Expanding the Just Transition to Include Teachers: Composting, Zero Waste and Climate Action in Montreal Schools

Mitchell McLarnon
Concordia University

Abstract

In the context of the current climate emergency, governments are implementing important climate policies promoting zero waste, carbon neutrality, increased greening, and protection of biodiversity. While climate policies are created with the best of intentions, they obscure the lived experiences of front-line workers attempting to implement these policies in a rapidly changing environment. This article proposes a nuanced understanding of a "just transition" as a promising proposal for climate justice and labour politics. Through drawing on institutional ethnographic approaches to conducting interviews, gathering fieldnotes during observations, and conducting textual analysis, this article connects educational workers' experiential knowledge with climate policies that shape educational possibilities both locally and extra-locally. By interrogating the enactment of recent zero waste policy from the perspectives of teachers, a principal, and a school board employee, the research findings and discussion increase understanding of how climate change mitigation efforts and policies can produce unequal and unintended effects.
Keywords: education, climate policy, just transition, institutional ethnography, labour relations, schools, composting, zero waste

Résumé

Dans le contexte de l'urgence climatique actuelle, les gouvernements mettent en œuvre d'importantes politiques climatiques portant sur le zéro déchet, la neutralité carbone, l'augmentation des espaces verts et la protection de la biodiversité. Bien que ces politiques soient élaborées avec les meilleures intentions, elles occultent les expériences vécues des travailleurs de première ligne qui tentent de les appliquer dans un environnement en mutation rapide. Cet article propose une compréhension nuancée de la « transition juste » comme une piste prometteuse pour la justice climatique et les politiques du travail. En s'appuyant sur des approches ethnographiques institutionnelles pour mener des entretiens, collecter des notes d'observation sur le terrain et analyser les transcriptions, cet article relie les savoirs expérientiels des acteurs éducatifs aux politiques environnementales qui influencent les possibilités éducatives à la fois localement et au-delà. En examinant la mise en œuvre récente d'une politique zéro déchet du point de vue des enseignants, d'un directeur d'école et d'un employé d'une commission scolaire, les résultats de cette recherche et la discussion autour de celle-ci permettent de mieux comprendre les effets inattendus et inégalitaires que peuvent générer les initiatives et les politiques en faveur de l'atténuation du changement climatique.

Mots-clés : éducation, politique climatique, transition juste, ethnographie institutionnelle, relations de travail, écoles, compostage et zéro déchet.

Introduction

As cities and communities grapple with climate change mitigation and adaptation, efforts to realize global and local climate policy ambitions are often premised upon the concept of a "just transition." As a conceptual framework and practice, a just transition is an approach for connecting mechanisms of climate action with social fairness (Snell, 2018). In this article, I interrogate the enactment of a recent climate pilot policy in Montreal from the lived experiences of three teachers, a principal, and a school board employee. In the context of the climate emergency, municipal governments like that of the city of Montreal are implementing important climate policies encouraging zero waste, carbon neutrality, increased greening, and protection of biodiversity (Ville de Montréal, 2019, 2020). While climate change mitigation efforts are more necessary than ever before, often these amendments are created and employed without considering how these policies will

come to bear on those tasked with implementing them in complex social settings. When the City of Montreal piloted its ambitious zero waste plan in 2019, schools were targeted and recruited as sites that needed to better adopt composting measures. However, during implementation, little support was offered to participating schools, compelling educators, administrators, and other staff members to take on additional and onerous tasks in order to support the implementation of the city's plan.

This additional labour and lack of pedagogical and human resource support threatens the overall effectiveness and impact of these imperative policies while leaving some teachers, students, and community members feeling that they are most responsible for this kind of community-level change. In short, while the work of making climate policies is done with the best of intentions, it can obscure the lived experiences of the front-line workers attempting to apply these policies in a rapidly changing environment. By developing a more fulsome understanding of the social relations of climate policies, this article shows how policy implementation would benefit from better engagement with front-line educators and suggests that a more nuanced and expansive interpretation of a just transition is needed. This research connects environmental justice to the creation of social, educational, and climate policies by showing how the material, often literally "hands-on" acts that are required to enact policy statements about "caring for" the planet, are developed by those who are more "hands-off" themselves. In other words, when caring for the planet is translated into physical, material, and laborious acts, new questions of justice arise.

