of acquiring Monsanto?

Asbah Ahmad

Abstract

This article looks at the specific links between global agriculture and the connection with modern corporations that operate in that space. Specifically, the article proposes methods by which Bayer can make their business operations of the acquired Monsanto division more equitable and sustainable for the global food economy and agricultural industry. The central issue this article targets is the rise of business practices in agriculture that disadvantage ground level farmers and do not help in the global mission to end world hunger. Current data and statistics are analyzed in this article along with the writings of leading academics to assess the validity of this proposed business model designed to improve sustainable development. The geographic concept of mapping was fundamental in coming to a conclusion on all of the proposed business metrics. This allowed for the article to reasonably conclude that it is quite feasible for Bayer to move to a sustainable business model that puts the interest of society first, while maintaining the ability to leverage a profit.

Introduction

Agriculture has been essential to the survival of humanity. No matter the linguistic or ethno-cultural background one comes from, agriculture has ensured that our societies grow and thrive. Agriculture was, and still is the backbone we often do not appreciate. A noticeable trend amongst companies and nations has been towards scientific development of products that aim to alleviate the effects of food insecurity. It is the hope of these companies that food insecurity may be solved without taking a place and space centric approach. These developments in science have caused significant issues in the standards, quality and effectiveness of research going into product design and deployment.

In this poster, the practices of Monsanto will be analyzed, which has now been bought by Bayer. Bayer's division of Crop Science now runs all the products and patents owned by Monsanto. This is where Monsanto's former employees work to create products for the agriculture sector. Monsanto had been known to partake in activities contravening ethical practices surrounding political lobbying and scientific research funding (Lamphere & East, 2016). Monsanto started its work from the cell, constructing genetically modified (GMO) crops and chemicals designed to end the life of specific microscopic organisms. These combinations of pesticides and crop fixing landed the company in hot water, with a multitude of lawsuits. Moreover, Monsanto sought to fundamentally undermine regional self-reliant food systems (Kneen, 1998) by exploiting the idea that there is a "right to food." This is a reputation that Bayer must now live with. Bayer has been forced to payout billions (BBC, 2020) because of Monsanto's agrochemicals which have shown to be severely injurious to health (BBC, 2020). Monsanto has also been heavily criticized for its development of GMO crops, which

has been one of the factors leading to the demise of regional farming. This poster will give ways for Bayer to reform and guide their crop division's practices, such that Monsanto's practices do not "seep" over from the acquisition. Specifically, this poster will provide a proposed remedy for Bayer that will counter Monsanto's current business model; which targets farmers on a local and regional level through sales of agrochemical and GMO crop technologies (Cinici, 2016).

Proposal

Bayer can work to solve the wide-scale issue of sustainability in food production and safety from agrochemical pesticides by promoting and creating products catered towards the farming of regional native crops and working to innovate in the organic pesticide sector.

This approach requires a few points of analysis. First, a 4-pillar business plan will be initiated. For the sustainability of food production, this poster will investigate the food production, and its impact by GMO crops. Then a comparison will be made between the effects of farming native species and the nutrition rates. This will allow for a comparison between the value of "place" in scale of production. The agrochemical aspect of this poster will be looked at from the current ethical issue of Monsanto's contribution to harmful synthetic pesticide use. The proposed shift to organic synthesis of pesticides by Bayer will be explored as a viable alternative. The Geographic idea of "mapping" will also be used to model the local and global implications of these proposed changes. This will also allow for the development of understanding surrounding the scale of Bayer's reach in regional "food economies." The Geographic method allows for us to understand the importance of

socio-scientific concepts within the context of a specific "place." This allows for a deeper understanding on the impact of development and scale of resource access to be considered.

Benefits of the "Monsanto Model" to Society and Sector

The "Monsanto model" has a few clear advantages for Bayer. The model is so effective that it has been replicated by other companies (on a smaller scale) such as Agrium in Canada. Firstly, there is an aggressive push into diverse global markets, and local governments are very happy to welcome biotechnological shifts in agriculture. This fact allows for a higher return on the company's equity, leading to large profit margins (Cherry et.al, 2020). Once GMO crops are promoted in a nation, companies can increase their stakes in the market share by selling their agrochemicals, which are species specific (Cherry et.al, 2020). This creates a cyclical cycle built on some modicum of initial trust. Interestingly, companies following this model receive large amounts of support from their home governments. This is because of the ability for developed nations to leverage a level of business diplomacy (Martinez, 2018). All this investment and government lobbying allows for easy pleasing of shareholders and increased profits.

With respect to societal impacts, the "Monsanto model" does have some benefits, especially in 'developing nations.' This often flies under the radar and is not adequately understood by the general public (Cinici, 2016). GM foods can have a positive impact on nutrition content in foods, a fact that is still up for debate in the scientific community (Key et. al, 2008). Genetically modified crops do allow for increased yields which do not necessarily correlate with food security but is an important step in avoiding famine (Key

et. al, 2008). GM foods also allow for better adherence to specific climatic conditions in growing regions (Cinici, 2016). Agrochemicals also have very important roles in ensuring the vitality of the seasonal harvests in many nations (Kulkarni, 2016). Monsanto simply capitalizes on the (ancient) need of agrochemicals in a way that contravenes global development in favour of capital and profits.

4-pillar corporate action plan based on proposal

- 1) Research and identify regions with food insecurity, and their native crop species used for food.
- 2) Develop GMO versions of native species that contain higher nutritional content and increased crop yield
- 3) Market these products to local markets and governments as an aide to helping increase food security in locality and/or region.
- 4) Develop agrochemicals targeted towards specific regional insects, using organic means that conform to strict health guidelines proposed by the World Health Organization.

What the four fundamental pillars for action create for Bayer, is the ability to improve its brand reputation after it took a hit with the Monsanto acquisition. It also allows for some parts of the original business model to remain intact but allows for a more symbiotic relationship where the chance of legal litigation is limited.

Feasibility of proposed pillar 1 and 2

In some nations particularly in South East Asia, there was a considerable net positive effect by the adoption of GMO plants in the late 1970s and early 1980s (Timmer, 2008). But this was not possible without the significant efforts undertaken by the respective governments to provide price buffers on staple food items. Such was the case with efforts to stabilize rice prices (Timmer, 2008), which used GMOs. This same model was unsuccessfully applied throughout Sub-Saharan Africa, but with crops imported from the “west.” This showed a lack of a spatial awareness. GMO density had a significant impact on yield (refer to figure 1), but the nutrition outcomes suffered (Timmer, 2008). There was no incentive for governments to invest in staple food items, and companies did not invest their genetic modification technology on staple crops. This fact is shown through the spatial dimension of malnutrition, which can be clearly assessed through geostatistical methods (Marx et.al, 2014). Geostatistical analysis of data proves that the farming of native species gives governments and people incentives to cultivate and incorporate native crops into their diets. By genetically modifying native crops and correcting for additional nutritional content and increased output, one factor of spatial awareness in food security would have already been improved upon by Bayer (Marx et.al, 2014). Interestingly, there is also a lower risk of Bayer losing money on native regional crop products (Shelef et.al, 2017). This is because farmers are more accustomed to those plants’ cultivation and growth. As well, middlemen in the food supply chain in developing nations will have a much easier time marketing native products to a local population (Shelef et.al, 2017). The international scale of the supply chain is also slightly more localized,

making it more efficient and more likely to return high yields in profits, while working towards regional food stability. In general, it is proven that GM infiltration into the economy increases the profit margin for the agriculture industry in general (refer to figure 2) (Timmer, 2008). This would guarantee Bayer a more sustainable income, with the possibility of increasing its market share in the localized region. Another benefit for Bayer and local governance is the ability for native GM crops to create a new market that previously did not exist (Timmer, 2008). On a final note, the feasibility of pillar one and two are improved upon when considering the role of science. Scientifically, the genetic modification of diverse and varying crops from around the world is very plausible given the current biotechnical advancements (Cook et.al, 2004). Bayer currently has the scientific infrastructure necessary, and Bayer has many ties to local research institutes which allows for decentralization of the scientific method but ensures patents are owned by Bayer. The decentralized research model also have a significant benefit because there is increased diversity of thought brought into the “plant design” process, which includes traditional and indigenous skillsets (Cook et.al, 2004).

Feasibility of proposed pillar 3

Adopting pillar one and two by Bayer would also empower many small-scale farmers throughout regions suffering from malnutrition. This would be done because market level competition would now become less dependent on farm size, and there would be a substantial gain in occupational health and safety (Azadi et. al, 2015). The disadvantage for farmers would be the supply and price of GM seeds, however this is where local governments can open up as potential business partners. In keeping in-line

with World Trade Organization mandates, governments would establish subsidies to support farmers and native agricultural products. This would generate wealth and a positive brand image for Bayer. Significant marketing should be done surrounding the idea of “urban agriculture.” Urban agriculture can have a major influence in turning the tide on food insecurity (Crush et. al, 2011). Urban agriculture allows for “places” to improve upon the scale and dimensions of their food supply chains (Crush et. al, 2011), creating a more equitable and even distribution of food materials for all. Nations with a strong system of urban farming have lowered food prices for citizens (meaning more access), and a large amount of capital investment, and capital output in the agriculture industry (Surya et. al, 2020). This is also a great income stream for Bayer that is untapped because they have not invested in scalable native crop cultivation (Shelef et.al, 2017). Another issue that comes up in marketing is local resistance to GM crops, however this is a wide assertion that holds limited merit. It has been shown many times that public perception of GMO foods in a region improves significantly when members of society are exposed to local staples which have undergone the genetic modification process (Cook et.al, 2004), in combination with government support (Varzakas et.al, 2007). These points add to the validity of pillar one and two, as well as showing the feasibility of marketing genetically modified native agricultural products.

