LANDMARKS

THE JOURNAL OF UNDERGRADUATE GEOGRAPHY

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UNIVERSITY OF TORONTO

ABOUT THE COVER

The cover design/illustration was made by Natalie R. Chiovitti. Inspired by the themes in this issue, the aim is to explore the pressing issues that arise today such as sustainable living, food security, and health, during the COVID-19 pandemic. This includes the complexity within the balancing of privacy and surveillance in our society. The overshadowing by local and global power structures are visually depicted through the enlargement of the building and the canned goods in contrast to the reduced scale of the people walking (socially distanced). The satellites surrounding the earth in the center, represent surveillance. The theme and three principles of sustainability (environment, social, and economic), are echoed through depictions of people (social; human); Bosco Verticale tower (environmental); surveillance satellites and canned goods (economic). Conceptually, the work encompasses the essence of a "landmark"; identified as a turning point in something such as the COVID-19 pandemic, which has opened conversations.

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TABLE OF CONTENTS

INTRODUCTORY NOTE

Land Acknowledgement

"We wish to acknowledge this land on which the University of Toronto operates. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this meeting place is still home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land."

- University of Toronto, The Division of Human Resources & Equity

The Editorial Board is proud to present the seventh volume of *Landmarks: The Journal of Undergraduate Geography*. This introductory note strives to set a precedent not only for future publications, but also for the standardization of acknowledging, and actively supporting and incorporating, Indigenous land rights, systems of governance and culture, in everyday socio-economic practices across Canada. Throughout the production of this journal, our team, our nation and the world, were confronted with Canada's horrific histories of Indigenous residential schools as the unmarked burial sites of hundreds of Indigenous children are being discovered across Canada. As of July 6th 2021, the Truth and Reconciliation Commission of Canada has identified information about more than 4100 Indigenous children who died while attending a residential school as part of their Missing Children Project. We offer our deepest condolences - we stand beside you.

In a written statement on May 27th 2021, days before National Indigenous History Month, the Tk'emlúps te Secwépemc, Kamloops Indian Band, confirmed the remains of Indigenous students and children found near the former site of Kamloops Indian residential school in British Columbia. Additional burial sites across Canada have since been confirmed at Brandon Indian residential school in Manitoba, Marieval Indian residential school in Saskatchewan and Kootenay Indian residential school in British Columbia. New searches for unmarked burial sites at former residential schools have since been announced by various First Nations groups.

In Canadian history, over a hundred and thirty residential schools once operated across Canada. These institutions actively functioned with the intent to erase Indigenous people and culture. They were funded by the previously named Department of Indian Affairs branch of the Canadian government and administered by Christian churches. It is our hope that the uncovering of fatal Indigenous geographies across Canada will oblige further governmental investigative action, further mandate the inclusion of true Indigenous histories in Canadian history curriculums, and serve as a reminder for individuals, especially those in power, to actively contest the ongoing oppressions of systemic colonial practices against marginalized communities.

Additionally, our team has been hyper aware of national and international vaccination efforts to flatten the curve of the ongoing Covid-19 pandemic, as Ontario has progressed through various stages of reopening since June 2021 after more than a year of 'pandemic living'. We have proven our ability as students, professionals, family members, humanitarians and regular ole' land-dwellers alike, to find innovative ways to adapt and support each other during this global crisis. Moving forward, we must continue to apply these same characteristics in our academic and professional approaches to resolving the many injustices and inequalities that persist around the globe. While we have arguably glimpsed the proverbial 'light at the end of the tunnel', we hope that programming, ongoing projects and overall efforts to support marginalized communities will re-emerge once again from the impeding shadow of the global pandemic, able to resume their operations at full strength and capacity.

Health, above all, has been foremost on everyone's minds as hand washing, sanitizing, mask wearing and self-isolating have become part of our daily routines. It seems only too fitting that this year's journal features topics of global health, security and sustainability. It is our great pleasure to showcase Natalie Chiovitti's cover design as she combines the social, environmental and economic complexities of global health for this year's cover artwork. Themes of health and safety, economy, food security, environmental sustainability, security and surveillance are all represented. Internationally, and domestically, we must question and criticize standardized colonial practices and capitalist driven ideologies that continue to influence governmental, judicial, educational, economic and health care systems. This year's authors not only problematize critical global issues, but also embrace alternative worldviews and practices, recognizing the

significance of global systems and networks, and advocating against the marginalization of others.

The Editorial Board would like to thank all the students who submitted their papers for consideration and the Department of Geography and Planning for their ongoing support. I am especially grateful for our Managing Editor Priya Patel, our team of Editors and our authors for their contributions and hard work throughout the production of this issue. We hope that you enjoy the seventh volume of Landmarks and find yourself in good physical and mental health. Finally, regardless of your location in the world, I hope you are able to innovate, adapt, revolutionize, support, practice self-love, be kind, open-minded and compassionate, for the sake of improving overall global health and sustainability for future generations.

Sincerely,
Lisa Holliday,
Editor-in-Chief

CORPORATE SOCIAL RESPONSIBILITY AND THE PROMISE OF 'HEALTH FOR ALL'

EXAMINING GLAXOSMITHKLINE'S INVOLVEMENT IN INDIA

MATILDA DIPIERI

ABSTRACT

The global pharmaceutical industry relies on Corporate Social Responsibility (CSR) strategies to justify its presence and operations in countries of the Global South, like other transnational corporations of our time. With pharmaceutical countries holding a unique responsibility in the provision of public goods (i.e., drugs and specialized treatments) and safeguarding global health, CSR strategies applied in their offshore locations serve as an illustrative point of study. Using the case of GlaxoSmithKline (GSK) in India, this paper examines how this pharmaceutical corporation mitigates the exploitation of India's economy and specialized labour force through CSR strategies that promise to improve health equity and access in the country. By positioning GSK as an actor in global health, this paper argues that multinational pharmaceutical firms' efforts to assume responsibility for both inaction in health promotion and the exploitation of emerging economies through CSR strategies are ultimately insufficient.

Keywords: pharmaceuticals, India, health equity and promotion

CORPORATE SOCIAL RESPONSIBILITY AND THE PROMISE OF 'HEALTH FOR ALL': EXAMINING GLAXOSMITHKLINE'S INVOLVEMENT IN INDIA

As a leading transnational pharmaceutical corporation, GlaxoSmithKline (GSK) is confronted with both the moral obligation to contribute meaningfully to global public health, while confronting the same competitive and innovation pressures as any other globalized industry sector. Although calls for increased social awareness and transparency have led to the widespread implementation of Corporate Social Responsibility (CSR) strategies by multinational firms of different sectors, pharmaceutical companies' unique positionality as drivers of public welfare raises questions about these strategies' effectiveness and these companies' intentions (Droppert & Bennett, 2015).

In recent years, GSK has invested and collaborated with India and its local health sector, promising to improve access to health and healthcare services, as part of their goal for growth and diversification in emerging economies (Rizhamadze, 2020). Yet criticisms have been raised about the firm's intentions in the region, given India's highly educated and specialized labour force, as well as their continuous underperformance in indices of health and health equity (Mukhopadhyay & Paul, 2018). Through the examination of GSK's CSR initiatives in India, this paper will argue that multinational pharmaceutical firms' efforts to assume responsibility for both inaction in health promotion and the exploitation of emerging economies through CSR strategies are ultimately insufficient when considering these companies' role as actors in global health.

GSK'S GROWING INTEREST IN EMERGING ECONOMIES

GSK's current position as a top research and pharmaceutical corporation is largely in consequence of their long history of development. While the current rendering of GSK began its operations in 2001, this British multinational firm's history goes back a couple of centuries, being deeply connected to Imperialist efforts of development and expansion, conducting research expeditions across the Amazon and regions of Northern Africa (GSK, n.d.). Today, GSK's operational presence is felt in 150 different countries, with manufacturing sites dispersed across 39 countries — making this firm unquestionably transnational (Rizhamadze, 2020). The majority of GSK's manufacturing sites can be found in Central and Eastern Europe, allowing the corporation to majorly reduce exporting fees and trade barriers. While its large base in the United States allows the company to reduce shipping costs and benefit from a significantly higher profit margin (Rizhamadze, 2020).

While this strategic expansion has allowed for much of this firm's dominance within the industry, GSK has recently invested in numerous emerging economies in efforts to diversify within the global market, but also in hopes of contributing to expanding access to health and medications. Starting in 2008 in particular, GSK allotted substantial investment in BRIC (Brazil, Russia, India, China) countries, as well as Mexico, South Korea, and Turkey (Palmer, 2013). Doing so allowed the firm to diversify its range of pharmaceutical products, moving from those serving predominantly western markets and addressing western disease, products directed at populations within emerging economies.

This strategy addressed the firm's selective reliance on affluent market areas of promised growth through diversification policy that managed to increase their annual sales growth (Jack, 2013). Additionally, GSK's newfound interest in emerging economies allowed them to acquire a much wider range of off-patent brands, effectively placing them in a competitive advantage for government drug purchasing contracts (Jack, 2013). Nevertheless, with this pharmaceutical company's global expansion and presence in developing regions they have come under a significant critique for their exploitative power and their

growing role as a provider of public goods.

EMERGING ECONOMIES AND THE CALL FOR SOCIAL RESPONSIBILITY

While GSK's interest and investment in emerging economies was undoubtedly part of a larger scheme of economic growth and diversification, the firm's involvement in developing countries also addressed critiques about the firm's social responsibility. This becomes evident when examining their goals and mission associated with its investment in the Indian economy. In 2014, GSK's Consumer Healthcare Division in India emphasized that their involvement in the country looked to increase the access to pharmaceuticals across the local population, in efforts to increase health for all (GSK Consumer Healthcare India, 2014). This sentiment greatly resembles other pharmaceutical companies' discourses in the emerging countries they serve, emphasizing their role as providers of public goods and their interest in the local community as "deeply human" (deCampos & Pogge, 2012).

Given the similarity of global pharmaceutical firm's CSR statements and missions, scholars have begun to question whether a disconnect exists between these companies' interests in these countries' economies and simple increases in profit and the protection of their public image (Lee & Hunt, 2012). This can be illustrated in Andrew Witty's, past CEO of GSK, decision to price malaria vaccines 5% above the cost of production for India and other developing countries, in direct response to critiques about GSK's neglect of tropical diseases that arose in 2011 (Weeden, 2011, p. 69).

Similarly, GSK donated 5% of all of its profits in India towards building a stronger local healthcare system, after receiving backlash about its exploitation of industry workers throughout its operations in developing countries (Rizhamadze, 2020). While these philanthropic responses ultimately benefited the host economy in question, critiquing the reactionary nature of these strategies is still of interest, especially concerning the ongoing behavioural and discursive trends of other transnational pharmaceutical companies.

Critics have raised concerns about the very concept of CSR, particularly how its definition is often used differentially to serve different firms' and industries' interests. Within the pharmaceutical industry, CSR is often understood on a spectrum basing its initiatives on philanthropy, risk management and an avenue towards creating shared value (Droppert & Bennett, 2015). Understanding the range of CSR's initiatives allows for companies like GSK to make decisions that superficially address the needs of their host population with very little accountability of its overall merit and value. Yet again, while differential understandings of CSR exist, many of the same promises and missions are delivered to developing countries by a series of pharmaceutical and other industry actors.

There have been calls to unify the concept of CSR for transnational pharmaceutical companies, as well as to eliminate the concept altogether (Droppert & Bennett, 2015). While the pharmaceutical industry is composed of corporations, their role in promoting and ensuring health places additional pressure on their public engagement in a way not experienced by other sectors (Lee & Hunt, 2012). Therefore, relying on a CSR framework that does not acknowledge this unique experience prevents GSK and similar TNCs from achieving the sustainable development they promise for their host economies. In India, this has come about in failed attempts at health promotion and improved access to health services that point to GSK's simplistic mission statements that are broad enough to improve their public image, yet also sufficiently vague enough to receive little implications for their failed promises and disconnect from local economies.

PHARMACEUTICALS AS A PUBLIC GOOD

Discussions of GSK's role as a provider of public goods allows for an in-depth evaluation of their CSR strategies and commitment to the Indian economy and its people. While there is a lack of consensus among scholars about the pharmaceutical industry's role in protecting the right to health and ensuring equitable access to pharmaceuticals, GSK's CSR mission in India indicates the firm's commitment to this human right (Lee & Hunt, 2012). In 2014, the company asserted that it was deeply committed to ensuring "health for all," with aims in improving the quality of life of the local Indian community (GSK Consumer Healthcare India, 2014, p. 2).

These commitments from GSK indicate a strong commitment to human rights and development towards the United Nations' Sustainable Development Goals (SDGs) (Lee & Hunt, 2012). This declaration and commitment seemingly leave no room for question about the firm's motives and interests within the country and the wider health community. Nevertheless, with little to no infrastructure ensuring accountability and measuring the firm's progress towards these major goals, GSK's promise of CSR is simply kept as a statement and promise.

Providing transnational pharmaceutical corporations with a framework of accountability created for the corporate sector ignores the unique role of these firms as providers of public goods. While it could be argued that this role in upholding and protecting human rights is outside the scope of a corporation, the promises made within GSK's framework of CSR make its commitment clear. It is therefore apparent that GSK's philanthropic and reactionary attempts at appeasing public concern are ultimately in the benefit of these corporations rather than the people they are promising to serve. Nevertheless, we can still examine the efforts and initiatives that this firm itself has reported analyzing its value and overall contribution to promoting the right to health.