Using aspects of institutional ethnography as theorized by feminist sociologist Dorothy Smith (2006), I bring into view the work of climate-engaged teachers and educational workers who have acted and reacted to this recent zero waste policy shift. The climate policy organization of zero waste in the city of Montreal is what institutional ethnographers would refer to as "the research problematic" or point of entry to this study. Below, I begin by reviewing relevant literature on composting and zero waste in cities and schools. I then situate the research within Montreal and in relation to relevant theories that help connect social justice and labour considerations with the urban environment. To achieve these aims, I relate urban political ecology to the conceptual framing of a just transition to reveal contradictions in how capitalist forms of production and neoliberal governance can shape municipal policies and individual practices in unjust and uneven ways. Next, I elaborate on institutional ethnography as my method of inquiry and how its analytic commitments helped uncover the social, environmental, and neo-liberal interactions of the recent zero waste program in Montreal.

In the second half of this article, I trace the work processes of teachers, a school principal, and a school board employee as they negotiated how their everyday activities shifted due to the implementation of Montreal's Climate Action Plan in 2020. I argue that while policy makers and city planners certainly have the best of intentions, more care is needed on multiple scales to ensure that these policies include social and structural supports that enable workers to address the intended climate action objectives.

The research findings show that educational workers experienced a top-down policy implementation that created misunderstanding and undercut existing school composting programs and other established processes. Highlighting power imbalances between the civic government in Montreal and participating schools suggests that educators' perspectives need to be at the centre of a just transition. By focusing on the tensions and contradictions that teachers and others experienced when working with Montreal's zero waste policy (Ville de Montréal, 2019), I build on writing that suggests a just transition cannot exclusively be climate policy shifts toward zero waste or any other climate action objective—instead, it requires departure from the rationalities of neo-liberalism (Velicu & Barca, 2020). This article adds to educational scholarship in two distinct ways. At a conceptual level, this research uses a nuanced and expansive interpretation of a just transition as a promising proposal for connecting teachers' work to climate justice and labour politics. More empirically, the findings and discussion add to a growing body of scholarship that brings into view how global climate agreements and collaborations in extra-local settings emerge and shape practices and pedagogies in local educational contexts (Eastwood, 2018; McClintock, 2021, 2024; McClintock & Guimont Marceau, 2022; Nichols, 2019).

Cities, Composting, and Zero Waste

In the context of the climate emergency, cities are discursively positioned as being both major drivers of climate change and on the front line of climate change mitigation and adaptation (United Nations Environment Programme, 2023a). All over the globe, municipal governments contend that because cities are closest to their citizens, are flexible as political actors, and are often most accountable for emissions that contribute to climate change, they are also best situated to solve the environmental issues they are encountering (Gordon, 2024). Over the past several decades, managing and reducing waste has been a central climate change policy concern of municipal governments across Canada (Envi-

ronment and Climate Change Canada, 2024). More recently, the notion of zero waste has entered policy discussion, global agreements, and the everyday vernacular. Decomposing organic waste that ends up in the landfill causes significant environmental damage and climate harm (Government of Canada, 2019). Approximations from the International Solid Waste Association state that "when all waste management actions, including disposal, recycling, composting and treatment, are considered, the waste sector could cut 10 to 15% of GHG emissions globally" (C40 Cities, n.d.-a, para. 2). In attempts to realize policy commitments to zero waste, Miller (2020) recommends that cities embrace a "circular" economy, where items are recycled and reprocessed, and waste is prevented to the extent that is possible. Inevitably, when food waste is produced, all efforts should be made to first feed people experiencing food insecurity before separating compostable waste and capturing landfill gas. While zero waste and composting are closely associated, zero waste practices and principles aim to keep waste out of everything, including compost.