Feasibility of proposed pillar 4

The World Health Organization (WHO) has extensively legislated regulations on pesticides, however, the actual enforcement has been left exclusively to nations and companies. Bayer can take a bold business step by ensuring their products strictly align with WHO guidelines

(WHO, n.d). This would open the company to more governmental contracts and improve the public reputation of the company. This pillar does not demand a shift to organic farming, that method would malign the interests of Bayer's business, and it is not sustainable in solving demand issues when it comes to food supply (Shelef et.al, 2017). Rather, instead of investing in the development of chemicals such as Roundup, the emphasis should be focused on the production of biodegradable and organic chemicals rather than common synthetic chemicals. Common synthetic chemicals are harmful to the environment and people (Carvalho et.al, 2003). This elimination would cause slight rises in the price of chemicals for farmers, but Bayer could hold exclusive patents on certain biodegradable products. Also, farmers would be forced to buy from Bayer since the "bold step" would mean a paradigm shift in the current development of pesticides, with the support of international and governmental agencies. Competing companies would be forced to react to the new organic pesticide standard, and this would over time level out prices for farmers, improving cost effectiveness all while maintaining public safety. Bayer would also significantly benefit from intellectual property royalties internationally on their unique products. These actions would aim to increase the food security, all while protecting the food supply (Carvalho, 2006). This makes pillar four feasible in its approach if scale is assessed. The easiest way for scale to be assessed in a geographically informed method is by mapping the prevalence of pesticide use, as done in figure 3. Mapping in a similar mechanism will ensure that the development of organic pesticides starts in regions with a more prevalent need, where the market share isn't already heavily saturated by other corporations.

Challenges in approach

The following challenges exist for Bayer in following this proposal:

1. Lack of clarity on how the market and shareholders will respond to a paradigm shift. Likely will be better than the current performance on the stock market, where Bayer plummeted to a 7 year low following Monsanto's acquisition (Rebière & Mavoori, 2020).
2. The nature of some of the target regions are quite unstable politically causing strains in marketing. The company must work hard with governmental organizations to ensure products go to market.
3. Very time consuming to go through the research process for FDA approval of crops, especially when the specific native species does not have previously engineered models. Significant independent research work must be utilized to corroborate results. Convincing regulators of safety.

Industry and Canadian impacts

The "bio-agriculture" sector will significantly benefit from the proposed paradigm shift. It will cause other companies to realize the potential that is in store for native plant cultivation and the use of organic pesticides. Companies will begin to work towards innovation, rather than complying with standards set in the 1960s. In Canada, it is my hope that farming becomes less about means, but more about quality. I also see this as a method by which marginalized communities in remote locations can be given access to farming native species to generate revenue for their respective localities. Such would be the case on Northern First Nations reserves across the nation, specifically, in Alberta where there is a lot of potential for the

commercialization of native species (Kim, 2018).

Conclusions

Bayer can work towards solving the wide scale issue of sustainability in food production and agrochemical safety by systematically looking into its regional markets independently of each other. This will allow for a place-based approach, where native crops are cultivated, and innovative organic pesticides as designed to target specific pests. Bayer will have to look into its method of doing business with nations and organizations to ensure they have a strong market footing. Despite their shift from the current industrial/sectoral status quo.

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INTRODUCTION

Agriculture has been essential to the survival of humanity. No matter the linguistic or ethno-cultural background one comes from, agriculture has ensured that our societies grow and thrive. Agriculture was, and still is the backbone we often do not appreciate. A noticeable trend amongst companies and nations has been towards scientific development of products that aim to alleviate the effects of food insecurity. It is the hope of these companies that food insecurity may be solved without taking a place and space centric approach. These developments in science have caused significant issues in the standards, quality and effectiveness of research going into product design and deployment.

In this poster, the practices of Monsanto will be analyzed, which has now been bought by Bayer. Bayer's division of Crop Science now runs all the products and patents owned by Monsanto. This is where Monsanto's former employees work to create products for the agriculture sector. Monsanto had been known to partake in activities contravening ethical practices surrounding political lobbying and scientific research funding (Lamphere & East, 2016). Monsanto started its work from the cell, constructing genetically modified (GMO) crops and chemicals designed to end the life of specific microscopic organisms. These combinations of pesticides and crop fixing landed the company in hot water, with a multitude of lawsuits. Moreover, Monsanto sought to fundamentally undermine regional self-reliant food systems (Kneen, 1998) by exploiting the idea that there is a "right to food." This is a reputation that Bayer must now live with. Bayer has been forced to payout billions (BBC, 2020) because of Monsanto's agrochemicals which have shown to be severely injurious to health (BBC, 2020). Monsanto has also been heavily criticized for its development of GMO crops, which has been one of the factors leading to the demise of regional farming. This poster will give ways for Bayer to reform and guide their crop division's practices, such that Monsanto's practices do not "seep" over from the acquisition. Specifically, this poster will provide a proposed remedy for Bayer that will counter Monsanto's current business model; which targets farmers on a local and regional level through sales of agrochemical and GMO crop technologies (Cinici, 2016).

PROPOSAL (THESIS)

Bayer can work to solve the wide-scale issue of sustainability in food production and safety from agrochemical pesticides by promoting and creating products catered towards the farming of regional native crops and working to innovate in the organic pesticide sector.

This approach requires a few points of analysis. First, a 4-pillar business plan will be initiated. For the sustainability of food production, this poster will investigate the food production, and its impact by GMO crops. Then a comparison will be made between the effects of farming native species and the nutrition rates. This will allow for a comparison between the value of "place" in scale of production. The agrochemical aspect of this poster will be looked at from the current ethical issue of Monsanto's contribution to harmful synthetic pesticide use. The proposed shift to organic synthesis of pesticides by Bayer will be explored as a viable alternative. The Geographic idea of "mapping" will also be used to model the local and global implications of these proposed changes. This will also allow for the development of understanding surrounding the scale of Bayer's reach in regional "food economies." The Geographic method allows for us to understand the importance of socio-scientific concepts within the context of a specific "place." This allows for a deeper understanding on the impact of development and scale of resource access to be considered.

Benefits of the "Monsanto Model" to Society and Sector:

The "Monsanto model" has a few clear advantages for Bayer. The model is so effective that it has been replicated by other companies (on a smaller scale) such as Agrium in Canada. Firstly, there is an aggressive push into diverse global markets, and local governments are very happy to welcome biotechnological shifts in agriculture. This fact allows for a higher return on the company's equity, leading to large profit margins (Cherry et.al, 2020). Once GMO crops are promoted in a nation, companies can increase their stakes in the market share by selling their agrochemicals, which are species specific (Cherry et.al, 2020). This creates a cyclical cycle built on some modicum of initial trust. Interestingly, companies following this model receive large amounts of support from their home governments. This is because of the ability for developed nations to leverage a level of business diplomacy (Martinez, 2018). All this investment and government lobbying allows for easy pleasing of shareholders and increased profits.

With respect to societal impacts, the "Monsanto model" does have some benefits, especially in 'developing nations.' This often flies under the radar and is not adequately understood by the general public (Cinici, 2016. GM foods *can* have a positive impact on nutrition content in foods, a fact that is still up for debate in the scientific community (Key et. al, 2008). Genetically modified crops do allow for increased yields which do not necessarily correlate with food security but is an important step in avoiding famine (Key et. al, 2008). GM foods also allow for better adherence to specific climatic conditions in growing regions (Cinici, 2016). Agrochemicals also have very important roles in ensuring the vitality of the seasonal harvests in many nations (Kulkarni, 2016). Monsanto simply capitalizes on the (ancient) need of agrochemicals in a way that contravenes global development in favour of capital and profits.

Asbah Ahmad , Queen's University

4-PILLAR CORPORATE ACTION PLAN BASED ON PROPOSAL

1) Research and identify regions with food insecurity, and their native crop species used for food.

2) Develop GMO versions of native species that contain higher nutritional content and increased crop yield

3) Market these products to local markets and governments as an aide to helping increase food security in locality and/or region.

4) Develop agrochemicals targeted towards specific regional insects, using organic means that conform to strict health guidelines proposed by the World Health Organization.

What the four fundamental pillars for action create for Bayer, is the ability to improve its brand reputation after it took a hit with the Monsanto acquisition. It also allows for some parts of the original business model to remain intact but allows for a more symbiotic relationship where the chance of legal litigation is limited.

FEASIBILITY OF PROPOSED PILLAR 1 AND 2:

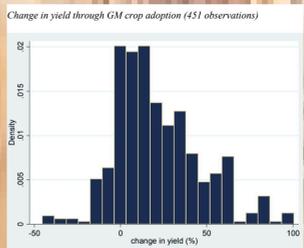


Figure 1: (Klümper & Qaim, 2014)

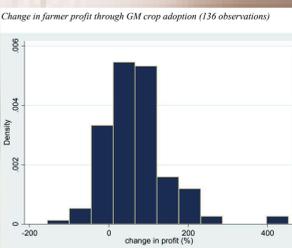


Figure 2: (Klümper & Qaim, 2014)

In some nations particularly in South East Asia, there was a considerable net positive effect by the adoption of GMO plants in the late 1970s and early 1980s (Timmer, 2008). But this was not possible without the significant efforts undertaken by the respective governments to provide price buffers on staple food items. Such was the case with efforts to stabilize rice prices (Timmer, 2008), which used GMOs. This same model was unsuccessfully applied throughout Sub-Saharan Africa, but with crops imported from the "west." This showed a lack of a spatial awareness. GMO density had a significant impact on yield (refer to figure 1), but the nutrition outcomes suffered (Timmer, 2008). There was no incentive for governments to invest in staple food items, and companies did not invest their genetic modification technology on staple crops. This fact is shown through the spatial dimension of malnutrition, which can be clearly assessed through geostatistical methods (Marx et.al, 2014). Geostatistical analysis of data proves that the farming of native species gives governments and people incentives to cultivate and incorporate native crops into their diets. By genetically modifying native crops and correcting for additional nutritional content and increased output, one factor of spatial awareness in food security would have already been improved upon by Bayer (Marx et.al, 2014). Interestingly, there is also a lower risk of Bayer losing money on native regional crop products (Shelef et.al, 2017). This is because farmers are more accustomed to those plants' cultivation and growth. As well, middlemen in the food supply chain in developing nations will have a much easier time marketing native products to a local population (Shelef et.al, 2017). The international scale of the supply chain is also slightly more localized, making it more efficient and more likely to return high yields in profits, while working towards regional food stability. In general, it is proven that GM infiltration into the economy increases the profit margin for the agriculture industry in general (refer to figure 2) (Timmer, 2008). This would guarantee Bayer a more sustainable income, with the possibility of increasing its market share in the localized region. Another benefit for Bayer and local governance is the ability for native GM crops to create a new market that previously did not exist (Timmer, 2008). On a final note, the feasibility of pillar one and two are improved upon when considering the role of science. Scientifically, the genetic modification of diverse and varying crops from around the world is very plausible given the current biotechnical advancements (Cook et.al, 2004). Bayer currently has the scientific infrastructure necessary, and Bayer has many ties to local research institutes which allows for decentralization of the scientific method but ensures patents are owned by Bayer. The decentralized research model also have a significant benefit because there is increased diversity of thought brought into the "plant design" process, which includes traditional and indigenous skillsets (Cook et.al, 2004).