Within India, GSK has been vocal about its collaboration with local NGOs and government sectors to improve access to local healthcare services, which can be observed in their yearly CSR reports and press releases (Rizhamadze, 2020). Yet, from these reports it is difficult to discern how these efforts differ from philanthropic initiatives and how meaningfully they contribute to the health of the communities they are intending to serve. This is particularly relevant to consider given GSK's explicit claim that their efforts are "a genuine and sustainable investment in the community that we are a part of and is not just philanthropy" (GSK Consumer Healthcare India, 2014, p. 1).

Once again, this inability to properly measure or evaluate the success of their commitments points to the insufficiency of the CSR framework. Relying exclusively on self-reporting and selective 'external contracting' for evaluation, GSK's role in upholding and promoting health in India will never be understood impartially. This becomes especially relevant given India's continuous underperformance in indices of health access across OECD countries (Mukhopadhyay & Paul, 2018). Allowing GSK to report its "successes" in achieving corporate responsibility in India through their yearly reports, while little improvement is observed at the population level that points to issues in the validity and valuation of these CSR strategies.

The commitment to uphold the human rights of vulnerable populations should not be taken lightly, especially given the firm's powerful position as a provider of public goods. Current frameworks of CSR should be put into question when used by corporations like GSK to improve their public image and justify their investments in emerging economies. The lack of accountability experienced by these powerful corporations should be questioned more widely, particularly when their claims and promises position them as contributors to global health efforts.

INDIA AS A KNOWLEDGE ECONOMY AND

GSK AS A LEADER IN GLOBAL HEALTH

Thus far, we have examined GSK's interest and commitment to India, as one of the host economies it has invested in, as a part of their diversification strategy. Nevertheless, understanding India's interest in GSK and its position as a knowledge economy also raises questions about the role of pharmaceutical corporations as global health leaders. Since the 1990s, the Indian government has implemented a series of initiatives and strategies to strengthen their role as a knowledge economy in efforts to transition away from the global periphery (Mukhopadhyay & Paul, 2018). Knowledge economies are most significantly shaped by state retrenchment from public services, which directly shapes both the state and corporate actors' abilities to serve as providers of public goods.

These economies are also supported by a product patent system that promotes foreign direct investment (FDI) (Mukhopadhyay & Paul, 2018). Simultaneously, the transition towards a knowledge economy has been argued to promote economic growth and subsequent population-level development through its model of trickle-down economics.

While GSK has provided India with significant FDI in recent years, the Indian government has not received the expected inflow of FDI that was predicted through their knowledge economy modelling and implementation of a product patent system (Rizhamadze, 2020). This has had direct impacts on health outcomes within the country, regardless of GSK's commitment to health access and delivery among vulnerable populations. As of 2011, India has seen substantial economic growth, observable in tax collections and an increase in per person income (Kumar et al., 2011). Nevertheless, there has been a decline in corresponding health welfare expenditure. This is compounded by the fact that India only accounts for 1.2% of global pharmaceutical expenditure, even though 50% of health-related conditions in the region were attributable to poverty (Kumar et al., 2011). This raises questions about corporate responsibility in health, especially when the government positions economic growth as necessary for development and improved health outcomes.

The Indian government's retrenchment from healthcare expenditure should be more explicitly addressed by GSK's mission of CSR, particularly their efforts to improve "health for all." From their mission statement, GSK has positioned itself as an important stakeholder in the health and health outcomes of the Indian population, which is only exacerbated by the host economy's fixation with market-based solutions to development. This places GSK and other pharmaceutical corporations with FDI in India in a unique position that should require substantial accountability.

The Government of India's policies and GSK's own CSR commitments place this TNC as a major stakeholder in India's overall population health. While it is unrealistic for this firm to address the expansive healthcare needs of its host economy, the way its CSR strategy has fixed its position as a relevant actor points, once again, to the shortcomings of CSR strategies altogether. Situating transnational pharmaceutical firms as stakeholders in promoting the health of vulnerable populations requires a framework more expansive and accountable than that of CSR (Droppert & Bennett, 2015).

Allowing firms like GSK to make their philanthropic contributions and publicize reports of their progress and efforts undermines the experiences of the Indian population and their local health care system (Mukhopadhyay & Paul, 2018). If transnational pharmaceutical corporations want to make significant contributions to protecting their rights to health, they should do so through frameworks of accountability that position them as important global health stakeholders. Otherwise, their corporate promises and collaborations with the local government become insufficient in addressing real health needs.

CONCLUSION

Throughout this paper, GSK's promises of social responsibility and its inaction in addressing the health needs and outcomes of the Indian population raised questions about global pharmaceutical companies' roles as protectors of health and providers of public goods. What was clear from this exploration was the insufficiency and ineffectiveness of CSR strategies and frameworks in addressing these concerns and mediating this TNC's involvement with its host economy. With promises to uphold "health for all" and improved health outcomes in the region, GSK positioned itself as an important actor in addressing the needs of the Indian population.

Nevertheless, with minimal accountability in its progress towards this goal or evaluations of its strategies, it is difficult to meaningfully position this firm as a leader in global health. If transnational pharmaceutical corporations are looking to take responsibility for health in emerging economies, they must look beyond corporate frameworks of accountability. When it comes to protecting human rights and ensuring access to health, both TNCs and their host economies should have more comprehensive strategies to monitor and assess these efforts. Otherwise, strategies implemented by firms like GSK will never move beyond philanthropic, public appeasement.

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FOOD APARTHEID

A RADICAL AMENDMENT TO THE FOOD DESERT PARADIGM

AISHA ASSAN-LEBBE

ABSTRACT

Throughout the paper I explore the debate surrounding 'food deserts' in the contemporary United States. I explore the dominant paradigm, which is a market-based solution of simply introducing grocery stores to underserved communities as a means of addressing food insecurity. I take cues from community organizers who have framed the conversation around food inaccessibility as being endemic to urban America. Drawing on policy reports, the work of federal food initiatives, and recent scholarship by critical food scholars, I affirm that 'food apartheid' is a more apt and paradigm term than 'food deserts', as it speaks to the historical realities of food as a tool in the war against the poor and people of colour. Lastly, I conclude by discussing some avenues for change that attend to the work done through this paradigm shift towards food apartheid.

Keywords: food security, food desert, urban America

INTRODUCTION

In an influential article in the non-profit magazine "Guernica", community organizer and political activist Karen Washington (2018) proposes the designation "food apartheid" (par. 7) as a dramatic revision of the food desert metaphor: "When we say food apartheid," Washington argues, "the real conversation can begin" (Brones, 2018, par 7). Washington is not alone in the conviction that the American food landscape is riddled by an institutionalized legacy of segregationist planning. While so-called food desert regions have been of concern among progressive public health and other government officials alarmed by the negative impact of food insecurity in these neighbourhoods, attention is seldom drawn to the alarming amount of food deserts located within communities of colour.

In this paper, I expand upon Washington's argument surrounding the urgency of the need to shift the terms of the debate concerning the prevailing food desert paradigm. In revealing the sociopolitical and economic underpinnings of the food desert paradigm, it becomes clear that the term and associated paradigm 'food apartheid' is far more effective and apt, and provides a unique opportunity to ask imaginative, far-reaching questions about how public space, community resources, and state policies can be mobilized for the purpose of creating a different form of political engagement with problems of food insecurity.

Although the issues associated with food deserts are neither specific to the metropolis nor confined to the continental United States, the focus of this paper is on urban America, which is a paradigmatic place to situate my argument since the effects of structural racism are abundantly clear in these areas. This paper unfolds in five parts: in the first section, I contextualize food deserts and lay the premise of a market-based or supply-side approach to a lack of access to healthy and affordable food. The second section interrogates the trope of desertification. Next, I problematize the typical market-driven solution to food precarity, that is simply introducing more supermarkets. I then suggest that food apartheid is a more apropos term that conveys the use of food as a tool of war against the poor and people of colour. I conclude by outlining urgent and critical interventions which accompany the work done through the linguistic shift towards food apartheid.

DEFINING THE TERMS OF THE DEBATE

The U.S. Department of Agriculture's (USDA) definition of food deserts includes any census tract with a 20 percent or greater poverty rate and where a third or more of the residents live more than one mile from a supermarket or large grocery store (Ver Ploeg et al., 2011). As of 2010, the USDA reported that 23.5 million Americans live in food deserts (Ver Ploeg et al., 2011). The effects of food deserts on poor health outcomes are well-established, as food deserts are known to contribute to poor diet, obesity, and other health disorders. While there is little contention among progressive-minded experts and officials that access to food is uneven, the degree to which this problem ought to be politicized remains perennial to this discussion. A

ccording to policymakers and government officials, access is restricted due to the absence of any grocery stores within reasonable travelling distance. Food deserts are likened to physical desert regions because the search for and acquisition of nutritious and affordable food is not easily accomplished, as in a desert region. Indeed, food deserts are not readily traversed, particularly by people without cars who rely on public transportation.

The issue of food deserts has gained attention even at the level of the U.S. Senate, with multiple policy initiatives brought to the floor of Congress. Such bills as HR 3100 and HR 3015 introduced by Democratic congress people include a suite of economic measures and financial incentives to encourage supermarkets and real estate developers to seek

business in underserved areas, including tax credits for rehabilitated buildings, sales on fruits and vegetables, and employment returns (Cohen, 2013). The Healthy Food Financing Initiative (HFFI) is another example of the prominence and wide acceptance of the food desert mantle. The HFFI is a public-private partnership that provides financing to grocers and real estate developers looking to open or expand stores in areas without adequate access to affordable, nutritious foods, and was spearheaded in 2010 by the Obama administration as part of the public health campaign entitled Let's Move! ('Healthy Communities', n.d.).

The HFFI alone has diverted more than $220 million in grants and an estimated $1 billion in loans towards "revitalizing economies, creating jobs, and improving access to healthy food" ('About the Healthy Food Financing Initiative', n.d., par 3). Encouraging the opening and expansion of large supermarkets is seen to act as a logical counterforce to a lack of access.

Individual behaviour and decision-making also affects one's ability to acquire healthy food from a food desert perspective. The HFFI in conjunction with the Let's Move! campaign joined forces with the White House, Walgreens, and Wal-Mart to tackle the problem of urban food security. Both corporations promised to open new stores in inner city areas and stock fruits and vegetables, while the campaign promoted education about personal exercise and healthy food selection. As urban studies theorist Richard Florida contends, "the biggest difference in what we eat comes not from where we live per se, but from deeper, more fundamental differences in income and, especially, in education and nutritional knowledge" (Florida, 2018, par 2).

Thus, while the interaction of supply and demand factors generally determines which food products are available and the price of those products, consumer demand is heavily influenced by personal preference and individual behaviour. In low-income areas therefore there often exists not only a lack of nutritious foods but also a lack of education about healthy food choices, thereby maintaining the demand for unhealthy food products, perpetuating their availability. As I demonstrate next, food deserts are a wholly inaccurate and depoliticized framework.

INTERROGATING 'FOOD DESERTS'

Food deprivation has been depoliticized due to centrist origins of the food desert paradigm. The first use of the desert metaphor can be traced to a 1995 article in a U.K. government publication document from a policy working group entitled the "Low Income Project Team", commissioned by then Conservative Government's Nutrition Task Force, which quoted a resident of a public sector housing scheme who used the term 'desert' to describe areas defined by health inequality and social exclusion (Beaumont et al., 1995). Since then, the term has captured the imagination of policymakers, academics, and community groups across the political spectrum.

The most trenchant critique of food 'deserts' is that this naturalist language neglects any discussion of race or class, which both are inherent to the issue of food precarity. Racialized minorities, including African Americans and Hispanic Americans, are disproportionately represented in food deserts. The USDA tool neglects to mention the racial and ethnic composition of residents of food deserts. In reality, access to food is restricted due to a variety of factors such as cost, food safety, crime, class status, as well as market forces. As such, the simplistic definition of food deserts outlined above allows policymakers to create solutions that only exacerbate the problem, while aiding large national corporations. Those that espouse the food desert viewpoint fail to address the fact that proximity to grocery stores is not the sole determinant of whether poor people can access healthy foods. Clearly, the food desert mantle is radically depoliticized with its absence of

socioeconomic considerations.

Furthermore, the trope of desertification is racialized and harmful. The use of 'deserts' suggests that these spaces are devoid of valuable life, and thereby presenting inhabitants of these areas as deprived while eliding the vibrancy of these spaces. This language also obscures from view those that are responsible for the conditions of intentional divestment, neglect and the separation of poor communities of colour from food. It absolves corporations of accountability, particularly supermarkets and real estate agents who enable the segregationist structure of the American urban food system.

FAILURE OF THE SUPPLY-SIDE SOLUTION

The approach that considers food 'deserts' a market-failure assumes a principal issue of physical access to fruits and vegetables that impedes people from accessing healthy food. As previously argued, access to food in food deserts is restricted due to a variety of factors beyond only physical access, including cost, crime, class status, and race.

Though such a market-oriented solution is the dominant, federally recognized model, it is insufficient given that food deserts fail to address the range of impediments to food accessibility, and the fact that they lack any long-term vision for structural change, they are often an emergency fix.