Composting refers to a slow and deliberate process whereby organic discards are converted, through human behaviours of care and attention, into a nutrient-rich new soil. Since civic and municipal governments are politically responsible for waste management in Canada, composting and moving toward zero waste is a crucial action for mitigating climate change. Within schools and in other educational contexts, composting is a well-researched topic. For example, recent research by García-Prats et al. (2023) describes the successful implementation of small-scale school-based composting for waste reduction in Barcelona, Spain. In Canada, composting as an educational act has been researched from the lens of school food and nutrition activities (Stephens et al., 2016). Moreover, many Canadian provinces, municipalities, and not-for-profits provide online resources, project-based learning units, and curricular guides to support educators and students who are interested in creating composting initiatives (see Recyc-Québec, n.d.; EcoSchools Canada, n.d.; Zero Waste Canada, n.d.). While past studies have discussed the individual benefits of composting initiatives in schools (Everitt et al., 2022), the politics of discard studies (Liboiron & Lepawsky, 2022), and the power imbalances of waste labour relations (McClintock & Morris, 2024), there has been limited exploration in climate change—related research on how composting in schools and zero waste policies and principles synergistically contribute to climate change mitigation.

Sustainable Cities, Just Transitions, and Urban Political Ecology

Cities are complex metabolic circuits linked to many distant ecosystems through plumbing in water and oil and the transportation of food, along with the expulsion of wastes and greenhouse gases (Heynen et al., 2006). As cities grew during industrialization, they were seen as separate or apart from nature and the natural world. Urban political ecology complicates and rejects the bifurcation of cities and nature and of nature and society, splits that are inherent in Western epistemology's very limited social imaginary. Kaika (2005) reminds us that everything humans interact with in an urban environment is nature that has been converted and commodified with the integration of human labour, technology, and financial capital. Krueger's (2007) research shows a strong association between post-industrial cities in North America that have thrived in the knowledge economy (the tech industry, the financial sector, and design industries) and those that have implemented sustainability policies. The author highlights how sustainable development initiatives reflect a form of capital accumulation that works within the rules of the game of international neo-liberalism, creating a different "sphere of convergence" (Krueger, 2007, p. 100) where sustainability is no longer a barrier to capitalistic growth, "but rather a constituent part of it" (p. 103). Like other post-industrial cities, Montreal continues to adhere to capitalistic growth models while concurrently attempting to address environmental issues that are materially connected to city's colonial history. Urban political ecology takes a historical and material approach to making sense of urban processes, while also pointing to the multi-scalar developments and relations of power (Cornea, 2019).

In recent years, political ecologists have taken an interest in the concept of a "just transition" as a dialogue between climate justice and labour movement activists who together aim to complicate established understandings of socio-ecological justice (Bouzarovski, 2022; Velicu & Barca, 2020; Velicu & Kaika, 2017). Framed as innovative and equity-based proposals, just transitions typically seek to reconcile environmental and social issues with a low-carbon and fossil-fuel–free future. As such, much of the research on just transitions encircles worker and labour rights from the energy, manufacturing, and transport sectors as they move toward zero emission outcomes (Morena et al., 2020). Extending this line of thinking, my research points to teachers and other education workers as key contributors for policy development toward a just transition. With the increasing inclusion of climate change education in provincial curricula and mounting pressures to add climate change action and content into existing courses, teachers are being positioned

as key players in addressing the global climate crisis. To ensure that curricula and policies encircling climate action do not ring hollow, teachers and other education workers need to be at the heart of decisions that will have an impact on their everyday work lives. Velicu and Barca (2020) contend that, because ecological and social crises are constructed and reproduced through power imbalances, a just transition cannot simply be a transition from fossil fuels; it also needs to be a departure from the logic of unequal relations. In what follows, this article interrogates power imbalances and labour contradictions on different scales to direct attention toward how social relations interact with climate policy issues like waste management, zero waste, and composting.