FEASIBILITY OF PROPOSED PILLAR 3:

Adopting pillar one and two by Bayer would also empower many small-scale farmers throughout regions suffering from malnutrition. This would be done because market level competition would now become less dependent on farm size, and there would be a substantial gain in occupational health and safety (Azadi et. al, 2015). The disadvantage for farmers would be the supply and price of GM seeds, however this is where local governments can open up as potential business partners. In keeping in-line with World Trade Organization mandates, governments would establish subsidies to support farmers and native agricultural products. This would generate wealth and a positive brand image for Bayer. Significant marketing should be done surrounding the idea of "urban agriculture." Urban agriculture can have a major influence in turning the tide on food insecurity (Crush et. al, 2011). Urban agriculture allows for "places" to improve upon the scale and dimensions of their food supply chains (Crush et. al, 2011), creating a more equitable and even distribution of food materials for all. Nations with a strong system of urban farming have lowered food prices for citizens (meaning more access), and a large amount of capital investment, and capital output in the agriculture industry (Surya et. al, 2020). This is also a great income stream for Bayer that is untapped because they have not invested in scalable native crop cultivation (Shelef et.al, 2017). Another issue that comes up in marketing is local resistance to GM crops, however this is a wide assertion that holds limited merit. It has been shown many times that public perception of GMO foods in a region improves significantly when members of society are exposed to local staples which have undergone the genetic modification process (Cook et.al, 2004), in combination with government support (Varzakas et.al, 2007). These points add to the validity of pillar one and two, as well as showing the feasibility of marketing genetically modified native agricultural products.

FEASIBILITY OF PROPOSED PILLAR 4:

The World Health Organization (WHO) has extensively legislated regulations on pesticides, however, the actual enforcement has been left exclusively to nations and companies. Bayer can take a bold business step by ensuring their products strictly align with WHO guidelines (WHO, n.d). This would open the company to more governmental contracts and improve the public reputation of the company. This pillar does not demand a shift to organic farming, that method would malign the interests of Bayer's business, and it is not sustainable in solving demand issues when it comes to food supply (Shelef et.al, 2017). Rather, instead of investing in the development of chemicals such as Roundup, the emphasis should be focused on the production of biodegradable and organic chemicals rather than common synthetic chemicals. Common synthetic chemicals are harmful to the environment and people (Carvalho et.al, 2003). This elimination would cause slight rises in the price of chemicals for farmers, but Bayer could hold exclusive patents on certain biodegradable products. Also, farmers would be forced to buy from Bayer since the "bold step" would mean a paradigm shift in the current development of pesticides, with the support of international and governmental agencies. Competing companies would be forced to react to the new organic pesticide standard, and this would over time level out prices for farmers, improving cost effectiveness all while maintaining public safety. Bayer would also significantly benefit from intellectual property royalties internationally on their unique products. These actions would aim to increase the food security, all while protecting the food supply (Carvalho, 2006). This makes pillar four feasible in its approach if scale is assessed. The easiest way for scale to be assessed in a geographically informed method is by mapping the prevalence of pesticide use, as done in figure 3. Mapping in a similar mechanism will ensure that the development of organic pesticides starts in regions with a more prevalent need, where the market share isn't already heavily saturated by other corporations.

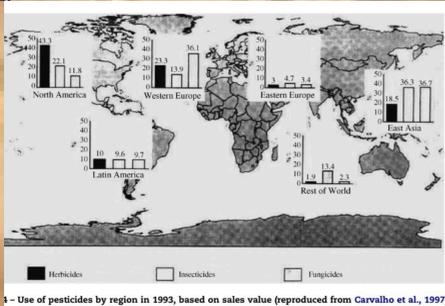


Figure 3: (Carvalho, 2006)

CHALLENGES IN APPROACH:

The following challenges exist for Bayer in following this proposal:

- 1) Lack of clarity on how the market and shareholders will respond to a paradigm shift. Likely will be better than the current performance on the stock market, where Bayer plummeted to a 7 year low following Monsanto's acquisition (Rebière & Mavoori, 2020).
- 2) The nature of some of the target regions are quite unstable politically causing strains in marketing. The company must work hard with governmental organizations to ensure products go to market.
- 3) Very time consuming to go through the research process for FDA approval of crops, especially when the specific native species does not have previously engineered models. Significant independent research work must be utilized to corroborate results. Convincing regulators of safety.

INDUSTRY AND CANADIAN IMPACTS:

The "bio-agriculture" sector will significantly benefit from the proposed paradigm shift. It will cause other companies to realize the potential that is in store for native plant cultivation and the use of organic pesticides. Companies will begin to work towards innovation, rather than complying with standards set in the 1960s. In Canada, it is my hope that farming becomes less about means, but more about quality. I also see this as a method by which marginalized communities in remote locations can be given access to farming native species to generate revenue for their respective localities. Such would be the case on Northern First Nations reserves across the nation, specifically, in Alberta where there is a lot of potential for the commercialization of native species (Kim, 2018).

CONCLUSIONS:

Bayer can work towards solving the wide scale issue of sustainability in food production and agrochemical safety by systematically looking into its regional markets independently of each other. This will allow for a place-based approach, where native crops are cultivated, and innovative organic pesticides as designed to target specific pests. Bayer will have to look into its method of doing business with nations and organizations to ensure they have a strong market footing. Despite their shift from the current industrial/sectoral status quo.

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The impact of fulfillment centres on minority groups

Jessica Rawlins

Abstract

While Amazon has dominated the e-commerce industry, its success has come at the expense of the communities and employees exposed to its fulfillment centres. The lingering effects of these fulfillment centres can be interpreted as Amazon's connived contribution to 'environmental and systemic racism'. By taking a geographical perspective, we can infer that North America's Amazon fulfillment centres are predominantly located in low-income, ethnically diverse neighbourhoods. Amazon's current business strategy can be criticized at exploiting low-income communities by providing them with inadequate protection from environmental and safety concerns, and adequate job security. However, with only a few minor policy recommendations, the implementation of a Community Benefits Agreements, enhanced safety and communication protocols, and increased promotional opportunities, I predict these changes to Amazon's current strategy will increase accountability and ensure a positive impact is made within these communities.

Key issue

While Amazon has dominated the e-commerce industry, its success has come at the expense of the communities and employees exposed to its fulfillment centres. By taking a geographical perspective, we are able to understand that in North America, Amazon's fulfillment centres are located in predominantly low-income, ethnically diverse neighbourhoods (Amazon Employees for Climate Justice, 2020), disproportionately exposing visible minorities to the environmental, workplace, and employment hazards exhibited by these centres.

About Amazon

Amazon's business model revolves around its desire to be the "Earth's most customer-centric company," Amazon has simply created an e-commerce empire, allowing for extraordinarily fast and reliable shipping made possible by its expert-designed and dedicated employees ("Who We Are", 2020). While creating this image, Amazon has become the largest online retailer and continues to expand. Today, almost 1 in 3 Americans subscribe to Amazon Prime (Dunne, 2020), and global users are on the rise (Cohn, 2019). Unlike many other businesses, Covid-19's impact on Amazon has followed a positive trend as many customers transition to online shopping (Ali, 2020; Caligiuri et al, 2020)

Prior to COVID-19, Amazon took initiatives to become a leader in workplace equality as well, through programs, such as the Wise Ten Steps Commitment, that promotes the recruitment of women and people of diverse backgrounds ("Diversity", 2020). Furthermore, the CEO of Amazon,

Jeff Bezos, reinforced Amazon's commitment to equality after receiving the Equality Award in 2017,

"We want our employees and the communities where we operate to embrace that we are all human, we are all different, and we are all equal," ("Diversity", 2020).

However, while Amazon's profits are skyrocketing due to changes in consumer behaviour (Calligiuri et al, 2020), this trend has only exacerbated the environmental, hazardous, and economic disadvantages of its warehouses or which Amazon refers to as, "Fulfillment centres".

Competitive landscape

Amazon conducts its own delivery but also works with other secondary shipping companies such as FedEx, United Parcel Services, and United States Postal Service ("Amazon Challenges", 2020). As well, Amazon's competitors, such as Walmart, Alibaba, and eBay, are other key players in the e-commerce kingdom and engage in similar shipping methods as Amazon (Inci, 2020). In order to obtain fast and prompt shipping, it is crucial for shipping companies to have fulfillment centres and warehouses that are central to consumers. Within North America, these locations are chosen based on expansive land availability, cost, the geographical location of product demand, and public transit access (Lopienski, 2020).

With new technologies, companies can track incoming and outgoing inventory using e-management systems and electronic logging devices ("What do the Best", 2019). Additionally, warehouse workers are often trained to manage inventories, optimally use space, maintain turnover rates, and replenish products ("What do the Best", 2019). Once

the products are received and warehoused into their specific slots, they are ready to be loaded into vehicles and transported to a customer's location ("What do the Best", 2019). Transportation varies within many intermodal shipments and often involve road, rail, ship, and air travel ("What do the Best", 2019). A majority of Amazon's competitors and other shipping companies rely on manual methods of sorting, though Amazon prides itself on being at the forefront of innovative warehouses by using a combination of robots and warehouse workers to pick and transfer products ("What do the Best", 2019).

Geographical perspective

The negative impacts from pollution, unsafe working conditions, and automation are inherently a geographical issue. Both the distribution of fulfillment centres and visible minorities follow a similar pattern that can be strongly identified through mapping. By taking a geographical approach, the spatial distribution of Amazon fulfillment centres can be identified and contrasted against the area's socioeconomic status. Amazon has 110 of its 175 fulfillment centres located in North America, with the remainder across Europe (Zahn & Paget, 2019). Below we can see the distribution of Amazon centres in North America, and the concentration of these facilities in zip codes with a high concentrations of people of colour. As we can see from the graph, 80% of Amazon's North American fulfillment centres are located in impoverished areas (Amazon Employees For Climate Justice, 2020). Not surprisingly, 65% of Amazon's global workers are people of colour, while

59.3% of Amazon's managers are Caucasian, showing the reliance that Amazon has on visible minorities to sustain a functioning company, as well as their concentration in fulfillment centres (Richter & Craig, 2013).