Further, public and private policy makers often amplify community distress and negative perceptions of the urban poor (Alkon, 2013; Eisenhauer, 2001). These approaches erase the agency of poor communities, who are erroneously believed to lack the "desire, knowledge, and/or means to eat healthier" (p. 27) in this purview (Alkon, 2013). Moreover, victim-blaming often accompanies this stereotyping. The initiatives by the Obama administration, though well-meaning, were overwhelmingly predicated on health outcomes as a derivative of individual behaviour, the effect of which atomizes responsibility and maligns the communities in question.

Though urban supermarkets can enhance the livability and economy of the neighbourhoods in which they are located, they can also be detrimental to these communities. These chains can disrupt strategies for survival employed by residents of food deserts. Residents who live in food deserts often employ a variety of methods and strategies to access affordable healthy food options for themselves and family members in the absence of supermarkets, including community programming and urban gardens (Alkon, 2013).

As community organizers have recognized, a solution to food deserts requires a redirection of capital towards residents rather than the corporations which are inherently profit-oriented. While supermarkets may be one piece of a larger slate of solutions, they should not be the sole focus of policymakers and politicians. Food deprivation does not occur in a vacuum and should only be considered in tandem with overlapping struggles for economic and social justice.

As previously argued, the lack of supermarkets within low-income, inner-city communities of colour is not accidental, as the naturalist framework of the food 'deserts' suggests. Rather, conditions of food precarity are the result of capitalist development, racist urban planning, and class structure. Simply introducing new supermarkets predominantly benefits supermarket corporations, who enjoy an increased share of consumer spending, thus diverting capital away from communities. As I explore next, the American food landscape is afflicted by the history of planners prioritizing White Americans over communities of colour, the very definition of apartheid. Therefore, a new discourse and mode of understanding is needed to better reflect the reality of the situation.

A DISCURSIVE INTERVENTION: FOOD "APARTHEID"

The American urban food landscape mirrors and is deeply intertwined with the historical geography of the nation (Eisenhauer, 2001). Many U.S. cities are haunted by a legacy of prejudicial lending, residential segregation, disinvestment in inner cities, and white flight following the Second World War. Food deprivation is the result of a large, monopoly-based economy, in which big box stores tend to dominate the landscape and are able to set prices due to their elevated status above small-scale food retailers. Following their introduction into metropolitan areas, supermarkets relocated to suburban areas in pursuit of a wealthier, mobile clientele.

The deliberate abandonment of infrastructure is a key facet of apartheid. Though apartheid was the name given in South Africa to describe the segregation of inhabitants of European descent from non-Europeans, it is not confined to this regional experience. Indeed, it can apply to all forms of racial separation, or any similar movement regardless of geographic location ('Apartheid, n.', n.d.). In evoking the language of 'apartheid', the term food apartheid conveys the urgency of the situation and is an indictment of systemic factors. Not only does this term remedy the naturalizing effect of the food desert metaphor, but also it describes the root causes and structural underpinnings of food access issues.

Government policies and their resulting incentives have played a significant role in shaping the segregated landscape of American cities. Food apartheid opens questions about pressing issues as part of a slate of political responses to food access concerns, and appropriately registers inaccess as deprivation. It also draws attention to the racist legacies of segregation and prejudicial lending. Moreover, the food apartheid label takes a holistic, structural approach to the problem of food oppression, thus giving strong theoretical grounding for a study of urban foodways that would illuminate underlying causes, conditions, and possibilities for change.

POTENTIAL POLICIES AND SOLUTIONS

The narrow formulation implicit in the term food 'deserts' tends to result in temporary and superficial fixes to the issue. The way in which an issue is linguistically framed informs solutions; indeed, the way policymakers frame issues can either impede or encourage the ability to enact environmental and social change (Kennedy et al., 2016; Eisenhauer, 2001). Drawing insights from the eat-local movement, Kennedy et al. (2016) argue that prescriptions for change are limited by the political discourse with which they are presented. Language which is politically charged can enlarge the scope and depth of political engagement, though it can also be dismissed as overly divisive. I argue that in this case, the politicization of food deprivation through the term food apartheid opens a wealth of opportunities to reinvent the community-oriented solutions to the issue of food access.

Food apartheid allies itself with a theoretical food scholar and activist framework that Ashante M. Reese (2019) calls a "geography of self-reliance" (p. 20). Geographies of self-reliance draw from a rich historical legacy of Black food geographies which emerged in response to deep structural inequalities. The term food apartheid similarly considers the entirety of the food system, including the role that alternative, less corporatized foodways can play in food provision (Brones, 2018). Alternative foodways offer a unique and under-explored entry point into conversations about redistributing power in the urban food landscape, as exhibited by such groups as the Nation of Islam and the Pan-African Orthodox Church ('Community Food Security', 2013). This is not to suggest that structural change is unnecessary; rather, as these groups have illustrated, it is possible for power and agency to be placed back in the hands of communities. As these groups argue, Black people are overrepresented among those who live in hunger, and capital from the urban food system should be diverted towards communities so that local knowledge can be harnessed when recreating healthier and more accessi-

ble food systems.

CONCLUSION

In this paper, I have identified one crucial referent — language — as a key impediment to addressing solutions to disinvestment by the state and historical legacies of institutional neglect and racial segregation. One of the primary concerns of the food desert paradigm is that deserts are naturally occurring phenomena. This use of natural language obstructs what is the intentional disregard of poor, racialized communities. By modifying the terms of the debate, the term food apartheid provides an entry point into conversations about alternative ways forward, and bring attention to the ways in which food is a weapon against poor, racialized communities.

Ultimately, this discursive framework recognizes that the fight for racial justice coincides with the fight for economic justice, and that the forces that produce over-policing and unequal neighbourhoods also produce contemporary food inequalities. Solutions should be consistent with the food sovereignty movement: control over food systems as food deserts are created by design.

While the supply-side approach seems to be an intuitive, simple solution with wide policy-backing, it is a harmful model that can inadvertently disrupt habits and strategies employed by communities to deal with food deprivation. Further, inserting an out-of-town chain supermarket simply exports profits and tax dollars out of communities. Rather, buttressing alternative foodways is a way to cope with institutionalized segregation. Ultimately, the adoption of the food apartheid paradigm provides a unique opportunity to ask imaginative, far-reaching questions about how public space, community resources, and local policies can be more meaningfully deployed in addressing food insecurity.

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GRANTING THE WHANGANUI RIVER PERSONHOOD STATUS

LIMITATIONS OF THE *TE AWA TUPUA ACT*

JANE YEARWOOD

ABSTRACT

With the development of the Rights of Nature Movement over the past few decades, there has been a marked increase in the enactment of legislation which extends rights to non-human entities as an environmental protection strategy. The *Te Awa Tupua Act,* which was passed in 2017 in New Zealand, extends rights of personhood to the Whanganui River. While much literature has lauded this Act as a truly transformational and innovative legislation, this article takes an opposing view: I argue that the Te Awa Tupua Act has serious limitations as a legislation and is thus unlikely to effectively meet its goal of improving water management and ecosystem health while recognizing Indigenous Maori sovereignty. This article begins with an overview of the development of the *Te Awa Tupua Act,* then undertakes an analysis of the four principal weaknesses of the Act: its adoption of an ineffective Guardianship model; failure to guarantee protection for the entirety of the Whanganui river system; maintenance of Western logics of anthropocentrism; and potential for difficulties in terms of enforcement. This article concludes that future efforts by governments to enact rights of nature legislation must carefully consider and improve upon the limitations of the *Te Awa Tupua Act.*

Keywords: *Te Awa Tupua Act,* water management, ecosystem health, Maori

INTRODUCTION

Should a tree be able to stand up in court and advocate for damages acted against it? This question might sound ridiculous on the face of it, but this is the provocative question which Christopher Stone (1972) asks in his article *Should Trees Have Standing?—Toward Legal Rights for Natural Objects*. Stone (1972) proposes that rights to personhood be extended to non-human entities as a method of countering the "cultural and legal understanding that humans are categorically different from animals and from the rest of nature" (p. 116), a perspective which he argues is central in driving environmental destruction. At the time of Stone's publication in 1972, the thought that nature could have rights was a novel idea within the Western legal system, and was met with speculation (Hutchison, 2014).

Over the past few decades however, the concept has gained traction, and an entire movement, the Rights of Nature Movement, also called the Earth Jurisprudence Movement, has developed (Hutchison, 2014). This movement advocates for the extension of rights to non-human entities, and the incorporation of a more eco-centric perspective into law (Hutchison, 2014). Thus far, there are several cases of rights of nature having been enacted. In Ecuador and Bolivia for example, rights of nature were incorporated into national law, extending the rights of personhood to all natural entities in these respective countries (Pecharroman, 2018). In other cases, rights of nature have been applied at a smaller scale to specific natural entities, including parts of The Ganges, parts of Lake Erie, and a variety of rivers in Victoria, Australia (Campbell & Gurney, 2020; Kauffman & Martin, 2018).

Perhaps the most well-known example is the extension of rights of personhood to the Whanganui River in New Zealand (O'Bryan, 2017). The passing of the *Te Awa Tupua Act* in 2017 garnered international attention, and is notable for a number of reasons, principally because it represents a novel case (O'Bryan, 2017). This legislation is not only the first instance in the history of the British legal system—the model under which New Zealand operates—that full rights of personhood were extended to a singular body of water, but it is also the first instance of Indigenous groups being directly involved in the development of rights of nature legislation (Charpleix, 2017). The *Te Awa Tupua Act* is the most recent case of the enactment of rights of nature legislation, so it is the most current model for the legal application of such legislation, and is thus under particular scrutiny (Kauffman & Martin, 2018).

Many scholars and activists have lauded the *Te Awa Tupua Act* as a truly transformational legislation both in terms of environmental protection efforts and the respect of Indigenous rights by settler states; indeed, many articles, both scholarly and popular, have explored the positive aspects of this Act (See Argyrou & Hummels, 2019; Chapron et al., 2019; Rodgers, 2017). The majority of work about this Act argues that it is innovative, and promises to effectively meet its outlined goal of improving water management and ecosystem health while also recognizing Indigenous Maori sovereignty (O'Bryan, 2017).

In recent work however, there have been a few scholars who have begun to more critically analyze this legislation to reveal a counter perspective: that while the *Te Awa Tupua Act* does have the potential to result in some positive outcomes, there are also numerous, serious concerns which can be levelled against it, and which put into question the degree to which it will be able to meet its goals (O'Bryan, 2017). This work is quite new, and based on my literature review, no scholar has as yet completed a full analysis of the weaknesses of the *Te Awa Tupua Act*. Thus, in an effort to contribute meaningfully to the existing literature on the topic, I will explore these weaknesses in this essay: I argue that the *Te Awa Tupua Act* has serious limitations as a legislation, and it is thus unlikely that this extension of personhood rights to the Whanganui River will result in any substantial gains

for river health or Māori sovereignty.

STUDY AREA

The Whanganui River is the longest navigable river in New Zealand, running for 290km from the centre of New Zealand's North Island to the Tasman Sea (See Appendix A for map; Hutchison, 2014). It travels through a variety of terrains, including volcanic plains, forested valleys, and farmland (Charpleix, 2012). Several Māori tribes have developed around the River with 70% of the population residing in the town of Whanganui, located at the mouth of the river (Charpleix, 2012). Fish from the river are an important food source for the Māori, though recreational fishing also takes place (Argyrou & Hummels, 2019). Otherwise, the river is used for transport, and is also a significant tourist attraction for those interested in watersports and boating (Rodgers, 2017).

DEVELOPMENT OF THE *TE AWA TUPUA ACT*

Māori communities are indigenous to what is now New Zealand, and have actively sought to maintain rights to their territories since settler colonization in the early 19th century (Charpleix, 2017). In 1840, the *Treaty of Waitangi* was developed between the British Crown and the Māori, and outlined rights to lands (Charpleix, 2017). The treaty was however formulated within the terms of the British legal system, which is not in consonance with Māori understandings of ownership and land usage (Charpleix, 2017). Moreover, the treaty was deliberately misrepresented to Māori people at the time of signing (Charpleix, 2017). The Crown has been able to use this Treaty to justify infringements upon Māori territories and customary rights, which has negatively impacted much of the natural environment, particularly riparian lands (Hsiao, 2012). As such, there have been significant disputes between Māori and the government since the formation of this treaty (Charpleix, 2017).

Of particular concern is the Whanganui River, a river of spiritual importance to all Māori, though especially to the Whanganui Iwi Māori (Hutchison, 2014). Under the auspices of the *Scenic Rivers Act*, another act passed by the Crown and enabled by the *Treaty of Waitangi*, the Crown has justified removing gravel from the river, releasing invasive species, destroying fishing weirs, establishing hydro-electric dams, and selling portions of the river to private companies for natural resource extraction projects and other developments (Charpleix, 2017; Hsiao, 2012). In Whanganui Iwi cosmology, the river is not only sacred, but is a part of the Iwi themselves (Hutchinson, 2014).