Situating Zero Waste in Montreal

As a large municipality, Montreal discursively presents itself as progressive in terms of both politics and environmentalism (Moser et al., 2019). It is the site of six United Nations offices and has been a primary location for international environmental meetings (The Canadian Press, 2022). In 1987, the Montreal Protocol on Substances That Deplete the Ozone Layer was universally ratified by all United Nations member states and is still considered to be one of the most successful environmental agreements to date (United Nations Environment Programme, 2023b). More recently, Montreal hosted the 15th Conference of the Parties (known as COP15) to the United Nations Convention on Biological Diversity (United Nations Environment Programme, 2022). Given its focus on climate change mitigation and its ongoing engagement in the C40 Climate Leadership Cities Network, Montreal has achieved "a steering committee member" status for showing exceptional climate leadership at the global level (C40 Cities, n.d.-b).

In 2019, the City of Montreal ambitiously confirmed that it would transition to zero waste by 2030 (Harris, 2019a) as part of its commitments to the C40 Cities agreement. The broad objectives of the zero waste declaration of the C40 Cities agreement are as follows:

- Reduce the municipal solid waste generation per capita by at least 15% by 2030 compared to 2015.
- Reduce the amount of municipal solid waste disposed to landfill and incineration by at least 50% by 2030 compared to 2015, and increase the diversion rate away from landfill and incineration to at least 70% by 2030.

(C40 Cities, n.d.-a, "We pledge to advance" section).

In more explicit terms, the agreement also urges cities to the reduce "food losses and wasting of food at the retail and consumer levels by decreasing losses along production and supply chains, minimising the production of surplus food, and facilitating safe food donation and by-products for feed production" (C40 Cities, n.d.-a, "To achieve these bold targets" section). The declaration also stipulates that cities:

> Increase accessibility, awareness, scale and inclusivity of reduction, reutilization and recycling programmes and policies for all communities and neighbourhoods, investing in city wide communication and engagement efforts, offering resources in multiple languages, and ensuring benefits are distributed equitably across the city population.
> (C40 Cities, n.d.-a, "To achieve these bold targets" section)

In practice, the City of Montreal's implementation of this commitment to the C40 Cities Climate Leadership Group included proposed collaborations with Montreal's largest food waste producers, which are large grocery store chains, hospitals, and local schools (Harris, 2019b). Based on initial public consultations and past zero waste partnerships, the city sought to pass a bylaw in 2019 that would have prevented grocery stores, hospitals, and schools from discarding food that is still edible (Harris, 2019a). True to circular economy and zero waste principles, some of the goals of this partnership were to use this zero waste model to reduce Montreal's emissions, as food waste accounts for 15–20% of the city's emissions, and to ensure that food waste is either being composted or that food that is still edible is finding its way to those experiencing food insecurity (Ville de Montréal, 2019). With hopes of further reducing landfill waste, 22 schools across four school boards in Montreal were promised compost collection as part of the city's zero waste plan. The city also hoped to collect data about how much waste each school produced so that they could provide the appropriate number of composting bins. This zero waste pilot policy was supposed to run from 2019 to 2025, after which the City of Montreal would provide compost collection for over 700 schools on the island (Léveillé, 2019). One news story about a particular school highlighted communication between the principal, school board, and municipality (CBC News, 2019). Notably, teachers were not mentioned. This omission suggests a potential oversight in recognizing the role teachers play in supporting such initiatives.