Challenges within Amazon's fulfillment centres

Recently Amazon has made headlines concerning the working conditions and environmental hazards associated with their fulfillment centres and transportation (Garner, 2018). In addition, as the threat of automation increases across all industries, job insecurity and precarious workers have correspondingly increased as well. This has left many communities and employees which rely on Amazon's to support themselves and their community uncertain about mass layoffs (Amazon Employees For Climate Justice, 2020). A majority of these claims were made by activist groups, reporters and testimonials from current or terminated employees, and when brought to our attention, a positive correlation between Amazon's North American fulfillment centres and their situations in predominantly low-income, ethnically diverse neighbourhoods was found (Amazon Employees For Climate Justice, 2020). The negative impacts that fulfillment centres have on the environment, community, and employees are unethical but furthermore show the disproportionate concentration in low socioeconomic neighbourhoods. Overall, there are significant concerns over Amazon's business strategy, which seems to exploit low-income communities without providing them with proper environmental, safety, and job protection services.

Environmental implications

The negative effects of air pollution, noise, pavement damage and traffic threats caused

by heavier car/delivery truck activity in these neighbourhoods have long-lasting health effects. Poor air quality is one of the top pollutants which leads to a variety of health risks that have the greatest impacts on the elderly and children (Lelieveld & Poshcl, 2017, Maji & Li, 2020). In regard to the fulfillment centres located in San Bernardino and Riverside, the consequences of Amazon's diesel trucks cost the region \$107 million in health implications (Flaming & Burns, 2019). Moreover, this is an extremely current issue as a Harvard study shows that people who live in areas with poor air quality are more likely to die from Covid-19 (Amazon Employees For Climate Justice, 2020).

Injuries to workers

Amazon's fulfillment centres have twice as many injuries as the industry average and incurred 14,000 serious injuries in 2019 (Evans, 2020). Additionally, employees have attributed countless mental breakdowns to employer-imposed social isolation, aggressive surveillance, and hurried and dangerous working conditions. This emphasizes the continued existence of poor and dangerous working conditions within these centres (Richter & Craig, 2013). Recent events in 2020 showed that Amazon workers attributed their mental breakdowns to employer-imposed social isolation, aggressive surveillance, and dangerous working conditions at these fulfillment centres (Evans, 2020).

Risk of Automation

A McKinsey Global Institute study showed that approximately 20 percent of the global workforce could be lost to robotics by the year 2030 ("Robot," 2017), disproportionately impacting occupations such as factory and fulfillment employees (OpenStax, 2018;

Dhalin, 2019). As Amazon is at the forefront of innovation, it will likely see an increase in automated jobs and layoffs of its low-skilled workers (“Will Automation,” 2020). This will have significant impacts on ethnic and impoverished communities across North America (York Cornwall & Hall, 2017).

Current solutions

Amazon has taken various initiatives to reduce its environmental impact, increase safety, and promote education amongst its employees. An environmental initiative that Amazon recently undertook was the climate pledge, which commits it to have zero carbon emissions by 2040 (“Who We Are,” 2020). The advantage of this initiative is that it is recognized by major corporations and works towards global climate goals (Yuan, 2018). However, while this solution focuses on bigger picture, long-term global commitments, which will help the world as a whole, Amazon has limited initiatives in place to reduce its short-term local environmental impact (Amazon Employees for Climate Justice, 2020). While some Amazon locations have made some positive choices by signing a Community Benefits Agreement, others rely on fulfillment centre employees to form ambassadors and ‘take on causes in their own backyard’ (“Who We Are,” 2020). The limitation of the latter option arises from the power dynamic and a lack of enforceable accountability (“AWS and Community Outreach Making a Positive Impact,” 2020). Therefore, the negative impact that fulfillment centres have on local communities are not being equally and adequately addressed (Evans, 2020).

Amazon’s implementation of robots was thought to increase both efficiency and safety while reducing costs in its warehouses

(“Robot,” 2017). However, reports have shown that Amazon fulfillment centres actually have higher records of injuries due to robots than competitor companies (“Robot,” 2017). While Amazon has made claims that their current safety programs are reducing injury rates, “We continue to see improvements in injury prevention and reduction,” recent events say otherwise (Shieber, 2020). Overall, it seems that the problem lies with a lack of effective communication and safety measures in place rather than the implementation of robots (Anjum et al, 2019).

Amazon has increased training programs, educational services and internal promotion (“Who We Are,” 2020). In 2019, Amazon committed to spending \$700 million to improve its employees’ skills and allow for increased opportunities to account for automation (“Who We Are,” 2020). These programs are an excellent and necessary measure to mitigate the effects of automation, which is becoming increasingly popular. However, it is crucial that Amazon additionally recognize where automation is at the highest risk in order to implement proactive measures to reduce the impact that these job cuts will have on minorities, precarious workers, and the resulting local economy of the community (Dahlin, 2019). Overall, while Amazon has various current initiatives addressing these issues, in actuality it is not enough as visible minorities and surrounding communities continue to be abused by fulfillment centres.

Proposed solution

To ensure Amazon’s successfully addresses its goals of inclusivity, equality, and sustainability, I would recommend Amazon adhere to a mandatory Community Benefits Agreement in all fulfillment centres, enhance ownership

of reported workplace hazards, and invest in human capital to counteract the effect of jobs lost due to automation.

Environmental implications

To mitigate this issue, which has been flagged as environmental racism (“Amazon Employees,” 2020), Amazon should consider making it mandatory for each fulfillment centre to sign a Community Benefits Agreement. This would require each centre to adhere to certain agreed-upon guidelines regarding CO2 emissions and traffic in order to bring environmental justice and public accountability to the communities (Marantz, 2015; Janssen-Jansen & Veen, 2017).

Injuries to workers

Amazon should consider taking further proactive measures to investigate any and all workplace-related injuries, enhance the training of both full-time and temporary employees, and enhance internal communications to allow employees to escalate grievances and address concerns as shown by model companies, Microsoft and Google (Brown, 2020).

Risk of Automation

To prevent mass unemployment due to automation, Amazon should invest further in human capital in order to enhance the existing training infrastructure to prepare low-skilled workers for alternate job duties and career paths (Cader, 2008).

Feasibility analysis

The solutions I propose are feasible and are within the realms of Amazon’s budget, which had an operating expense of \$265.98 billion in 2019 (“Amazon Operating Expenses”, 2020).

Community Benefits Agreement (CBA)

A CBA has been a part of a select few agreements with communities but not all. Therefore, an easy policy change within Amazon can enforce this measure as mandatory. This policy change will greatly increase the communication between headquarters and the community and aid in mediating disputes before they get to the press, as well as ensure that Amazon has the positive impact it strives for in all of its fulfillment centre locations (Marantz, 2015). Possible challenges that could weaken the value of a CBA is low community engagement, vague commitments, and/or no means of holding either party accountable (“Community Benefits,” 2019). However, acknowledging these limitations will allow the creation of a strong CBA that involves the community and offers clear commitments with timeframes and measurements, as well as holds both parties accountable (“Community Benefits,” 2019; Janssen-Jansen & Veen, 2017).

Enhance Safety and Communication Measures

Amazon has the capacity to implement proactive safety measures like Microsoft and Google, through enhancing both the training of employees and internal communication measures (Brown, 2020). This enhancement, while incurring costs, would greatly aid employee safety and wellbeing, increasing morale and productivity, as well as decreasing the amount of worker strikes and whistleblowers that bring negative connotations to Amazon’s fulfillment centres (Anjum et al, 2018). A challenge that could be associated with this proposal is the initial costs of time and money to retrain employees in new safety and communication methods. However, while safety measures and training will have an initial cost, the costs can be thought of as a future investment that will

increase productivity and decrease negative publicity.

Increase Training, Educational, and Promotional Opportunities

As part of Amazon's responsibility to local communities, it is imperative that Amazon increase existing training and educational programs for minorities in order to increase future opportunities and limit the impact that automation will have on these low socioeconomic communities (Dahlin, 2019). Amazon currently has a few programs in place, such as leadership training and degree apprenticeship programs, which help people of all backgrounds enhance their skills for greater opportunities ("Who We Are," 2020). Therefore, implementing these existing programs with increased opportunities for promotion in fulfillment centres will increase the positive impacts that Amazon has globally and allow Amazon to continue to be ranked in the top 10 of companies with great employee training infrastructure, regardless of future automation (Stoller, 2020). A challenge posed by this solution could be seen in the mass retraining of employees, which could lead to a surplus of overqualified employees and additionally, the costs and time associated with training. However, if this proposal is conducted in stages, systematically retraining sections of the workforce at a time while increasing opportunities this should allow for maximum productivity, profits, and job security aiding the economy.

Benefits to Amazon and beyond

A change within Amazon could initiate a domino effect within rival retailers due to its extensive network, like when Amazon increased its minimum wage and challenged others to increase as well or do better. Therefore, implementation of these changes could reduce the negative impacts of

large companies globally, which often take advantage of visible minorities and low socioeconomic communities for profitable gain.

Enhance Environmental Accountability

A community benefits agreement (CBA) would reduce health impacts caused by environmental pollutants and ensure risks are brought to Amazon's attention immediately, allowing for prompt actions and measures (Yuan, 2018). As well, not only will a CBA limit negative health impacts, but it will also foster a respective relationship between communities and corporations and will cohesively work towards Amazon's zero carbon emission pledge to decrease both their long- and short-term environmental impacts (Anjum et al., 2018).

Decrease Workplace Related Injuries

Increasing Amazon's proactive safety and communication measures will protect employees across North America, especially those of minority status, from hazardous working conditions while incurring fewer costs to our health care system (Anjum et al., 2018). A reduction of costs to our health care system will reduce economic deficits, as well as give the government opportunities for investments, which could lead to economic growth (Richter & Craig, 2013).

Mitigate Job Loss and Increase Economic Potential

Over the coming decades, we will see automatization occurring globally with Amazon, a leader in innovation, paving the way ("Who We Are," 2020). Consequently, as precarious work becomes an increasing reality for many, actions directed at training and increasing job opportunities will be able to mitigate the damage that automation has on both the local and global economy

(“Will Automation,” 2020). Furthermore, the implementation and creation of extensive training programs throughout Amazon’s fulfillment centres will aid the economy’s growth by contributing to innovation, human capital, and job security (Richter & Craig, 2013). The benefits of retraining will be maximized in low socioeconomic communities, aiding to replenish the economy and leading to many downstream impacts such as better educational systems, city infrastructure, and health care (Richter & Craig, 2013).