This perspective of indivisibility between Māori and the river is evident in the Iwi proverb "I am the river. The river is me" (Hsiao, 2012, p. 371). In the Iwi worldview, the river is an ancestor and a living being, and thus cannot be commodified, or owned (Hutchinson, 2014). Moreover, any damage to the river is seen as being tantamount to an attack on the Iwi people themselves (Hutchinson, 2014). Since the passing of the *Treaty of Waitangi* in the late 19th century, the Whanganui Iwi Māori have been engaged in protests, petitions, and legal battles with the Crown in an attempt to claim their customary rights and to prevent the Crown from damaging the treasured river (Hsiao, 2012). In 2017, after the longest standing legal battle in New Zealand's history, the *Te Awa Tupua Act* was passed in an effort to settle claims between the Iwi and the state and to ensure the health of the river (Argyrou & Hummels, 2019).

The *Te Awa Tupua Act* dictates that the Whanganui River is a living entity, and extends legal personhood to the river; a legal status which requires the needs of the river to be considered in court to ensure its continued flourishing (Rodgers, 2017). The Act is called Te Awa Tupua, the Māori word for the Whanganui river (Rodgers, 2017). In Māori, the meaning is more complex however, and loosely translates to "an indivisible and living whole from the mountains to the sea"

(p. 102), reflecting the Māori view of the river as a single entity (Kothari & Bajpai, 2017). In honour of this, the Act also claims that it supports a unified approach to river management, taking into account the entirety of the river ecosystem (Kothari & Bajpai, 2017). As of now, no major cases have been brought to court enlisting the *Te Awa Tupua Act*; however, there are many limitations evident in the Act on principle alone, as will now be explored (Argyrou & Hummels, 2019).

ADOPTS AN INEFFECTIVE GUARDIANSHIP MODEL

A unique element of the *Te Awa Tupua Act* is the guardianship model, also called the trustee model: two designated individuals are tasked with acting on behalf of the river, one appointed by the Crown and the other by the Whanganui Iwi (Argyrou & Hummels, 2019). The trustee model was initially suggested by Stone (1972) in his aforementioned work *Should Trees Have Standing?* One central challenge of rights of nature legislation is the representation of nature, given that nature cannot of course advocate for itself formally in court (Stone, 1972).

Stone (1972) attempts to address this concern by suggesting that an individual speak for the interests of the natural world, similar to the way in which corporations act for themselves through a company representative (Argyrou & Hummels, 2019). The New Zealand government adopted this guardianship model because it is easy to incorporate into New Zealand's existing British legal system, and as an attempt to recognize Iwi cosmology, as the Iwi describe themselves as 'guardians' of the river (Argyrou & Hummels, 2019; Charpleix, 2017). In this model, the human trustees neither own nor have control over the river; rather, they are expected to represent the interests of the river in court (Argyrou & Hummels, 2019).

Many concerns can be raised with respect to this guardianship model. To begin, the two guardians are tasked not only with "acting and speaking for and on behalf of the river", but also with "promoting and protecting the environmental, social, cultural, and economic health and well-being of the river" (Argyrou & Hummels, 2019, p. 753). While it is important to take into account a variety of factors impacting the river when making decisions, requiring guardians to consider economic factors, including tourism, recreational businesses, and amenities associated with the river undermines the role of the guardians as representing purely the interests of the river itself (Rodgers, 2017). Several scholars have argued that should an economic or social dispute arise in relation to the river, an impacted individual should represent such issues, while the guardians should entirely focus on representing the needs of the river (Argyrou & Hummels, 2019). This is important given that in many cases, economic and environmental or spiritual interests are oppositional, and are better considered in isolation (Argyrou & Hummels, 2019).

Next, the guardianship model invests representative power in only two individuals, doing little to improve the overall participation of Iwi in river governance (O'Bryan, 2017). While Iwi are able to appoint one of the two representatives, the Iwi are a large group with differing interests between community members: indeed, some Iwi may be fishers, and have more of an interest in addressing related concerns, while others may be involved in educational programs on river biology, and have another set of concerns (O'Bryan, 2017). Determining a nominee for the position of guardian who can effectively represent a variety of community interests and is approved by all Iwi may be challenging, if not impossible, and could lead to the politicization of the position or even conflict among community members (O'Bryan, 2017). The *Te Awa Tupua Act* was established with the purpose of increasing Māori involvement in governance and decolonizing the system, yet only allows for the involvement of one additional Iwi representative (Argyrou & Hummels, 2019).

Further, not only is disproportionate power vested in only one Māori representative, but also legal personhood as a legislation does not significantly increase Iwi involvement in governance, or the protection of the river (O'Bryan, 2017). Guardians do not have a management role, as they are not a consent authority, nor are they involved in the development of strategies for the administration of the river (O'Bryan, 2017). Rather than participating proactively in river management, they are only able to speak on behalf of the river in court in situations after damages have likely already taken place (O'Bryan, 2017). In other words, through the guardians, the river has "procedural access to New Zealand's political and legal systems only…while these ecosystems can own property, incur debts, petition the courts and administrative agencies, and receive reparations for damages, should a court rule in their favor, the laws do not guarantee the ecosystems' right to maintain their integrity or be restored, much less to flourish" (Kauffman & Martin, p. 50). Indeed, the Act is only concerned with allowing guardians to represent the river in court, not to work in management to restore and prevent damages to the river for its continued health.

Last, there is a more conceptual concern around the capacity of humans to act as a proxy for nature: can humans, particularly the non-indigenous guardian, with value systems shaped by the practice of commodifying and objectifying nature, effectively represent the needs of a non-human entity (Argyrou & Hummels, 2019; Hsiao, 2014)? Many rights of nature scholars accept the impossibility of answering this question completely but assert that it is still important to acknowledge the deficiencies in any model which attempts to give voice to nature, as the inherent biases and limitations of human understanding will always pose concern (Argyrou & Hummels, 2019).

Further, some have expressed concern that 'speaking for nature' could simply be used by the government as a front to further their own, human interests (Kauffman & Martin, 2018). In fact, this concern has already been realized in the case of extending rights to the Ganges, which some argue is a political tactic for furthering certain religious and political interests (Campbell & Gurney, 2020; Kauffman & Martin, 2018). Evidently, while the guardianship model was adopted with the intention of honouring Iwi cosmology within a British legal system and increasing environmental protection, there are flaws with the model which may preclude its ability to meet these objectives.

FAILS TO GUARANTEE PROTECTION FOR THE RIVER SYSTEM AS A WHOLE

Another central concern about the *Te Awa Tupua Act* is that it only applies to certain parts of the river, leaving segments of the river open to destruction by the New Zealand government and other actors. To begin, the Act stipulates that the riverbed of the Whanganui river will be protected under the law, not the water itself (Collins & Esterling, 2019). Indeed, the *Te Awa Tupua Act* "does not create, limit, transfer, extinguish, or otherwise affect any rights to, or interests in, water" (p. 57), and the consent of the guardians is not required to use the water in the river (O'Bryan, 2017). Even while the water of the river is inextricably part of the river, it remains entirely unprotected (Collins & Esterling, 2019). The true absurdity of this aspect of the legislation is poignantly stated by Collins & Esterling (2019): "Water is the crucial element of a river because without water, there is only a dry channel of land. Under the *Te Awa Tupua Act*, Te Awa Tupua [the river] does not have proprietary rights to the water, which creates an anomaly because it does not own the very aspect of the River that makes it a river: the water" (p. 216). As such, water pollution, extraction of water, and other environmental damages to the water could still be justified under the *Te Awa Tupua Act* (Collins & Esterling, 2019).

Moreover, only some parts of the riverbed are included under the Act. All portions of the river previously owned by the Crown

are now part of the *Te Awa Tupua Act*; however, those portions which are public access or which are privately owned will "not be affected by the river's legal personhood status" (Hutchison, 2014, p. 182). The Act also explicitly excludes any roads, railway infrastructure, or structures located within the coastal area from being vested in the Act, even further limiting the scope of this legislation (Collins & Esterling, 2017). Thus, guardians will not have the power under the law to exclude private landholders or the public from accessing several large portions of the river (Collins & Esterling, 2017). Using these exceptions to the legislation, the government has already legally justified the construction of hydroelectric dams and the extraction of minerals (Collins & Esterling, 2017; Kothari & Bajpai, 2017).

All of these exceptions to the protection of the river directly counter the claim made in *Te Awa Tupua Act* that the river will be protected as "an indivisible and living whole… incorporating all its physical and metaphysical elements" (p. 104) as per Māori cosmology (Kothari & Bajpai, 2017). Many activists and scholars point to this Act as delusive, and rightfully accuse the New Zealand government of misrepresenting the true scope and reach of this Act for the purposes of preserving their own political image as interested in environmental protection, decolonization, and improved Maori relations (O'Bryan, 2017).

As put by O'Bryan (2017), this legislation cannot be seen as anything more than "illusory, [and] only of symbolic effect" as long as it excludes water, which is "an essential physical element of" (p. 64) the river, and other portions of river, which are equally indivisible from the totality of the river and ecosystem. Given the many exceptions to its legal scope, the ability of this act to protect the long-term health and wellbeing of the entire river is nearly impossible.

MAINTAINS WESTERN LOGICS OF ANTHROPOCENTRISM

Another central concern regarding the *Te Awa Tupua Act* is its underlying Western logic of anthropocentrism. As mentioned, the *Te Awa Tupua Act* was developed as an attempt to reconcile the British legal system and the Māori system of governance (Charpleix, 2017). While some argue that the Act has done so successfully, others express the view that this attempt to syncretize the two systems still maintains the Crown as the dominant system (Charpleix, 2017; Hsiao, 2012). Not only is the terminology used and the format of the document based on the conventions of the British system, but also the Act maintains a fundamentally Western, British logic of human dominance over nature (Charpleix, 2017). This model of incorporating legal systems is "inherently hierarchical" (p. 26), as it prioritizes the Western model of the legal individual over the Māori tradition of relational rights, in which "land, water and people are treated as one and the same" (Charpleix, 2017, p. 25).

In a Māori system of governance and law, there is no separation between the human and the non-human, and natural entities are not seen as destined for human use (Charpleix, 2017). The *Te Awa Tupua Act* however emphasizes the protection of the "social, cultural and economic health and wellbeing of the Whanganui River" (p. 374), in other words the "aspects of the River which are of anthropocentric interest" (Hsiao, 2012, p. 374). Moreover, by positioning the river as a single 'person', as opposed to an entire ecosystem with relations to other beings, the Act is entirely based around the concept of individual rights (Charpleix, 2017).

Speaking more broadly of the Rights of Nature movement, there are many scholars who critique the idea that nature should require legal personhood in the first place, arguing that instead a paradigmatic cultural shift is necessary for true environmental protection (O'Donnell & Talbot-Jones, 2018). As argued by Pecharroman (2018), a "relationship of dominance between humans and nature can never put a stop to further damaging

nature" (p. 3), as people continue in the belief that non-human actors serve human needs, justifying destructive treatment of the natural world.

A system of governance in which nature has value solely based on whether humans have legally designated it as having rights and in which humans must have spoken on its behalf for it to have value certainly reinforces and reflects a relationship of domination over nature. Inherent to the concept of providing nature with the rights of a person is the view that our "concern and moral consideration" (p. 109) must not extend beyond the human community; in other words, to be respected, an entity must be considered human (Kothari & Bajpai, 2017).

In order for nature to be truly protected, anthropocentrism must be challenged at an ontological level (Youatt, 2017). Indigenous worldviews offer alternate ways of being in the world, which establish an ethic of care between all entities and which seek to dismantle the dichotomy between humans and the natural world (Kothari & Bajpai, 2017; Singh, 2017). Ultimately, a cultural shift towards this kind of worldview, in which a "recognition of nature's rights is part of attitudinal shifts in human beings and not only a part of legal measures" (p. 109) is necessary in achieving true environmental respect and protection (Kothari & Bajpai, 2017).

From this point of view, extending rights to nature is in fact regressive in light of the radical shift in thinking which is needed, as such laws cement an anthropocentric relationship with nature that perpetuates the colonization of Indigenous ontologies (Youatt, 2017). Thus, the *Te Awa Tupua Act* maintains the dominance of the British legal model and the Western logics which underpin it, as does all rights of nature legislation.

LACKS CLARITY AND PRESENTS POTENTIAL DIFFICULTIES IN ENFORCEMENT

Finally, the *Te Awa Tupua Act* contains ambiguities and is lacking in clarity, which may contribute to potential difficulties in enforcing it. As mentioned, there are several examples of rights of nature legislation having been implemented prior to the *Te Awa Tupua Act* in a variety of contexts (Kauffman, 2018; Pecharroman, 2018). In each of these previous cases, concerns have arisen around the enforcement of the rights of nature laws (Charpleix, 2017; O'Donnell & Talbot-Jones, 2018). For example, The Rights of Nature Act in Ecuador resulted in a legal victory where the Vilcabamba river was recognized as having rights, and the local government was charged with implementing an environmental remediation plan and a variety of protective measures (Pecharroman, 2018).

The enforcement of these measures was extremely difficult however due to uncooperative local governors and inefficient action, and resulted in social conflicts between the government and Indigenous populations (Pecharroman, 2018). Even in rights of nature cases in which legislation is specific to individual bodies of water, such as rights extended to the Ganges, or to Lake Erie in Toledo, few if any tangible actions for the health of these water bodies have been realized, in spite of legal cases having been brought to court (Kauffman & Martin, 2018; O'Donnell & Talbot-Jones, 2018). As succinctly put by O'Donnell & Talbot-Jones (2018): "legal rights are only worth having if they can be enforced" (p. 2).

As these earlier examples demonstrate, even if cases are successfully upheld in court, there can be a host of challenges associated with actually translating legal decisions into on-the-ground action, an issue which the *Te Awa Tupua Act* does not acknowledge and certainly does not make provisions for (Pecharroman, 2018). Otherwise put, "legal personhood in itself confers nothing except procedural access and capability", so while the Act certainly might succeed in bringing legal attention to concerns facing the river, this will not "necessarily lead to a substantive outcome" (O'Bryan, 2017, p. 66).

Further, the definition of legal personhood is itself ambiguous. Even in the case of humans, "the rights, duties, and powers to be exercised by a legal person are not always easily definable by the law" (p. 9), and these uncertainties are only amplified when attempting to extend rights of a person to a non-human entity (Pecharroman, 2018). While the *Te Awa Tupua Act* does include an article outlining some general guidelines around what personhood rights entail, they are quite vague and general; for example, one article item guarantees "the right to health and well-being" (p. 65), without providing any further detail (O'Bryan, 2017). As said by O'Bryan (2017), such vagueness creates questions around how effectively decisions will be enforced, given the many competing values which could be represented within the wide scope of 'personhood'.

Moreover, many legal scholars point out that throughout history, legal obligation to human people has certainly not translated into moral norms (Blankestijn & Martin, 2018). Indeed, not only can personhood rights be somewhat ambiguous, but also many such rights are violated even when legally established (Blankestijn & Martin, 2018). For example, women technically share the same legal rights as men in the United States, and yet are still marginalized due to patriarchal structures (Blankestijn & Martin, 2018). If legal personhood does not result in the enforcement of rights for humans, can it be presumed that the same enforcement will be extended to protect the rights for non-humans?

To continue, rights of nature cases often raise concern around establishing a reasonable balance between respecting nature's rights and allowing for human development (Kothari & Bajpai, 2017). For example, dams can have damaging environmental impacts and most certainly interfere with rivers through their diversion of water; yet a case could be made for the necessity of dam construction in certain instances, such as to protect communities against floods (Kothari & Bajpai, 2017). This question of how much development should be permitted is highly subjective, and the *Te Awa Tupua Act* remains ambiguous about how guardians should balance environmental and development interests (Kothari & Bajpai, 2017).

The only guidance given is that guardians may defer to other Acts as they form decisions; however, given that the hierarchy of rights is unclear, this may only serve to further reduce clarity (Kauffman & Martin, 2018). For example, the river is also subject to the Resource Management Act, which has many elements that are incompatible with the *Te Awa Tupua Act*, though it is unclear which Act should take precedence over the other (Kauffman & Martin, 2018). Such ambiguities could not only be used to justify inaction and lack of enforcement, but also could result in disputes among affected parties and delay enforcement of legal decisions.

In this same vein, there are also questions around whether guardians should be able to bring cases related to past damages to court (Kothari & Bajpai, 2017). If for example a dam built prior to the enactment of the *Te Awa Tupua Act* begins to have negative impacts on the river, should the guardians be allowed to make a case for its removal (Kothari & Bajpai, 2017)? Should these kinds of restorative actions be permitted, and if so, how might this impact compensation of damages (Kothari & Bajpai, 2017)? All of these questions remain unanswered in the *Te Awa Tupua Act* (Kothari & Bajpai, 2017). Given the lack of clarity in this Act, there will likely be significant challenges in deliberating cases and enforcing decisions once they have been reached.

CONCLUSION

This analysis reveals that there are significant limitations associated with the *Te Awa Tupua Act*. The Act was passed with the intention of extending legal personhood rights to the Whanganui River so as to ensure the continued flourishing of the river; however, it is clear that the many weaknesses of the Act

mean that it cannot guarantee the long-term health of this water body. The particularities of the Act are such that it fails to guarantee protection for the entirety of the Whanganui river system, and presents difficulties in terms of enforcement. Moreover, although it was the Māori's self-advocacy and sustained legal battle that led to the creation of *Te Awa Tupua Act*, this legislation does not do full justice to Māori cosmology and value systems, in that it maintains Western logics of anthropocentrism and continues to centre settler concerns. The Guardianship model is also ineffective in allowing for a diversity of Iwi voices to be heard, and thus the potential of this Act to result in significant improvements for Iwi sovereignty is overstated.

In analyzing this case, this paper also raised some concerns with rights of nature legislation more broadly. While it is true that the limitations of the *Te Awa Tupua Act* could be learned from and future rights of personhood laws for natural entities improved as a result—and I would encourage governments to do so should further attempts be made to enact such legislation—ultimately the weaknesses of rights of nature laws suggest that they should be rejected entirely as a method of environmental protection. At the core of any law which extends human rights to non-humans lies the dominant anthropocentric worldview. With increasing recognition that our relationships with non-humans must be fundamentally altered in order to meaningfully protect and care for the natural world, it can be reasoned that rights of nature legislation should be abandoned altogether in favour of action leading to more radical cultural change.

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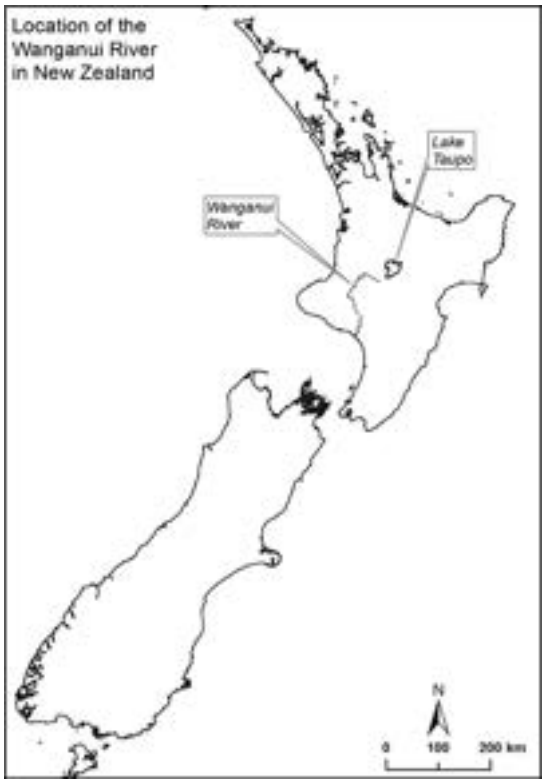
APPENDIX



Appendix A. Map of Te Aua Tupua, the Whanganui River.

THE PERFECT STRAWBERRY IN A FLAWED SYSTEM

THE RELATIONSHIP BETWEEN EXPECTATIONS AND PRODUCTION IN CALIFORNIA'S STRAWBERRY INDUSTRY

EVELYN ATKINSON

ABSTRACT

Like most industrially-produced monocrops, strawberries are expected to be perfect. This expectation has caused the strawberry industry to adopt a heavy pesticide regime, with severe environmental consequences. Drawing from a variety of agricultural and scientific sources, this paper will explore the pesticide regime applied in commercial agriculture using the California strawberry industry as a case study. Prior to evaluating strawberry expectation, this paper will explain the production history and the traditional conventional production system of the California strawberry industry. Then, it will explore traits valued by producers, the influence of consumer expectations and their preferences on the appearance of the commercial strawberry, and worker involvement in perpetuating fumigation. High expectations regarding breeding and quality are directly related to food waste because producers and consumers do not allow for natural variability or environmental damage, and because producers and the industry create a dependence on fumigants like methyl bromide. As preferences evolve, in order to become a sustainable industry, strawberry production will need to adopt new socioeconomic and environmental standards.

Keywords: strawberries, agriculture, California, production and economics

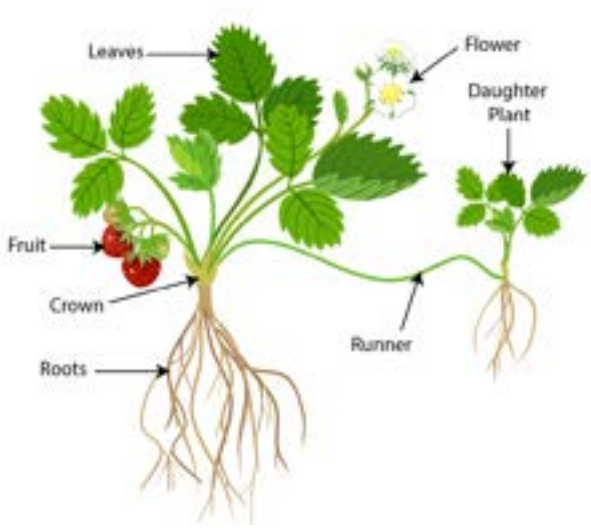
INTRODUCTION

The strawberry (*Fragaria* × *ananassa*) is an increasingly popular commodity in the United States. Over the past thirty years, strawberry consumption in the United States has been steadily rising, increasing from two pounds per capita in 1980 to eight pounds per capita in 2013 (Samtani et al., 2019). The United States strawberry industry supplies roughly twenty percent of the world's strawberry crop (Ibid). The majority of strawberries are grown for fresh consumption, with a fraction being produced for frozen or processed strawberry products, such as in jams (Ibid). In 2018, the United States Department of Agriculture (USDA) valued the 1,427,545 tonnes of consumed strawberries in the United States at $2.67 billion USD (NASS, 2019). California is the largest strawberry producing state, contributing to over ninety-one percent of the total produced in 2018 (Geisseler & Horwath, 2016; Samtani et al., 2019). Of the $2.67 billion USD of utilized strawberries produced in 2018, California's strawberry industry contributed $2.34 billion USD worth of produce (NASS, 2019).

While producers' preferences for strawberry traits influence which cultivars are bred, consumers drive demand and therefore inherently affect appearance. *Fragaria* × ananassa is a very delicate crop whose appearance is highly susceptible to environmental and production-related damages. The California strawberry industry relies on pesticides to combat environmental stressors, so much so that strawberries have held the number one spot in the "Dirty Dozen" for most contaminated produce since 2016 (Environmental Working Group, 2020). Using the California strawberry industry as a case study, this paper will argue that expectations concerning the visual appearance of produce have changed production standards in industrial agriculture, leading to increased dependence on selective breeding and pesticide use.

BACKGROUND: THE STRAWBERRY

Figure 1
Anatomy of a strawberry plant.



The garden strawberry (*Fragaria* × *ananassa Duch.*) is a member of the Rosaceae family (Figure 1; Liston et al., 2014). *Fragaria* plants are classified by five anatomical characteristics: a crown with white, five-petaled flowers, shallow root system, green trifoliolate leaves, runners (stolon), and runner plants (Ibid). The strawberry is a low-growing, herbaceous perennial that relies on insect pollination to reproduce; pollinated flowers produce red, fleshy fruits with small seeds on the outside (Ibid). In California, *F. ananassa* crops are grown in well-draining sandy or loamy soils along the Pacific coast (WIFSS, 2016). The state's mild climate supports year-round strawberry production with peak strawberry yield occurring between April and August (California Strawberry Commission, 2018).

While thousands of *Fragaria* species are naturally found across the Northern Hemisphere and in southern South America, *Fragaria* × ananassa originated out of Europe in the eighteenth century (Liston et al., 2014). It is a hybrid of two abundant species, the North American wild strawberry (*F. virginiana*) and the domesticated Chilean strawberry, *F. chiloensis* (Ibid). Numerous cultivated varieties of *Fragaria* × ananassa are farmed across California. Currently, the state's most popular commercial conventional cultivars are Mon-

terey, San Andreas, Fronteras, Portola, and Cabrillo as well as proprietary cultivars (like Driscoll's) (California Strawberry Commission, 2020; Samtani et al., 2019). In 2020, it is expected that over forty-six percent of commercial strawberries grown in California will be proprietary cultivars (California Strawberry Commission, 2020).

CALIFORNIA'S STRAWBERRY INDUSTRY

Prior to evaluating strawberry expectation, this section will provide clarity on the working of California's strawberry industry by exploring production history and the traditionally conventional production system.

PRODUCTION

California is the largest producer of strawberries in the United States. The market for California strawberries is primarily domestic; eighty-four percent of the yield is consumed within the United States and the remaining sixteen percent is exported (Samtani et al., 2019). Seventy-five percent of California's strawberries are intended for the fresh market, while the remaining twenty-five percent are frozen for processing (Geisseler & Horwath, 2016; Samtani et al., 2019).

California's commercial strawberry industry is divided into five regions that maintain year-round supply: Central Valley, Orange County/San Diego, Oxnard, Santa Maria, and Watsonville/Salinas (California Strawberry Commission, 2018). There are approximately 300 commercial growers across these regions (Ibid). Between September and June, the majority of commercial strawberry production comes from Southern California; as temperatures rise, production shifts northwards between March and December (Geisseler & Horwath, 2016). Peak yield occurs between April and August but after June 1st, only fifty percent of California's strawberry crop is harvested (California Strawberry Commission, 2018).

According to the USDA, 35,800 acres out of 35,900 planted acres of strawberry fields were harvested in California in 2018 (NASS, 2019). These 35,800 acres produced a total yield of 25,776,000 cwt of strawberries (Ibid). However, the USDA reported only 25,750,200 cwt of strawberries as utilized, with 25,800 cwt harvested but not used (Ibid). Although the unused strawberries only make up a small percentage of the total yield, this waste combined with the remaining unharvested crop has economic consequences such as: wasted water and other agricultural resources, and environmental consequences such as: field overuse, increased emissions from decomposition and fumigants. The value of California's utilized strawberry production in 2018 was $2.34 billion USD (NASS, 2019).