Executive summary

Amazon’s preference for fulfillment centres in areas with increased and cheaper land have produced centres that are disproportionality located in racially diverse, low-income communities (“Amazon Employees,” 2020). Consequently, the effects of these fulfillment centres are affecting minority groups and can be seen as Amazon’s connived contribution to ‘environmental and systemic racism’ (“Amazon Employees,” 2020). Addressing these issues with respect to Amazon’s fulfillment centres’ geospatial placement will decrease the disparity of health implications across socioeconomic and ethnically diverse communities. With only a few minor policy changes, the implementation of Community Benefits Agreements, safety and communication protocols, and increasing training opportunities for minority groups, will ensure that Amazon acts with full corporate responsibility and has a positive impact within it’s local communities, fulfillment centres, and globally.

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The Impact of Fulfillment Centres on Minority Groups



Key Issue

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Competitive Landscape

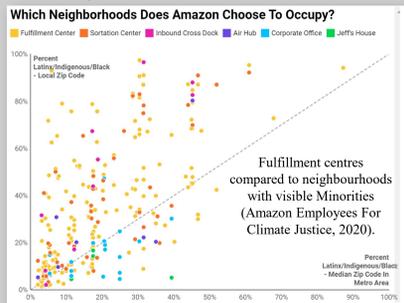
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Leaked documents show how Amazon misled the public about warehouse safety issues

(Evans, 2020)

'Colony of Hell': 911 Calls From Inside Amazon Warehouses

(Zahn, 2019)

Serious injuries at Amazon fulfillment centers topped 14,000, despite the company's safety claims

(Shieber, 2020)

Environmental implications

The negative effects of air pollution, noise, pavement damage and traffic threats caused by heavier car/delivery truck activity in these neighbourhoods have long-lasting health effects. Poor air quality is one of the top pollutants which leads to a variety of health risks that have the greatest impacts on the elderly and children (Lelieveld & Poshcl, 2017; Maji & Li, 2020). In regard to the fulfillment centres located in San Bernardino and Riverside, the consequences of Amazon's diesel trucks cost the region \$107 million in health implications (Flaming & Burns, 2019). Moreover, this is an extremely current issue as a Harvard study shows that people who live in areas with poor air quality are more likely to die from Covid-19 (Amazon Employees For Climate Justice, 2020).

Injuries to workers

Amazon's fulfillment centres have twice as many injuries as the industry average and incurred 14,000 serious injuries in 2019 (Evans, 2020). Additionally, employees have attributed countless mental breakdowns to employer-imposed social isolation, aggressive surveillance, and hurried and dangerous working conditions. This emphasizes the continued existence of poor and dangerous working conditions within these centres (Richter & Craig, 2013). Recent events in 2020 showed that Amazon workers attributed their mental breakdowns to employer-imposed social isolation, aggressive surveillance, and dangerous working conditions at these fulfillment centres (Evans, 2020).

Risk of Automation

A McKinsey Global Institute study showed that approximately 20 percent of the global workforce could be lost to robotics by the year 2030 ("Robot," 2017), disproportionately impacting occupations such as factory and fulfillment employees (OpenStax, 2018; Dhalin, 2019). As Amazon is at the forefront of innovation, it will likely see an increase in automated jobs and layoffs of its low-skilled workers ("Will Automation," 2020). This will have significant impacts on ethnic and impoverished communities across North America (York Cornwall & Hall, 2017).

Current Solutions

Amazon has taken various initiatives to reduce its environmental impact, increase safety, and promote education amongst its employees.

An environmental initiative that Amazon recently undertook was the climate pledge, which commits it to have zero carbon emissions by 2040 ("Who We Are," 2020). The advantage of this initiative is that it is recognized by major corporations and works towards global climate goals (Yuan, 2018). However, while this solution focuses on bigger picture, long-term global commitments, which will help the world as a whole, Amazon has limited initiatives in place to reduce its short-term local environmental impact (Amazon Employees for Climate Justice, 2020). While some Amazon locations have made some positive choices by signing a Community Benefits Agreement, others rely on fulfillment centre employees to form ambassadors and "take on causes in their own backyard" ("Who We Are," 2020). The limitation of the latter option arises from the power dynamic and a lack of enforceable accountability ("AWS and Community Outreach Making a Positive Impact," 2020). Therefore, the negative impact that fulfillment centres have on local communities are not being equally and adequately addressed (Evans, 2020).

Amazon's implementation of robots was thought to increase both efficiency and safety while reducing costs in its warehouses ("Robot," 2017). However, reports have shown that Amazon fulfillment centres actually have higher records of injuries due to robots than competitor companies ("Robot," 2017). While Amazon has made claims that their current safety programs are reducing injury rates, "We continue to see improvements in injury prevention and reduction," recent events say otherwise (Shieber, 2020). Overall, it seems that the problem lies with a lack of effective communication and safety measures in place rather than the implementation of robots (Anjum et al, 2019).

Amazon has increased training programs, educational services and internal promotion ("Who We Are," 2020). In 2019, Amazon committed to spending \$700 million to improve its employees' skills and allow for increased opportunities to account for automation ("Who We Are," 2020). These programs are an excellent and necessary measure to mitigate the effects of automation, which is becoming increasingly popular. However, it is crucial that Amazon additionally recognize where automation is at the highest risk in order to implement proactive measures to reduce the impact that these job cuts will have on minorities, precarious workers, and the resulting local economy of the community (Dahlin, 2019).

Overall, while Amazon has various current initiatives addressing these issues, in actuality it is not enough as visible minorities and surrounding communities continue to be abused by fulfillment centres.

Jessica Rawlins

Proposed Solution

To ensure Amazon's successfully addresses its goals of inclusivity, equality, and sustainability, I would recommend Amazon adhere to a mandatory Community Benefits Agreement in all fulfillment centres, enhance ownership of reported workplace hazards, and invest in human capital to counteract the effect of jobs lost due to automation.

1. Environmental implications

To mitigate this issue, which has been flagged as environmental racism ("Amazon Employees," 2020), Amazon should consider making it mandatory for each fulfillment centre to sign a Community Benefits Agreement. This would require each centre to adhere to certain agreed-upon guidelines regarding CO2 emissions and traffic in order to bring environmental justice and public accountability to the communities (Marantz, 2015; Janssen-Jansen & Veen, 2017).

2. Injuries to workers

Amazon should consider taking further proactive measures to investigate any and all workplace-related injuries, enhance the training of both full-time and temporary employees, and enhance internal communications to allow employees to escalate grievances and address concerns as shown by model companies, Microsoft and Google (Brown, 2020).

3. Risk of Automation

To prevent mass unemployment due to automation, Amazon should invest further in human capital in order to enhance the existing training infrastructure to prepare low-skilled workers for alternate job duties and career paths (Cader, 2008).



Amazon Fulfillment Employee working during the Pandemic ("Who We Are," 2020).

Feasibility Analysis

The solutions I propose are feasible and are within the realms of Amazon's budget, which had an operating expense of \$265.98 billion in 2019 ("Amazon Operating Expenses", 2020).

Community Benefits Agreement (CBA)

A CBA has been a part of a select few agreements with communities but not all. Therefore, an easy policy change within Amazon can enforce this measure as mandatory. This policy change will greatly increase the communication between headquarters and the community and aid in mediating disputes before they get to the press, as well as ensure that Amazon has the positive impact it strives for in all of its fulfillment centre locations (Marantz, 2015). Possible challenges that could weaken the value of a CBA is low community engagement, vague commitments, and/or no means of holding either party accountable ("Community Benefits," 2019). However, acknowledging these limitations will allow the creation of a strong CBA that involves the community and offers clear commitments with timeframes and measurements, as well as holds both parties accountable ("Community Benefits," 2019; Janssen-Jansen & Veen, 2017).

Enhance Safety and Communication Measures

Amazon has the capacity to implement proactive safety measures like Microsoft and Google, through enhancing both the training of employees and internal communication measures (Brown, 2020). This enhancement, while incurring costs, would greatly aid employee safety and wellbeing, increasing morale and productivity, as well as decreasing the amount of worker strikes and whistleblowers that bring negative connotations to Amazon's fulfillment centres (Anjum et al, 2018). A challenge that could be associated with this proposal is the initial costs of time and money to retrain employees in new safety and communication methods. However, while safety measures and training will have an initial cost, the costs can be thought of as a future investment that will increase productivity and decrease negative publicity.

Increase Training, Educational, and Promotional Opportunities

As part of Amazon's responsibility to local communities, it is imperative that Amazon increase existing training and educational programs for minorities in order to increase future opportunities and limit the impact that automation will have on these low socioeconomic communities (Dahlin, 2019). Amazon currently has a few programs in place, such as leadership training and degree apprenticeship programs, which help people of all backgrounds enhance their skills for greater opportunities ("Who We Are," 2020). Therefore, implementing these existing programs with increased opportunities for promotion in fulfillment centres will increase the positive impacts that Amazon has globally and allow Amazon to continue to be ranked in the top 10 of companies with great employee training infrastructure, regardless of future automation (Stoller, 2020). A challenge posed by this solution could be seen in the mass retraining of employees, which could lead to a surplus of overqualified employees and additionally, the costs and time associated with training. However, if this proposal is conducted in stages, systematically retraining sections of the workforce at a time while increasing opportunities this should allow for maximum productivity, profits, and job security aiding the economy.

Benefits to Amazon and Beyond

A change within Amazon could initiate a domino effect within rival retailers due to its extensive network, like when Amazon increased its minimum wage and challenged others to increase as well or do better. Therefore, implementation of these changes could reduce the negative impacts of large companies globally, which often take advantage of visible minorities and low socioeconomic communities for profitable gain.

Enhance Environmental Accountability

A community benefits agreement (CBA) would reduce health impacts caused by environmental pollutants and ensure risks are brought to Amazon's attention immediately, allowing for prompt actions and measures (Yuan, 2018). As well, not only will a CBA limit negative health impacts, but it will also foster a respective relationship between communities and corporations and will cohesively work towards Amazon's zero carbon emission pledge to decrease both their long- and short-term environmental impacts (Anjum et al., 2018).

Decrease Workplace Related Injuries

Increasing Amazon's proactive safety and communication measures will protect employees across North America, especially those of minority status, from hazardous working conditions while incurring fewer costs to our health care system (Anjum et al, 2018). A reduction of costs to our health care system will reduce economic deficits, as well as give the government opportunities for investments, which could lead to economic growth (Richter & Craig, 2013).