Mild weather supports a range of production systems, however commercial strawberries in California (both conventional and organic) generally germinate in nurseries before transplanted into monocrop rows in fields (California Strawberry Commission, 2018; Samtani et al., 2019). The standard production system is the annual hill plasticulture (AHP) system, which uses a combination of raised beds with plastic mulches and pre-planted fumigants to limit soil-borne diseases and weed infestations (Samtani et al., 2019).

Most acres are treated with 300 pounds of fumigants a year, with AHP systems being established on top of the original soil after fumigation to control for all possible variables (Ibid). Commercial producers attempt to preserve strawberry quality by using deficit irrigation systems in conjunction with AHP production systems (WIFSS, 2016). Drip irrigation, a form of deficit irrigation, maintains consistent soil moisture while limiting contact between irrigation water and the fruit (Samtani et al., 2019; Weber et al., 2017). Drip irrigation systems use high amounts of water due to their constant flow (Ibid). While production systems vary, all strawberries in California are largely hand-picked by migrant workers (WIFSS, 2016).

CHALLENGES OF STRAWBERRY PRODUCTION IN CALIFORNIA

Despite the success of California's strawberry industry, growers continue to face production challenges with land and labour availability. Since 2017, the USDA has identified declining acreage for strawberry farms in California (NASS, 2019). Decrease in land availability has contributed to rising land costs, increasing urbanization, drought conditions, and labour shortages (Samtani et al., 2019). Lack of labour availability is also connected to an increase of on-farm food waste during peak season, when over fifty percent of fields remain unharvested (Baker et al., 2019; California Strawberry Commission, 2018). Strawberry producers are dependent on large numbers of migrant workers, primarily coming from Mexico, to harvest the fields (Guthman, 2016a). During peak strawberry season, fruit must be harvested approximately every three days (WIFSS, 2016). However, recent border and immigration changes in the United States have constrained labour availability (Guthman, 2016a; Soper, 2019).

STRAWBERRY QUALITY AND PREFERENCE

This section will address the strawberry traits valued by producers before exploring how consumer expectations and preferences have influenced the appearance of the commercial strawberry. The relationship between migrant workers and strawberry preference was limited to harvesting practices (specifically fumigant use) rather than appearance and therefore is included in the discussion of the strawberry's pesticide regime.

PRODUCER PREFERENCES

Strawberry producers prioritize cultivars that have high marketability and strong supply chain traits like yield and post-harvest quality (Colquhoun et al., 2012; Lado et al., 2010; Yue et al., 2014). Producers prioritize varieties that are abundant, affordable, available year-round, and disease-resistant (Folta & Klee, 2016). The most valued cultivar traits by producers are, and have been firmness, flavour, shelf-life at retail location, fruit colour, and finally fruit size (Yue et al., 2014). Industry-mandated qualities for strawberry cultivars include larger fruits, heavier yields, uniformity, disease resistance, and high shipping quality (Folta & Klee, 2016). Unfortunately, the achievement of such production objectives occurs at the expense of sensory qualities, like flavour, which are not included in production requirements (Ibid).

The USDA has established three grades of strawberry quality which commercial producers must adhere to in order to sell their product: U.S. No. 1, U.S. Combination, and U.S. No. 2 (USDA, 2006; Yue et al., 2014). U.S. No. 1 is the highest strawberry grade; it requires berries to be of a single variety or of a variety with similar characteristics with the cap connected, have a diameter no less than three-quarters inch, and show red or pink over three-quarters of its surface area (USDA, 2006). To qualify for U.S. No. 1 grade, strawberries must also be firm and free from defects like mold, decay, or damage (Ibid).

U.S. Combination requires a minimum of eighty percent of strawberries to be in the U.S. No. 1 category with the remaining classified as U.S. No. 2 strawberries (Ibid). A maximum of ten percent of both U.S. No. 1 and U.S. Combination strawberries can be defective (Ibid). U.S. No. 2 strawberries must be free from decay or serious damage, be at least five-eighths of an inch in diameter and have at least fifty percent of their surface be pink or red (Ibid).

Berry defects are classified as damaged or seriously damaged depending on the severity. Damages detract from the appearance or quality of the fruit. This category includes undeveloped strawberries (strawberries that have not obtained the traditional cone shape) or damage caused by "dirt, moisture, foreign matter like hay, disease, insects, or mechanical or other means" (USDA, 2006, 1). Serious damage is classified as berries with less than half their surface showing a pink or

red colour, or berries that are severely deformed, bruised, caked with dirt, decayed, or leaky (Ibid). The majority of U.S. No. 2 strawberries are allocated for processed consumption rather than fresh consumption. All three categories have a tolerance of five percent of the shipment falling below the minimum size requirement (USDA, 2006).

CONSUMER EXPECTATIONS AND PREFERENCES

Consumer preference and acceptance of food varies as it is influenced by consumer characteristics, including age, education, ethnicity, gender, income, location, and marital status, and the consumer's purchasing environment (Colquhoun et al., 2012; Costell et al., 2010). However, food expectations are primarily based on the sensory quality of food during selection and consumption (Costell et al., 2010; Wang et al., 2016). Sensory characteristics include chemical and nutritional composition, physical appearance, and properties that make a food unique (Costell et al., 2016).

Consumer preferences drive demand, directly impacting strawberry production. *Fragaria* × *ananassa* was originally cultivated because consumers wanted cheap, constantly available strawberries (Folta & Klee, 2016). However, *Fragaria* × ananassa has a narrow genetic set and extensive breeding of new cultivars only decreases genetic variability through biological narrowing, which limits flavour diversity (Ibid; Weis, 2017). Once the original objectives were met, preference shifted to sensory characteristics.

The sensory characteristics that consumers value most in strawberries are colour, texture, taste, and size (Schwieterman et al., 2014). Multiple studies reported that consumers prioritized strawberry varieties with strong flavour complexity, sweetness (related to high sugar content), firmness, moderate juiciness, a vibrant red colour, and medium to large berry size (Colquhoun et al., 2012; Folta & Klee, 2016; Lado et al., 2010, Schwieterman et al., 2014; Wang et al., 2016). Consumers are indifferent to food-shape abnormality unless the abnormality is extreme (Colquhoun et al., 2012; Loebnitz et al., 2015). The commercial strawberry traits least preferred by consumers are berry crispness, softness (berry mushiness), and tartness (Colquhoun et al., 2012). These expectations, besides flavour, are reflected in the commercial varieties being cultivated in California as well as current production standards.

CALIFORNIA'S PESTICIDE REGIME & EXPECTATIONS

Due to the delicate physical composition of strawberries, commercial strawberries in California are susceptible to a range of diseases and pests, with production historically requiring the support of a complex pesticide regime. Such susceptibility is heightened by monoculture production as there is a lack of biodiversity to maintain a balanced, complex ecosystem (Weis, 2017). Monocrop production also compounds the rate at which nutrient leaching occurs in soil; this leads to increased erosion and soil runoff (Ibid; Guthman & Brown, 2015). Soil fumigants sterilize the soil of soil-borne pathogens, allowing farmers to forgo crop rotation and plant strawberries as monocrops on the same acreage each year (Guthman & Brown, 2015).

In California, methyl bromide, chloropicrin, and 1,3-dichloropropene were three pre-planted fumigants introduced in the 1950s and 60s to fight Verticillium wilt (IPES-Food, 2018; Patel et al., 2017). Wilt is a disease caused by a soil-borne pathogen, like *Verticillium dahliae*, which limits fruit productivity by infecting its root system (Lloyd & Gordon, 2016; Guthman, 2017). In 1991, the Montreal Protocol identified methyl bromide as a primary contributor to ozone depletion and required its mandatory phase out from agriculture (Gareau, 2008; Guthman, 2016b). Methyl bromide was not phased out of the system until 2017, and although banned, it can still be used in strawberry nursery production (Ibid). Methyl iodide was created as a substitute for methyl bromide; however,

the former was identified as being more carcinogenic and neurotoxic than the latter and removed from the market in 2012 (Guthman, 2016b). Consumers played an active role in the discontinuation of methyl iodide, following the announcement of registration of the fumigant, California's Department of Pesticide Regulation received over 53,000 comments opposing such action (Guthman & Brown, 2016). Despite backlash from consumers, chloropicrin continues to be used in strawberry production due to its effectiveness at curbing disease, although the state has instituted quotas and buffer zones to restrict the fumigants' negative environmental impacts (Ibid).

Since their introduction, pesticides have become essential to maintaining the physical appearance of strawberries and to supporting consumer demand (Lloyd & Gordon, 2016). Agricultural land value is directly related to crop value, and while strawberry yields are rising, acreage has decreased by twelve percent over the past three years (California Strawberry Commission, 2020). An acre of strawberry land costs roughly $50,000 USD (Patel et al., 2017; Guthman, 2017). As strawberry plantations are established along the coast, high land costs and limited availability force growers to rely on intensive production methods, like chemical fumigation, to maintain occupation of prime real estate (Guthman, 2017).

Further, labour shortages create a narrative where workers dictate strawberry production. Workers are paid based on the number of boxes they can fill per hour, contributing to a bias towards larger varieties with higher plant yields (Guthman, 2016a; Soper, 2019; WIFSS, 2016). Since USDA standards on strawberry grades perpetuate uniform crop expectations, workers insist on crop fumigation in order to maximize profit, despite the negative human health impacts, such as cancer and birth defects (Guthman, 2016a).

RECOMMENDATIONS: ALTERNATIVE PRACTICES

Movements shifting the discourse on strawberry appearance and associated preferences are emerging and alternative practices to conventional strawberry production are being evaluated for efficiency and environmental sustainability. In Santa Cruz, California, farmers are employing organic-based agroecosystems that prioritize field complexity, short crop rotations, and non-pesticide use (IPES-Food, 2018). In Santa Barbara County, California, local food hubs have emerged as an alternative system which places social and environmental equity above economic success within the food system (Cleveland et al., 2014). While organic and local farming practices address specific issues with conventional farming, they do not attempt to change the monoculture system that perpetuates these injustices. Rather than create new systems based on labour injustices and the heavy pesticide regime of strawberry production, focus should be placed on shifting policy rather than market-based initiatives. Once systemic inequalities are addressed, a new agricultural system should be implemented that prioritizes all parties' rights equally (including migrant workers) and optimizes land use.

CONCLUSION

The California strawberry industry demonstrates the extent by which expectations impact commercial agricultural production. Consumer and producer expectations varied, showing there is variability in what is considered a 'perfect' strawberry. Consumer expectations for strawberry appearance emphasized flavour and texture while producer expectations prioritized varieties with high durability and yield, leading to dependence on selective breeding and pesticide use in order to meet demand. High expectations regarding breeding and quality are directly related to food waste because they do not allow for natural variability. Future research should focus on shifting the unattainable narrative of 'perfect' conventional produce by making the

USDA standards more accepting of imperfections. Preferences change; however, an efficient, sustainable food system should be able to optimize these preferences while maintaining environmental and socioeconomic standards.

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THE PIRACY OF PRIVACY

URBAN HYPER-SURVEILLANCE AND ITS PROMINENCE IN ACADEMIC AND PUBLIC DISCOURSE

MATTHEW ARNOTT

ABSTRACT

Surveillance and its mechanisms are experiencing a renaissance in the contemporary age. With the explosion in production and consumption, both the academic and public discourse surrounding the topic has exploded. Academics argue that surveillance has ingrained itself so deeply into society and its institutions that it has dematerialized, affecting the urban inhabitant most greatly. Public discourse regarding the topic features an argument divided between the realms of privacy and financial stability. The overlap of academic and public discourse is explored, examining the ways in which academic findings have realized themselves within society.

Keywords: public surveillance, privacy

INTRODUCTION

Contemporary urban hyper surveillance has ingrained itself as a foundational entity in the lives of the public. The invisibility that surveillance has established within society, accomplished by the streamlining of its physical manifestations, has dematerialized further and thus engrained itself more deeply into all aspects of society. In response to this dematerialization, the surveillance industry is currently experiencing its renaissance, in that the landscape is changing both dramatically and rapidly, due to mass reinvestment.

Subsequently, the academic discourse surrounding the subject has experienced massive change. The contemporary landscape of surveillance presents unique challenges that have yet to be analyzed in the realm of surveillance theory. Thus, the dematerialization of surveillance and its mechanisms must be addressed from a new perspective that utilizes hyper-critical thought to question surveillance's role in society entirely.

With this, academics have proposed that contemporary urban hyper surveillance has capitalized upon three factors in attempts to further integrate itself into the contemporary socio-cultural fabric: corporate strongholds, power imbalances, and self-conditioning. Building upon historical precedents, the realm of surveillance theory has contemporized itself in attempts to understand, analyze, and ultimately regulate the rapidly changing entity of surveillance, from a variety of perspectives.

CORPORATE STRONGHOLDS: SURVEILLANCE'S ANTI-PUBLIC DEDICATION

Initially, academic discourse argued that surveillance, with its continually dematerializing mechanisms, became a factor that increasingly shaped the ways cities are formed and urban citizens function; and further, the democratization of surveillance should be addressed urgently. Across contemporary surveillance theory, the design of Jeremy Bentham's Panopticon, a prison that featured a central, ever-watching guard, encompassed by a circular organization of prisoners (Crampton and Elden, 2016), has been referenced to illustrate the ever-watching gaze of contemporary surveillance. In the case of Bentham, surveillance was an engaged activity utilized under the aim of discipline or more ideally, docility (Crampton and Elden, 2016).