Mitigate Job Loss and Increase Economic Potential

Over the coming decades, we will see automatization occurring globally with Amazon, a leader in innovation, paving the way ("Who We Are," 2020). Consequently, as precarious work becomes an increasing reality for many, actions directed at training and increasing job opportunities will be able to mitigate the damage that automation has on both the local and global economy ("Will Automation," 2020). Furthermore, the implementation and creation of extensive training programs throughout Amazon's fulfillment centres will aid the economy's growth by contributing to innovation, human capital, and job security (Richter & Craig, 2013). The benefits of retraining will be maximized in low socioeconomic communities, aiding to replenish the economy and leading to many downstream impacts such as better educational systems, city infrastructure, and health care (Richter & Craig, 2013).

Executive Summary

Amazon's preference for fulfillment centres in areas with increased and cheaper land have produced centres that are disproportionally located in racially diverse, low-income communities ("Amazon Employees," 2020). Consequently, the effects of these fulfillment centres are affecting minority groups and can be seen as Amazon's connived contribution to 'environmental and systemic racism' ("Amazon Employees," 2020). Addressing these issues with respect to Amazon's fulfillment centres' geospatial placement will decrease the disparity of health implications across socioeconomic and ethnically diverse communities. With only a few minor policy changes, the implementation of Community Benefits Agreements, safety and communication protocols, and increasing training opportunities for minority groups, will ensure that Amazon acts with full corporate responsibility and has a positive impact within it's local communities, fulfillment centres, and globally.

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Starbucks: Becoming ethically sound and genuinely green

Kailey Boots

Abstract

The research project investigated Starbucks® and proposed a solution for the company to use geography to become more ethically sound. The proposed plan created is called “genuinely green”; it’s a customer involved recycling program for Starbucks® to implement within specific geographical café locations that are lacking recycling facilities or programs. Utilizing a geographical approach – such as geographical mapping and volunteered geographic information – Starbucks® can create beneficial effects for company profits and the environment. Many communities do not have the proper infrastructure in place to properly recycle Starbucks® recyclable products, therefore allowing and encouraging customers to recycle their products at Starbucks® locations, not only promotes business but also positively impacts the environment. Although the Starbucks® brand colour is green, in order to be environmentally ethically sound the company needs to rid the green façade, make direct impactful changes to the planet, and make conscious decisions on geographical location and usage.

Introduction

This statement: Although the Starbucks® brand colour is green, in order to be environmentally ethically sound the company needs to rid the green façade, make direct impactful changes to the planet, and make conscious decisions on geographical location and usage. Being more transparent will not only help the environment, it will help the Starbucks® company overall in the process. Starbucks® cups and sleeves negatively impact the environment. I propose implementing a recycling program as an extension Starbucks® Reward Program that is already in place. I will be explaining how the current system of disposing sleeves has negative effects on the environment, and why implementing this type of recycling program is desperately needed. Instead of just having the colour of green on the brand, Starbucks needs to switch to becoming genuinely green.

In regards to making “green claims”, “if the green claim stresses that the source of the product is ethical, then consumers will be more likely to perceive a higher level of green trust in this company, green satisfaction with this company, and green brand equity for this company. Consumers are even more prone to demonstrate more purchase intention” (Mei-Fang & Chia-Lin, 2015).

One way to make Starbucks® more ethical is to look at its café locations in densely populated metropolitan areas—where consumption is high—and implement and encourage a recycling reward program. In addition, by hiring someone with a geographical focus it will allow Starbucks® to understand this issue through a more targeted and beneficial approach.

Company background

The Starbucks® website states, “Starbucks® first opened its doors in Seattle’s historic Pike Place Market in 1971” and “We make sure everything we do is through the lens of humanity – from our commitment to the highest quality coffee in the world, to the way we engage with our customers and communities to do business responsibly” (Starbucks, 2020). Well, let’s look through the lens of humanity with a geographical point of view, and recycle Starbucks® sleeves.

Starbucks® CEO Kevin Johnson said that, “Our aspiration is to become resource positive – storing more carbon than we emit, eliminating waste, and providing more clean freshwater than we use” (Johnson, 2020).

Common company practices

In 2012 Starbucks® introduced the EarthSleeve™, which includes proprietary technology to reduce overall material used as well as increasing post-consumer content; savings nearly 100,000 trees a year (Starbucks, 2020).

However, this simply isn’t enough. If customers are not recycling these sleeves, then what does this mean for our environment? After all, one of Starbucks® strategies going into 2021 is to have a, “50 percent reduction in waste sent to landfill from stores and manufacturing, driven by a broader shift toward a circular economy. To underscore its commitment to the circular economy, Starbucks is pleased to sign the Ellen MacArthur Foundation’s New Plastics Economy Global Commitment, setting ambitious circular targets for its packaging” (Manufacturing.net, 2020).

Starbucks rewards program

The current rewards program gives customers incentive to buy. They order and pay with a method of payment of choice and in return, customers earn Starbucks® Rewards Stars. These can be redeemed for rewards such as food, drinks and more (Starbucks, 2020).

Although Starbucks® is clearly making great strides and efforts to become greener, or at least appear greener, the marketing seems to make direct aims to change the genuineness of Starbucks® environmental appearance. Which, in the end distracts from the actual and factual pollution being created, and the authentic impact this is having on the environment. Instead of just “looking green”, let’s make specific implementations and initiatives to demonstrate to the customers and the planet, that Starbucks® is genuinely green, look at all we are doing.

The problem

Great You Created Recyclable Sleeves, But Are Customers Recycling? That is the question! The grassroots nonprofit organization Recycling Advocates states that, “cardboard sleeves can be recycled and reused, but often are not” (Recycling Advocates, 2020). This in large is due to people not being able to, whether it’s because their geographical location doesn’t offer pickup services for recyclables, or that their processing centers don’t have the proper equipment to break down the recyclables (Recycling Advocates, 2020). According to Waste Wise Products Inc., “Recycling is often reported in national figures but there are strong differences in each region of the country that can be caused by cultural attitudes towards recycling containers, money available for recycling programs, and local population density” (2013). Therefore, because there are regional trends and population access to curbside recycling

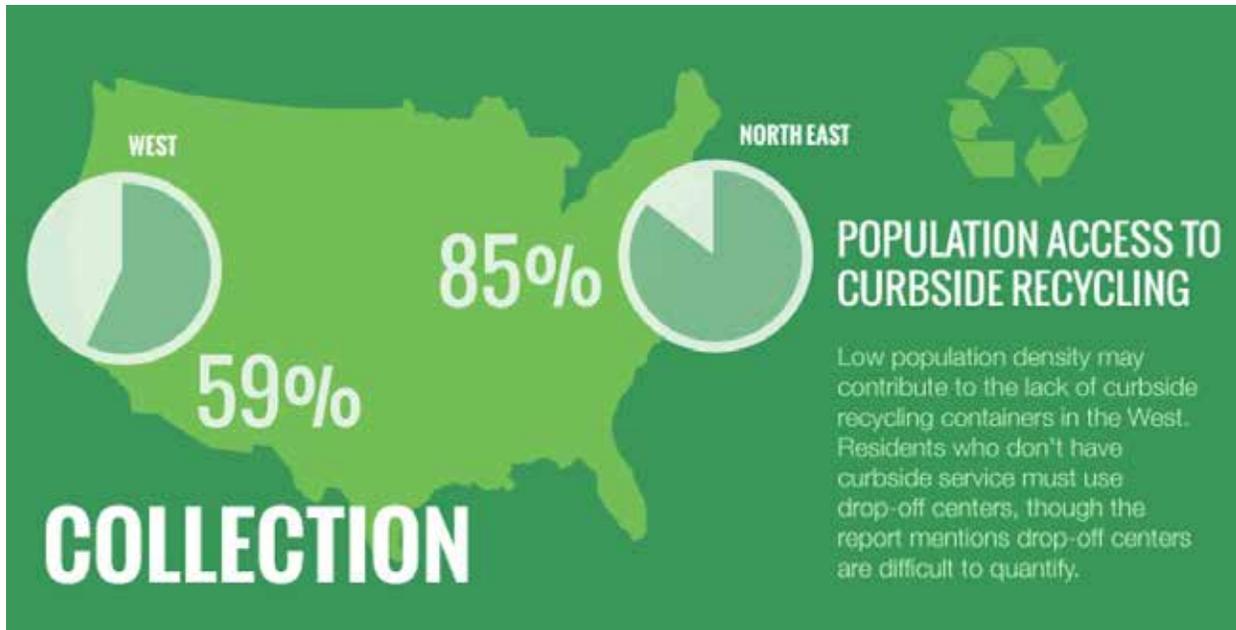


Figure 1. This image shows a the Population Access to Curbside Recycling. Geographical Trends In Recycling. (2013, November 7). Retrieved from <https://www.wastewiseproductsinc.com/blog/geographical-trends-in-recycling/>

affects who recycles their sleeves, by taking a geographical approach and mapping this out, we can ensure that the Starbucks locations in areas lacking curbside recycling, definitely offer and promote the genuinely green reward aspect of Starbucks® Rewards.

As you can see from this image above, “Low population density may contribute to the lack of curbside recycling containers” (Waste Wise Products Inc., 2013). The geographical location and population plays a large part in whether or not a person recycles. In most cases, people want to recycle, they just need it to be accessible. By providing this opportunity to customers, it will allow them to recycle their sleeves and feel better about their contribution to the planet; even if the don't live in an area with curbside recycling.

If customers are geographically limited to recycling the sleeves from Starbucks® cafés, these sleeves ultimately end up being disposed

of in their garbage, thus ending up in the local landfills. The amount of waste is reaching a maximum, “The global waste from cities alone is already enough to fill a line of trash trucks 5,000 kilometers long every day with global waste having risen from 30 million tons in 1980, to 200 million tons today, with most of it winding up in ill-tended landfills around major cities. Those landfills are at or near capacity, spawning illegal waste dumping and burning” (Chailertpong & Phumolsathien, 2018).

Challenges with these issues for Canada and beyond

There are serious challenges with recycling throughout Canada, the U.S. and beyond. One of the biggest challenges is recycling infrastructure; like Starbucks states themselves, “Because recycling infrastructure varies widely around the world, or may not exist at all – even from one city to another – a one-size-fits-all approach does not work for

a global business with stores in 64 countries. Some communities readily recycle our paper and plastic cups” (Starbucks, 2020).