Though, the contemporary landscape has progressed from the disciplinary society of the late 18th century and has moved towards a society which now values control. This movement towards a control-based society is detailed by Gilles Deleuze as he states "societies of control are in the process of replacing disciplinary societies. . . [t]here is no need to fear or hope, but only to look for new weapons" (Deleuze, 1992, p. 3-7). Deleuze expands upon this by stating that as societies become control-based, technology and surveillance dematerializes, and so too do the physical structures they serve. Thus, the factories, prisons, office buildings, and schools which surveillance had served are no longer bound by their physical structure, but by the extended gaze of those in control, illustrating that surveillance's roots are set in serving those in control, the surveyors, who seek to control subordinates, the surveyed.

This relationship between surveillance and control has only been amplified since Deleuze's time. As surveillance technology has perpetually catered itself to the needs of the corporations, it has continually dismissed the needs of the public, those at the scrutiny of this system. This has created a landscape where the public is largely unsure of surveillance's purpose or function. Thus, a rift has been created between the public and their perceived ability to alter or access the ways in which they are monitored. The work of Jiska Engelbert illustrates this disconnect between the public and the surveillance which controls them, such as in the case when the public was questioned regarding ways to alter their relationship with surveillance, she states "the idea

of collective contestation or resistance did not come up at all and neither did the question of municipal responsibilities, not even with the civil servants in [the] group" (Engelbert et al., 2021, p.243-254).

Engelbert's work embodies the way in which surveillance has ingrained itself into the fabric of contemporary society, so much so that its servitude to the corporate realm, and subsequent negligence of public interest, has been normalized. Thus, the perpetuation of the stronghold of surveillance is dependent upon the docility and compliance of the public, further enabling an unbalanced cycle of power.

POWER IMBALANCES: THE MARGINALIZING NATURE OF SURVEILLANCE ON MINORITIZED COMMUNITIES

Power is central to the operation of surveillance, and within academic discourse, there is a belief that surveillance is a relational entity directly proportional to the spectrum of power. Thus, depending on one's position upon the spectrum of power, surveillance can be either empowering or marginalizing. Contemporary surveillance is a complex entity wherein within the realm of the legal system, machines and cultural practices intertwine, typically creating a barrier between the user and their data (Monahan, Phillips, and Wood, 2010, p. 109). Though due to surveillance's complex nature, alternative outcomes are possible, and in turn, depending on one's place on the spectrum of power, surveillance may be a mechanism that is liberating; in that, they are deemed inherently innocent.

This further gestures to the intersectional nature of surveillance, in that it carries biases from its compositional elements of law and cultural practice. These biases enable surveillance to operate in a deeply racialized and gendered way, affecting marginalized groups of the public more greatly (Monahan, Phillips, and Wood, 2010, p. 109). Brianna Remster and Rory Kramer examine the ways that surveillance's racial biases manifest themselves in the lives of those it marginalizes, finding that "black and Latino men in segregated neighborhoods avoid formal institutions because of fear of surveillance" (Kramer and Remster, 2018, p. 1). Thus, the racialized nature of surveillance results in marginalized communities actively engaging in avoiding surveillance's presence. Said burden goes widely unrecognized by individuals whose place on the power spectrum deems them as inherently innocent.

Further, the place of surveillance within academia is questioned by Torin Monahan et al. as they highlight areas of the subject that cease to be examined, stating, "questions concerning the potential of surveillance for contributing to individual autonomy and dignity, fairness and due process, community cooperation, social equality, and political and cultural visibility have been rare in the field" (Monahan, Phillips, and Wood, 2010, p. 109). Here, Monahan exemplifies that even in the hyper-critical realm of academia, aspects of the entity of surveillance have come to be accepted and to a degree normalized, as illustrated by the topics scarcely referenced within surveillance theory. Surveillance depends on the continuation of present norms in order to discreetly normalize itself further. This normalization acts as a mechanism that aids in controlling the public and suppresses any critical thought of the entity of surveillance.

SELF-CONDITIONING: THE MUTUALITY OF SURVEILLANCE IN THE CONTEMPORARY AGE

Normalization is foundational to the operation of surveillance. Within academia it is believed that the presence of surveillance has become so deeply normalized, that society is moving toward a post-panoptic state wherein one becomes self-surveyed. As the public has become seemingly unaware of the constant presence of surveillance, the idea of a concrete gaze is impressed upon them

without their knowledge. This impression has led to the desire to watch and has become so deeply ingrained into social contexts, that Foucault's long standing theory of Hierarchical Observation has been disrupted (Adams and Purtova, 2016, p. 5-7).

Foucault would argue that individuals of a higher status would be responsible for the surveillance of those below them (Crampton and Elden, 2016), though the disruption presently occurring in observation has allowed surveillance to become a mobilized entity, granting all individuals with the ability to watch; ultimately shifting the lens of surveillance from direct to mutual (Adams and Purtova, 2016, p. 5-7). This mutuality is perpetuated by the public's increased access to viewership across media platforms and their desire to watch. Thus, the public has become reliable for the maintenance of order between one another. Though there is extremely limited public access to the data and footage that represents themselves, increased engagement with media platforms has created a reciprocal gaze between one another that holds each other accountable (Adams and Purtova, 2016, p. 5-7). Similar to Deleuze's theory of the dematerialization of physical spaces, systems of surveillance are further dematerialized with increased viewership of one another.

Ultimately, this mutuality has led to the evolution of the entity of surveillance, creating alternative forms of surveillance such as Sousveillance, Coveillance, Self-Surveillance, and Veillance (Adams and Purtova, 2016, p. 5-7). All of these concepts reflect not only the changing theory and discourse of surveillance but also the massive impact surveillance has in changing socio-economic structures and practices in everyday life.

Surveillance has so deeply normalized itself that the public's relationship with it is no longer questioned, rather it is prescribed. Through the prioritization of corporate needs and subsequent neglect of public insight, the silencing of marginalized voices, and the conditioning of the public to watch one another, surveillance has become an entity that must be approached from a critical, contemporary perspective within the academic realm. Public voice is equally as important in the democratization of surveillance as it is the public who are most greatly affected by systems of surveillance.

PUBLIC DISCOURSE: DIVIDED PERSPECTIVES

The entity of surveillance is a divisive issue within the realm of public discourse. One perspective is that hyper-surveillance in urban areas is a direct threat to urban citizens' right to privacy. This perspective argues that the increased presence of surveillance in urban centres has abolished urban citizens' access to public anonymity and further, places one's image under a constant degree of scrutiny previously reserved for highly securitized sites, subjecting individuals to the possible manipulation or misuse of their image (Villeneuve and Fielding, 2020).

Additionally, as surveillance becomes increasingly cloud-based, this public group feared that their data and subsequent image were more susceptible to hacking and alteration (SDM Magazine, 2016). Further, this perspective regarding surveillance fears the transparency of surveillance systems as the integration of new technologies into said systems, such as video facial recognition and metadata tracking, are often implemented without public input or knowledge (Villeneuve and Fielding, 2020). Typically, the perspective that surveillance is a threat aligns itself more closely with left-leaning political ideologies and is more concerned with moral and social values.

In contrast, another public perspective of the presence of surveillance believes that urban hyper-surveillance is an issue less threatening to the public's right to privacy but wreaks havoc on fiscal and judiciary systems. This perspective fears the fiscal impact that surveillance systems and their upkeep have

on the economy and even more so, the impact they have on humanism, which is pivotal to the judiciary system. This perspective goes as far as to say urban surveillance systems are fiscally irresponsible due to their high installation and maintenance costs (La Vigne et al., 2011, p. 1a-2). This portion of the public argues that surveillance systems have no benefit to crime mitigation as the evolution of crime in response to the implementation of hyper-surveillance systems in certain case studies did not see a drastic reduction but rather a migration to an area that was watched less intensely (La Vigne et al., 2012, p.2).

Further, their concerns regarding the judiciary system argue that widespread video surveillance systems threaten the position of police as these systems are often seen as neutral mitigation apparatuses (La Vigne, 2018). This view on surveillance is highly concerned with the effects that surveillance technologies have on humanism, which is deeply entwined within legal systems, as well as unstable fiscal repercussions that accompany surveillance systems. This perspective on surveillance is typically aligned with right-leaning political ideologies as exemplified by the emphasis on economic stability and the desire to preserve the existing policing structure.

RELATIONSHIP BETWEEN ACADEMIC AND PUBLIC DISCOURSE

The academic perspective centers itself around the democratization and critical response to events occurring in contemporary surveillance which partially overlaps with the public perspective regarding surveillance. Due to the binary nature of the public's perspective on surveillance, split between economic and humanitarian views, it is near impossible for the perspective of academia and the entirety of the public to synergize. Though, the views held by the left-leaning population that state the contemporary landscape of surveillance is encroaching on their right to privacy exhibits congruences with academic discourse. Simply put, both perspectives recognize the exponential growth that the surveillance industry is currently experiencing.

In parallel, both perspectives understand that this rapid expansion has ultimately created a techno-sphere that seeks to separate the user from their data, and values control over transparency. Further, they both seek to regulate and control the boom of surveillance technology initially illustrated by the public think tank, The Brookfield Institute's critique of the Personal Information Protection and Electronic Documents Act (PIPEDA) put forth by the Office of the Privacy Commissioner of Canada in 2000, and its lack of revision over the ensuing two decades (Villeneuve and Fielding, 2020). This desire for regulation is depicted in academia by the work of Jiska Engelbert, who, through her research, seeks to simplify the complex sphere of surveillance and data policy in attempts to educate individuals on their rights to their data (Engelbert et al., 2021, p.243-254).

However, the two perspectives of the public and academia diverge concerning the normalization of surveillance and surveillances' racialized tendencies, in that little public discourse questions the foundational role surveillance plays within society and approaches the topic from a unilateral perspective that disregards socio-cultural racial bias. Arguably, questioning the position of surveillance within society is integral to academic discourse, as depicted by Adams and Purtova, who argue that the normalization of surveillance has caused it to evolve and dematerialize, relying on individuals to maintain the status quo rather than physical monitoring devices (Adams and Purtova, 2016, p. 5-7). The portion of the public who views surveillance as a threat, and which academics feature similar discourses, ultimately seek order in a time of chaos, as the stronghold of surveillance technology goes unchecked and continues to grow rapidly.

Although the right-leaning views of the public do not produce similarities with academic discourse regarding the presence

of surveillance within the contemporary landscape, their perspective highlights a factor which academic discourse fails to acknowledge. While the right-leaning public perspective regarding surveillance is driven by economic consideration, academic discourse narrowly neglects the economic burden that would arise in creating transparency within the realm of surveillance. The academic discourse surrounding surveillance is largely driven by humanitarian values that argue that it is inhumane to deny the fiscal impact that would arise following the restructuring of a massive sphere such as surveillance.

Further, this perspective speaks little of how ever-changing surveillance technologies pose possible issues within the judicial realm; another topic which the right-leaning public speaks about in depth (La Vigne et al., 2011, p. 1a-2). Though academic discourse succeeds in addressing the way the development of surveillance technologies poses a threat to individuals, it speaks very little about the implications that the ambiguity between an individual and their data would have in a legal setting. Though the perspectives of the right-leaning public and academia fail to intersect, the former illuminates the shortcomings of the latter.

IMPLEMENTATION OF ACADEMIC FINDINGS

As the issue of urban hyper-surveillance is only beginning to gain notoriety within academic discourse, the work surrounding the topic is still in its infancy, having little time to manifest itself into the public realm. Though, some findings from the academic discourse surrounding contemporary surveillance have realized themselves into the public sphere. For instance, in May 2019, the city of San Francisco banned the use of facial recognition technologies from being used by the San Francisco Police Department as the software was deemed a breach of privacy by the city's inhabitants (Villeneuve and Fielding, 2020). The awareness of both the use and danger of facial recognition technologies within the policing sphere would be made public due to the availability of scholarly work similar to the work of Jacob Hood, who details the relationship between contemporary surveillance and policing (Hood, 2020).

Moreover, the findings of the academic discourse surrounding surveillance will become more influential in part due to public outreach facilitated by scholars such as Jiska Engelbert, who has established initiatives like her Data Walks and Smart city research games which seek to relay her findings surrounding the topic of data transparency (Engelbert et al., 2021, p.243-254). Though the academic discourse surrounding contemporary surveillance is still young, its effects in the public sphere are already materializing.

CONCLUSION

As the scope of contemporary surveillance continues to grow, academic discourse would argue that one's relationship to the surveillance that has been deeply integrated into the current social fabric must be viewed critically. Further, academia argues that the surveillance which permeates the entirety of the current socio-cultural landscape, if left unchecked, will continue to neglect public interest, further divide users from their data, and adapt the gaze of the public into yet another mechanism of surveillance; all while operating in a racialized and gendered fashion.

The perspective of academics aligns itself with a portion of the population that views contemporary surveillance as a threat to their privacy, though academic discourse's shortcomings are highlighted by the portion of the public which views surveillance through an economic lens. Moreover, the perspectives of the public and academia have only begun to synergize as the discourse in both realms are relatively new. Additionally, academic findings regarding the effects of surveillance have begun to manifest themselves within society in various forms including policy and

workshops. The landscape of contemporary surveillance is continually changing academia and parts of the public would argue that now, rather than later, is the best time to intervene.