They continue to state that, “However, due to a historical lack of demand for used cup material by the recycling industry, many don’t have the infrastructure in place to handle collection, hauling and processing. Additionally, in our stores operating in leased spaces, our ability to provide recycling for our customers is often dependent upon landlords who control the waste collection and decide whether or not they want to provide recycling. With approximately 20,000 retail locations globally, conditions vary from city to city and from store to store – making it a challenge for us to efficiently and effectively implement uniform recycling strategies” (Starbucks, 2020).

Therefore, due to these many challenges which are out of our control, it becomes apparent that the solution is to take a hands on approach and request customers to return their sleeves to any one of the many Starbucks® locations for proper processing (GG).

The solution

A possible solution to becoming greener is to implement a customer involved recycling program, similar to the M.A.C. BACK-to-M.A.C program. This M.A.C. program reduces the environmental impact and rewards their customers for participating; it’s a win-win. M.A.C. states that, “Our BACK-to-M.A.C take back program facilitates our use of recycled materials from returned makeup packaging to create new compacts; what is not recycled is converted to energy, reducing the amount of packaging that ends up directly in landfill” (M.A.C Cosmetics, 2020).

So in Starbucks® case, I think it would be best to encourage the customer to return the recyclable sleeves, in lieu of receiving Starbucks® Reward Stars. For example, for every 1 sleeve returned to Starbucks® locations, receive 1 Starbucks® Reward Star.

The current Starbucks® reward program— with locations in 75 countries and 13.3 million people (Harper, 2017)—provides customers with minimum 1 star for every \$1 spent (more for Gold members, etc.), therefore this system is in line with what is already being offered (Starbucks, 2020).

Green marketing has a positive impact on increasing purchases, on customer satisfaction, and a significant effect on brand image (Windiana & Bakhtiar et al., 2020). Involving and encouraging customers to recycle and reduce waste, creates a partnership feel, helps the environment, and promotes sales. Customers will feel excited to gain rewards stars while simultaneously helping the environment, and will be able to fulfill their waste reducing goals. In these instances, all parties involved win.

Feasibility

Clearly, it is undeniable that using the EarthSleeve™ to its fullest potential by encouraging customers to recycle them, will profoundly change the environmental impact.

Due to the already implemented Starbucks® Rewards program, the transition to the new addition of genuinely green to the program will be easy as customers are already set up on the platform, understand the rules, and how to enjoy the many perks available.

In geographical areas that do not have full accessibility to recycling, this encourages

them to take part in making an environmental difference, as well as to visit the Starbucks® café's – which is great for revenue.

In a recent study Exploring the effect of Starbucks' green marketing on consumers' purchase decisions from consumers' perspective, Pei-Hsuan & Guan-Yi et al., concluded that, "Green marketing stimulates green consumption behaviour by encouraging consumers to purchase green products, thereby reducing the generation of pollution," and also most importantly, "Green marketing can lead to purchasing or re-purchasing decisions" (Pei-Hsuan & Guan-Yi et al., 2020). Therefore, it's important to keep in mind when evaluating the feasibility, just how beneficial this addition to the rewards program will be.

How these changes benefit Canada and society

The changes I am proposing would benefit Canada and society because "Green entrepreneurship is claimed to have the potential to be a major force in the overall transition towards a more sustainable business paradigm, with green entrepreneurs offering exemplary solutions for a social transformation" (O'Neill & Gibbs, 2016). By setting this example of making an environmental decision and shift, it causes a wave of green thinking for customers.

Making concrete changes like adding in-house recycling infrastructure can make a huge difference for Canada and beyond. For many communities that don't have the luxury to recycle the sleeves, they will be more likely to stop at Starbucks® locations, knowing they can turn in their sleeves for rewards, while making a difference in their community and planet. An example of this being done is,

"Procter & Gamble has developed in-house recycling infrastructure and increased the recycled content of its plastic packaging by 30% from 2010 to 2016" (Dauvergne, 2018).

Geographical approach

Location and Mapping It Out– What About Geography?

By appropriately mapping out café locations, it will have beneficial effects for both the environment and Starbucks®, leading to happy customers and a happy planet. The location chosen to build and operate Starbucks® café's, ultimately has an effect on the environment and the company; especially since the waste products are ending up in the vicinity of that particular café location.

The advantages of taking a geographical approach are that we can map out the areas lacking recycling facilities or programs—the more rural areas—and strongly promote the genuinely green version of the Starbucks® Reward program. Ensuring that the recyclable sleeves are brought to Starbucks® cafés which will be responsible for properly recycling the products. This has shown effectiveness within studies because, "when an effort is made to make some green practices visible to customers, especially when customers can take action and experience that (such as in the case of encouraging customers to utilize reusable mugs), customers have a tendency to consider the company to be performing well in the implementation of other green practices" (Atzori & Shapoval et al., 2018).

Within the Starbucks® 2010 Global Responsibility Report, it was said that, "While some communities already recycle our paper and plastic cups, most don't have the infrastructure in place to handle collection, hauling and processing due to a lack of



Figure 2. This image locations that offer recycling. Starbucks Global Responsibility Report Goals & Progress 2010. (2010). Retrieved from <https://globalassets.starbucks.com/assets/2660085bf62e4246a91a8024f500cb37.pdf>

demand for cup material by the recycling industry” and that, “we won’t consider our cups universally recyclable until our customers can recycle them in our stores, at their homes and workplaces, and in public spaces” (Starbucks, 2010). Statistics Canada mentions that, “Differences in levels of access are apparent depending on dwelling type. Canadians who live in single detached homes are more likely to have access to recycling services than Canadians living in mobile homes or apartments (Statistics Canada, 2008).

It is my goal, to help Starbucks®, fill this gap, and allow fair recycling opportunity for their customers. I will use volunteered geographic information (VGI), which is emerging as a new category of data and is already used for purposes related to urban management, as it has been shown to accurately estimate population distribution (Bakillah & Liang et al., 2014). This image above from Starbucks®, illustrates the amount of North American Starbucks® locations and the percentage that has front-of-store recycling. Using

geographical mapping, we can change this to ensure this percentage increases, and that locations in areas that don’t offer curbside pickup, definitely have in-store recycling in place for those customers. I suggest employing a GIS and recycling expert at the Starbucks® headquarters. It’s great to create a more eco-friendly and recyclable product, but if customers aren’t disposing of it properly, what’s the point?

Making smart decisions for the future

I know Starbucks® has made great efforts in attempting to create a more eco-friendly brand with a smaller footprint. But let’s be honest – I am not here today to enhance their feats, but rather to point out their geographically environmental weaknesses. My job is not to boast on their accomplishments, but to help them—Starbucks®—understand areas where there could be improvement to become a more ethically sound company. I know the Starbucks® company is amazing, but we have a long way to go. Starbucks® states on their website that, “We are continuing to find innovative ways to engage customers to work with us to reduce waste” (Starbucks, 2020). Let’s start today! By hiring someone with a geographical approach to becoming genuinely green, will ensure that we reach this goal – together.

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Introduction & Thesis

GG – Starbucks® Becoming *Genuinely Green*

Thesis statement: **Although the Starbucks® brand colour is green, in order to be environmentally ethically sound the company needs to rid the green façade, make direct impactful changes to the planet, and make conscious decisions on geographical location and usage.** Being more transparent will not only help the environment, it will help the Starbucks® company overall in the process. Starbucks® cups and sleeves negatively impact the environment. I propose implementing a recycling program as an extension Starbucks® Reward Program that is already in place. I will be explaining how the current system of disposing sleeves has negative effects on the environment, and why implementing this type of recycling program is desperately needed. Instead of just having the colour of green on the brand, Starbucks needs to switch to becoming *genuinely green*.

In regards to making “green claims”, “if the green claim stresses that the source of the product is ethical, then consumers will be more likely to perceive a higher level of green trust in this company, green satisfaction with this company, and green brand equity for this company. Consumers are even more prone to demonstrate more purchase intention” (Mei-Fang & Chia-Lin, 2015).

One way to make Starbucks® more ethical is to look at its café locations in densely populated metropolitan areas—where consumption is high—and implement and encourage a recycling reward program. In addition, by hiring someone with a geographical focus it will allow Starbucks® to understand this issue through a more targeted and beneficial approach.

Company Background

The Starbucks® website states, “Starbucks® first opened its doors in Seattle’s historic Pike Place Market in 1971” and “We make sure everything we do is through the lens of humanity – from our commitment to the highest quality coffee in the world, to the way we engage with our customers and communities to do business responsibly” (Starbucks, 2020). Well, let’s look through the lens of humanity with a geographical point of view, and recycle Starbucks® sleeves.

Starbucks® CEO Kevin Johnson said that, “Our aspiration is to become resource positive – storing more carbon than we emit, eliminating waste, and providing more clean freshwater than we use” (Johnson, 2020).

Common Company Practices

Starbucks® EarthSleeve™



This image shows a Starbucks sleeve which adds to the pollution. Akyurt, E. 2018. Brown Starbucks Paper on Gray Wooden Surface. Retrieved from <https://www.pexels.com/photo/brown-starbucks-paper-on-gray-wooden-surface-1435750/>

In 2012 Starbucks® introduced the EarthSleeve™, which includes proprietary technology to reduce overall material used as well as increasing post-consumer content; savings nearly 100,000 trees a year (Starbucks, 2020).

However, this simply isn’t enough.

If customers are not recycling these sleeves, then what does this mean for our environment? After all, one of Starbucks® strategies going into 2021 is to have a, “50 percent reduction in waste sent to landfill from stores and manufacturing, driven by a broader shift toward a circular economy. To underscore its commitment to the circular economy, Starbucks is pleased to sign the Ellen MacArthur Foundation’s New Plastics Economy Global Commitment, setting ambitious circular targets for its packaging” (Manufacturing.net, 2020).

Starbucks® Rewards Program

The current rewards program gives customers incentive to buy. They order and pay with a method of payment of choice and in return, customers earn Starbucks® Rewards Stars. These can be redeemed for rewards such as food, drinks and more (Starbucks, 2020).

Ok That’s Great – But We Need to Do More!