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URBAN GREEN SPACES IN SHANGHAI

CLUB AND PUBLIC GREEN SPACES

SIJIE DONG

ABSTRACT

Urban green spaces in China are categorized into three types: public, private, and club. The opening-up of commercial housing and the subsequent residential segregation have resulted in inequitable access to club green spaces for the marginalized groups such as rural migrants. In addition to the inequitable access to club green spaces, access to public green space is uneven due to the government's entrepreneurial behavior in inner-city redevelopment and urban expansion. Despite the growing inequality, there is interest among city planners and bureaucrats to improve access and equity when it comes to urban green spaces in Shanghai. To compensate for the displacement of the vulnerable groups to the suburbs and to meet the green space demand for the growing population, local authorities and planners have started the Country Park Program in the suburbs of Shanghai. Although the construction of country parks will minimize the gap of accessing public green spaces between different groups, access to urban green spaces will remain inequitable as the affluent groups enjoy disproportionately high access to club green spaces due to residential segregation. Local authorities and planners in Shanghai should understand that market housing reform is the root cause of the uneven access and club green space and should provide more affordable housing and green services to marginalized groups.

Keywords: Shanghai, Country Park Program, green space inequality

INTRODUCTION

Shanghai is China's financial center and its biggest megacity, undergoing rapid development. The city has experienced the most intensified urbanization in recent years resulting in the imbalance between urban green spaces and widespread urban development. This growing imbalance in Shanghai raises the question of how to make the present urban green spaces equitably distributed and accessible for different socio-economic groups (Wu et al., 2019). This research paper will focus on urban green spaces in Shanghai, as it is the most densely populated city in China and a place which local authorities envision as "a city in the forest, a forest in the city" (Wu et al., 2019). Wu et al. (2019) assert that urban expansion and redevelopment of residential and commercial buildings in Shanghai have largely transformed green spaces and urban parks into construction areas.

However, green spaces have a positive impact on physical and mental wellbeing, the economy, and environment of the society (Xiao, Wang, & Fang, 2019). For example, urban green spaces can offer recreational opportunities, bring physical and psychological health benefits, and enhance environmental sustainability (Gu et al., 2020). Unfortunately, the city's ongoing urbanization processes have led to environmental degradation, loss of biodiversity, and social inequality (Wu et al., 2019). The uneven accessibility of urban green spaces in Shanghai has aroused governments' and planners' attention to environmental justice and social equity issues. According to Xiao, Wang, and Fang (2019), environmental justice concerns include whether citizens have equal access to green services, regardless of their income, age, or gender. Similarly, social equity of urban green spaces also focuses on the distribution of green space resources among different socio-economic groups (Xiao et al., 2017).

This research paper will focus on the factors that have led to the unequal distribution of urban green spaces, especially club green spaces and public green spaces, in Shanghai. To answer this question, this paper will explore the following questions: How has residential segregation resulted in inequitable access to club green spaces? How has the entrepreneurial behaviour of local authorities led to the unequal access to public green spaces? How has the government responded to the unequal distribution of urban green spaces? Have such responses fallen short of their goals, and, if so, why?

This research paper argues that residential segregation and the entrepreneurial behavior of local authorities have contributed to the inequitable access to urban green spaces in Shanghai. Residential segregation created by the opening of commercial housing has resulted in the inequitable access to club green spaces in Shanghai; club green spaces are exclusive to fee-paying residents in gated communities (Xiao et al, 2016). At the same time, the entrepreneurial behaviour of local authorities in the inner-city redevelopment and urban expansion has led to the unequal access to public green spaces and furthered residential segregation.

In response to the inequitable access to green spaces, local authorities and planners have promoted country park construction in the suburbs of Shanghai to provide more public green spaces for both urban residents and marginalized groups. However, the government has made little headway when it comes to improving unequal access to club green spaces for different groups of people.

URBAN GREEN SPACES IN SHANGHAI

Many researchers have identified that access to urban green spaces in Shanghai is not equitable for different groups (Shen, Sun, & Chen, 2017; Xiao et al., 2019). Residents' access to urban green spaces are stratified based on income, age, and gender (Xiao et al., 2017). Affluent households have greater access to all kinds of urban green spaces, while for the vulnerable groups, including rural

migrants and unemployed workers, it is becoming harder to access urban green spaces altogether. After the end of welfare housing and the start of commercial housing (also known as commodity housing) in 1998, residential club communities proliferated (Xiao et al., 2019).

According to Xiao et al. (2019), almost all constructed commodity housing in Shanghai is a form of gated community that provides exclusive community green spaces. Those green spaces are provided by a mix of home-owner associations, private developers, and property management companies, and can only be accessed by homeowners who pay a fee (Xiao et al., 2016). Therefore, urban green spaces in China are categorized into three types, including public green spaces (public parks), private green spaces (private home gardens), and club green spaces (exclusive to fee-paying residents in club communities) (Xiao et al, 2016). Some researchers argue that for people who can afford commodity housing, the emergence of club green spaces may substitute for public green spaces (Xiao et al., 2016).

RESIDENTIAL SEGREGATION AND CLUB GREEN SPACES

The proliferation of gated communities in Shanghai has led to residential segregation between different socio-economic groups since people's socio-economic status is closely associated with their housing types. According to Xiao et al. (2019), in Shanghai, middle-class or wealthy people are more likely to live in commodity housing estates for better amenities and services, including access to club green spaces. Whereas marginalized groups, such as laid-off workers and rural migrants may choose more affordable housing which is either subsidized municipal housing or resettlement housing (Xiao et al., 2019). The urban poor and rural migrants, due to low income, also disproportionately live in the rental sector consisting of underserved neighborhoods and deserted settlements in the inner city (Xiao et al., 2017).

The serious residential segregation in Shanghai, which was created by the start of commercial housing, has led to inequitable access to club green spaces for vulnerable groups based on which gated community they live in. While middle-class residents in commodity housing can enjoy club green spaces provided by private developers and property management companies, marginalized groups have inadequate access to club green spaces. Marginalized groups usually live in dilapidated neighborhoods or subsidized municipal housing complexes that are rarely equipped with club green spaces. On the other hand, residents who live in commodity housing usually have less demand for public green spaces, such as public parks, since club green spaces provided within the gated community can substitute for public green space usage (Xiao et al., 2016).

Furthermore, home prices in Shanghai tend to increase by the quality of the surrounding club green spaces and amount of services (Xiao et al., 2016). Every additional unit of club green space ratio within gated communities will add 8.7% to the property housing price (Xiao et al., 2016, p.445). This positive relation between club green spaces and home prices has largely contributed to the environmental injustice in green spaces. Due to high property values, laid-off workers, rural migrants, and low-income households are less likely to live in commercial housing estates equipped with club green spaces. Instead, the privileged groups, who can afford to buy commercial housing and pay fees for community amenities and services, have more access to club green spaces. Access to club green spaces within commodity housing and gated communities enhances the property value, making the housing less affordable for vulnerable groups, and aggravating residential segregation.

ENTREPRENEURIAL BEHAVIOR OF LOCAL AUTHORITIES

Access to public green spaces is unequitable due to inner-city redevelopment and urban expansion. In searching for maximum profit from land uses, local authorities in Shanghai demonstrated entrepreneurial behaviour by allotting highly accessible land to commercial buildings and privileged groups, and poorly accessible land to public parks (Xiao et al., 2019). Inner-city redevelopment in Shanghai disproportionately displaces rural migrants, most of whom live in old towns in the central city, to the urban fringe with poor public transportation and green space accessibility (Xiao et al., 2019). Once displaced, they are typically unable to return due to gentrification of the area and thus much higher living costs. During expansion and redevelopment in Shanghai, original public parks and green spaces are also demolished. Instead, new shopping malls, high-class offices, and commercial housing are built, which cater to middle-class and high-income people.

To maximize profit from land use and urban development, local municipalities in Shanghai provide improved public green space amenities and services for privileged groups who can afford to live in commodity housing. At the sub-district, known as Jiedao level, Xiao et al. (2019) assessed public green space accessibility by employing individual-level and activity-travel data from mobile phones and social media. They discovered that at the Jiedao level, which has a high proportion of commercial housing, residents' travel distance to urban parks and their travel cost to access public green services are lower than those who live in resettlement housing or dilapidated neighborhoods (Xiao et al., 2019). According to Wu et al. (2019), substantial green spaces have been sacrificed to make way for the construction of infrastructure and commercial housing projects.

As a result, public green spaces in Shanghai's suburbs have decreased from 3940.7 km2 in 1980 to only 2443.9 km2 in 2015 (Wu et al., 2019). Therefore, marginalized groups, who live in resettlement housing in the suburbs, must travel longer distances and spend more only to access public green spaces. Due to the increasing construction of commercial buildings and increased tourism, i.e the high number of visitors in the city center, public green spaces in the central city have more affluent consumers and workers frequenting the spaces (Shen et al., 2017). As such, the vulnerable groups, who live in the old, dilapidated town in the central city, may share these public green spaces built for nearby commercial housing residents and the public green spaces become very overcrowded and their quality declines.

Local authorities' entrepreneurial behavior not only worsens access to public green spaces for marginalized groups but also reinforces residential segregation. Although local municipalities tend to provide more access to public green spaces for privileged groups than marginalized groups, the total amount of public green spaces in Shanghai has declined since 1980 (Wu et al., 2019). This problem has been exacerbated by rising demand—and therefore rising prices—for club properties. As a result, marginalized communities are increasingly displaced to resettlement housing in the suburbs, thereby also increasing segregation.

COUNTRY PARK PROJECT IN THE SUBURBS

Despite the growing inequality, there is interest among some city planners and bureaucrats in further improving access to urban green spaces in Shanghai. According to Wu et al. (2019), different levels of governments in Shanghai have changed their urban greening policies, including the "Shanghai the Land Use Master Plan" and "Shanghai Urban Green Spaces System Planning", to accommodate the population growth and the scarcity of urban green spaces. For instance, to meet the green space demand for the growing population and to provide recreational, ecological and health benefits for citizens, local authorities and planners in Shanghai have started the country park program (Gu et al., 2020). According to Gu et al. (2020), country

parks are public green spaces located in the suburbs to provide residents with easy access to natural areas.

Shanghai Planning and Land Resources Administration Bureau and Shanghai Urban Planning and Design Research Institute have collaborated and worked on the country park unit planning, including 21 country park projects in the suburban districts since 2012 (Yin, 2012). According to a survey conducted by Gu et al. (2020) and its 795 observations, travel time exerts little impact on citizens' use of country parks in Shanghai. Since country parks have large areas of natural landscape and recreational facilities, most respondents think that travel time of more than one hour one-way is acceptable to visit the large country parks (Gu et al., 2020).

Besides, due to the absence and inadequacy of public green spaces in both the central city and suburbs, residents who live in these areas are willing to visit free country parks, especially on weekends, despite the long travel distances and cost (Gu et al., 2020). Since country parks in Shanghai are built in places where public transportation is well-developed, even the vulnerable groups who live in old towns in the inner city can visit these public country parks.

Suburban country parks also benefit displaced vulnerable groups and their poor access to public green spaces. According to Yin (2012), 21 country park projects have been built in 8 different suburban districts in Shanghai, which make sure that every district has its own country parks available for the residents. Country parks constructed in the suburbs will make public green spaces more easily accessible for the marginalized groups who live in the resettlement housing or the rental sector. Marginalized groups have greater areas of public green spaces near their neighborhoods, which they can visit with minimal travel distance and cost, thus boosting equitable access. Although green spaces were once sacrificed to make way for buildings and other infrastructure in Shanghai, current urban green space policies have been created to encourage urban greening. However, while these projects promote equitable public green space access, it cannot solve the inequality of access to club green spaces, which is generated by residential segregation between different socio-economic groups. As long as commercial housing and residential segregation exist, access to club green spaces in Shanghai will remain inequitable.

CONCLUSION

Residential segregation and entrepreneurial behavior of local authorities in Shanghai have created inequitable access to urban green spaces, especially club green spaces and public green spaces. As a result of residential segregation and unequal access to club green spaces, marginalized groups are usually unable to live in gated communities due to their low income, and therefore, are less likely to access club amenities and exclusive parks. Whereas the middle-class and high-income households are more likely to live in commodity housing with better club green space amenities and services. Local authorities' entrepreneurial behavior in city redevelopment and expansion makes access to public green spaces uneven. Urban poor are forced out of the city centre and into the suburbs where public parks are in low numbers. Parks are demolished and substantial areas are developed as construction sites and high-income commercial housing, which further reinforces residential segregation between different income groups.

In response to inequitable access to green spaces, country parks are constructed by local authorities and planners in Shanghai suburban areas to improve access to public green spaces for urban residents and marginalized groups. However, access to club green spaces created by residential segregation remains inequitable. Local authorities and planners should be more aware of the negative impacts brought by the opening-up of commercial housing, such as residential segrega-

tion both in Shanghai and in other Chinese cities. More urban green services should be provided for vulnerable groups who suffer longer travel distance and higher travel cost to obtain public green space services. More importantly, the government and planners need to construct more affordable housing which can provide club green spaces for vulnerable, low-income groups.

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