Although Starbucks® is clearly making great strides and efforts to become greener, or at least *appear* greener, the marketing seems to make direct aims to change the genuineness of Starbucks® environmental appearance. Which, in the end distracts from the actual and factual pollution being created, and the authentic impact this is having on the environment. Instead of just “looking green”, let’s make specific implementations and initiatives to demonstrate to the customers and the planet, that Starbucks® is *genuinely green*, look at all we are doing.

Starbucks®

Becoming Ethically Sound & *Genuinely Green*

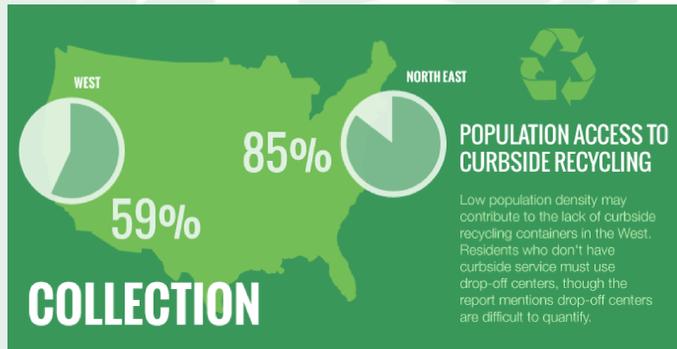
By Kailey Boots

Proposal

The Problem: Great You Created *Recyclable* Sleeves, But Are Customers *Recycling?* That is the question!

The grassroots nonprofit organization Recycling Advocates states that, “cardboard sleeves can be recycled and reused, but often are not” (Recycling Advocates, 2020). This in large is due to people not being able to, whether it’s because their geographical location doesn’t offer pickup services for recyclables, or that their processing centers don’t have the proper equipment to break down the recyclables (Recycling Advocates, 2020).

According to Waste Wise Products Inc., “Recycling is often reported in national figures but there are strong differences in each region of the country that can be caused by cultural attitudes towards recycling containers, money available for recycling programs, and local population density” (2013). Therefore, because there are regional trends and population access to curbside recycling affects who recycles their sleeves, by taking a geographical approach and mapping this out, we can ensure that the Starbucks locations in areas lacking curbside recycling, definitely offer and promote the *genuinely green* reward aspect of Starbucks® Rewards.



This image shows a Population Access to Curbside Recycling. Geographical Trends in Recycling (2013, November 7). Retrieved from <https://www.wastewiseproductsinc.com/blog/geographical-trends-in-recycling/>

As you can see from this image above, “Low population density may contribute to the lack of curbside recycling containers” (Waste Wise Products Inc., 2013). The geographical location and population plays a large part in whether or not a person recycles. In most cases, people want to recycle, they just need it to be accessible. By providing this opportunity to customers, it will allow them to recycle their sleeves and feel better about their contribution to the planet; even if the don’t live in an area with curbside recycling.

If customers are geographically limited to recycling the sleeves from Starbucks® cafés, these sleeves ultimately end up being disposed of in their garbage, thus ending up in the local landfills. The amount of waste is reaching a maximum, “The global waste from cities alone is already enough to fill a line of trash trucks 5,000 kilometers long every day with global waste having risen from 30 million tons in 1980, to 200 million tons today, with most of it winding up in ill-tended landfills around major cities. Those landfills are at or near capacity, spawning illegal waste dumping and burning” (Chailertpong & Phumolsathien, 2018).

Challenges with These Issues for Canada and Beyond

There are serious challenges with recycling throughout Canada, the U.S. and beyond. One of the biggest challenges is recycling infrastructure; like Starbucks states themselves, “Because recycling infrastructure varies widely around the world, or may not exist at all – even from one city to another – a one-size-fits-all approach does not work for a global business with stores in 64 countries. Some communities readily recycle our paper and plastic cups” (Starbucks, 2020).

They continue to state that, “However, due to a historical lack of demand for used cup material by the recycling industry, many don’t have the infrastructure in place to handle collection, hauling and processing. Additionally, in our stores operating in leased spaces, our ability to provide recycling for our customers is often dependent upon landlords who control the waste collection and decide whether or not they want to provide recycling. With approximately 20,000 retail locations globally, conditions vary from city to city and from store to store – making it a challenge for us to efficiently and effectively implement uniform recycling strategies” (Starbucks, 2020).

Therefore, due to these many challenges which are out of our control, it becomes apparent that the solution is to take a hands on approach and request customers to return their sleeves to any one of the many Starbucks® locations for proper processing (GG).

The Solution: Create Customer Involved Recycling Programs

A possible solution to becoming greener is to implement a customer involved recycling program, similar to the M.A.C. BACK-to-M.A.C program. This M.A.C. program reduces the environmental impact and rewards their customers for participating; it’s a win-win. M.A.C. states that, “Our BACK-to-M.A.C take back program facilitates our use of recycled materials from returned makeup packaging to create new compacts; what is not recycled is converted to energy, reducing the amount of packaging that ends up directly in landfill” (M.A.C Cosmetics, 2020).

So in Starbucks® case, I think it would be best to encourage the customer to return the recyclable sleeves, in lieu of receiving Starbucks® Reward Stars. For example, for every 1 sleeve returned to Starbucks® locations, receive 1 Starbucks® Reward Star.



The current Starbucks® reward program—with locations in 75 countries and 13.3 million people (Harper, 2017)—provides customers with minimum 1 star for every \$1 spent (more for Gold members, etc.), therefore this system is in line with what is already being offered (Starbucks, 2020).

Green marketing has a positive impact on increasing purchases, on customer satisfaction, and a significant effect on brand image (Windiana & Bakhtiar et al., 2020). Involving and encouraging customers to recycle and reduce waste, creates a partnership feel, helps the environment, and promotes sales. Customers will feel excited to gain rewards stars while simultaneously helping the environment, and will be able to fulfill their waste reducing goals. In these instances, all parties involved win.

Feasibility

Clearly, it is undeniable that using the EarthSleeve™ to its fullest potential by encouraging customers to recycle them, will profoundly change the environmental impact.

Due to the already implemented Starbucks® Rewards program, the transition to the new addition of *genuinely green* to the program will be easy as customers are already set up on the platform, understand the rules, and how to enjoy the many perks available.

In geographical areas that do not have full accessibility to recycling, this encourages them to take part in making an environmental difference, as well as to visit the Starbucks® café’s – which is great for revenue.

In a recent study *Exploring the effect of Starbucks’ green marketing on consumers’ purchase decisions from consumers’ perspective*, Pei-Hsuan & Guan-Yi et al., concluded that, “Green marketing stimulates green consumption behaviour by encouraging consumers to purchase green products, thereby reducing the generation of pollution,” and also most importantly, “Green marketing can lead to purchasing or re-purchasing decisions” (Pei-Hsuan & Guan-Yi et al., 2020). Therefore, it’s important to keep in mind when evaluating the feasibility, just how beneficial this addition to the rewards program will be.

How These Changes Benefit Canada and Society

The changes I am proposing would benefit Canada and society because “Green entrepreneurship is claimed to have the potential to be a major force in the overall transition towards a more sustainable business paradigm, with green entrepreneurs offering exemplary solutions for a social transformation” (O’Neill & Gibbs, 2016). By setting this example of making an environmental decision and shift, it causes a wave of green thinking for customers.

Making concrete changes like adding in-house recycling infrastructure can make a huge difference for Canada and beyond. For many communities that don’t have the luxury to recycle the sleeves, they will be more likely to stop at Starbucks® locations, knowing they can turn in their sleeves for rewards, while making a difference in their community and planet. An example of this being done is, “Procter & Gamble has developed in-house recycling infrastructure and increased the recycled content of its plastic packaging by 30% from 2010 to 2016” (Dauvergne, 2018).

Geographical Approach

Location and Mapping It Out– What About Geography?

By appropriately mapping out café locations, it will have beneficial effects for both the environment and Starbucks®, leading to happy customers and a happy planet. The location chosen to build and operate Starbucks® café’s, ultimately has an effect on the environment and the company; especially since the waste products are ending up in the vicinity of that particular café location.

The advantages of taking a geographical approach are that we can map out the areas lacking recycling facilities or programs—the more rural areas—and strongly promote the *genuinely green* version of the Starbucks® Reward program. Ensuring that the recyclable sleeves are brought to Starbucks® cafés which will be responsible for properly recycling the products. This has shown effectiveness within studies because, “when an effort is made to make some green practices visible to customers, especially when customers can take action and experience that (such as in the case of encouraging customers to utilize reusable mugs), customers have a tendency to consider the company to be performing well in the implementation of their green practices” (Atzori & Shapoval et al., 2018).

Within the Starbucks® 2010 Global Responsibility Report, it was said that, “While some communities already recycle our paper and plastic cups, most don’t have the infrastructure in place to handle collection, hauling and processing due to a lack of demand for cup material by the recycling industry” and that, “we won’t consider our cups universally recyclable until our customers can recycle them in our stores, at their homes and workplaces, and in public spaces” (Starbucks, 2010). Statistics Canada mentions that, “Differences in levels of access are apparent depending on dwelling type. Canadians who live in single detached homes are more likely to have access to recycling services than Canadians living in mobile homes or apartments (Statistics Canada, 2008).



This image locations that offer recycling. Starbucks Global Responsibility Report Goals & Progress 2010 (2010). Retrieved from <https://globalassets.starbucks.com/assets/2660085bf62e4246a91a8024f500cb37.pdf>

This image above from Starbucks®, illustrates the amount of North American Starbucks® locations and the percentage that has front-of-store recycling. Using geographical mapping, we can change this to ensure this percentage increases, and that locations in areas that don’t offer curbside pickup, definitely have in-store recycling in place for those customers. I suggest employing a GIS and recycling expert at the Starbucks® headquarters.

It’s great to create a more eco-friendly and recyclable product, but if customers aren’t disposing of it properly, what’s the point?

Making Smart Decision for The Future

I know Starbucks® has made great efforts in attempting to create a more eco-friendly brand with a smaller footprint. But let’s be honest – I am not here today to enhance their feats, but rather to point out their geographically environmental weaknesses. My job is not to boast on their accomplishments, but to help them—Starbucks®—understand areas where there could be improvement to **become a more ethically sound company**. I know the Starbucks® company is amazing, but we have a long way to go. Starbucks® states on their website that, “We are continuing to find innovative ways to engage customers to work with us to reduce waste” (Starbucks, 2020). Let’s start today!

By hiring someone with a geographical approach to becoming *genuinely green*, will ensure that we reach this goal – together. ☺

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