The Research

The analysis shared in this article emerges from an ongoing community-based research project called Gardening for Social Ills, where I collaborate with teachers, students, community workers, and community members to explore the extent to which school and community gardens might actually achieve aims of social and environmental justice. Since 2019, my research partners and I have brushed up against the City of Montreal's 2020 Climate Action Plan (Ville de Montréal, 2019). Among the newly created and amended climate action policies, the City of Montreal released a comprehensive urban agriculture and greening plan to combat the urban heat island effect; create increased opportunities for active transportation to reduce vehicle emissions; retrofit residential, commercial, and industrial buildings; and advance toward zero waste and carbon neutrality. In working closely with teachers and other educational workers on an ongoing basis, some of our informal research conversations compelled me to turn my ethnographic and analytic gaze toward composting and zero waste initiatives both within—and outside—of the City of Montreal's municipally mediated programs and policies. While Montreal's zero waste plan features social and climate objectives such as reducing emissions, public outreach, equity, accountability transparent reporting, and so on (Ville de Montréal, 2019), the research findings that I present below point to contradictions and power imbalances between and amongst the stated mission of the City of Montreal's policy and people's lived experiences. In solidarity with climate-engaged education workers, I seek to illustrate and interrogate what it is like for teachers and other educational workers to build or maintain composting initiatives in schools, and how the city's zero waste policy has shifted their activities. In so doing, I embrace the analytic goal of explication, rather than theory-building, to help people more fully understand "what they are up against [politically] and where they might want to apply pressure" (Devault, 2006, p. 295).

Method of Inquiry

Described as a method of inquiry, institutional ethnography is a sociology that resists producing and using knowledge in ways that perpetuate the objectification of people's lives and experiences as instances of a theory or concept (D. E. Smith, 1987). Research begins with people's experiential knowledge, then traces their knowledge into texts like policies,

laws, books, media, and digital technologies they interact with and that coordinate the ordinary movements of their days and nights. In this sense, an institutional ethnography analysis seeks to reveal large-scale forms of social coordination within which people's individual lives and experiences are unfolding (Mykhalovskiy et al., 2004).

Different from conventional ethnography that is often restricted to methods of observations and interviews, institutional ethnography works with "a commitment to an investigation and explication of how 'it' actually is, [and] of how 'it' actually works, of actual practices and relations" (D. E. Smith, 1987, p. 160). This commitment requires an ontological shift, where research is not *about* people, but *for* people. G.W. Smith (1990) extends the core tenets of institutional ethnography by providing researchers and organizers with a more explicit emphasis on social change by starting from the standpoint of political activists. Therefore, "making the ontological shift" (G.W. Smith, 1990, p. 643) suggests an understanding of the world as created across people's everyday doings and the coordination of these activities. As a conceptual, methodological, and heuristic approach, the ontological shift implores researchers to look outside assumption or ideological accounts of the social world, and to instead study the social relations that are part of people's actual activities and that make certain explanations of these same actions possible.

As an alternative sociology, institutional ethnography requires deep engagement with a research problematic and a highly focused analysis of how issues are socially organized. Importantly, institutional ethnographies work dynamically toward a socially and environmentally just political end. According to Berryman and Sauvé (2016), and in relation to education and policy, "institutional ethnography provides a compelling invitation to attend much more closely and much more critically to the whole series of strings linking global policy and educational encounters between educators and learners" (p. 143), while drawing "attention to power and ruling through various types of texts" (p. 143). Specific to the analysis offered in this article, institutional ethnographic methods with this political activist slant snap the actual activities of climate-engaged and activist teachers and educational workers into focus, *as well as* the complex web of social relations that influence these activities. Here, I undertake D. E. Smith's (2005) invitation to explore and deconstruct "how people are putting our world together daily in the local places of our everyday lives and yet somehow constructing a dynamic complex of relations that coordinates our doings trans-locally" (p. 2).

Data Generation

For this article, the data and analysis are based on over 40 informal conversations and five in-depth interviews with participants. The research participants include two public school teachers, one private school teacher, one principal, and the community relations coordinator of one of Montreal's Francophone school boards. I use pseudonyms to protect the confidentiality of my research participants and research partners. Because of the engaged nature of this research, where I spent hours each week working with teachers and students creating and maintaining gardens, informal conversations occurred with teachers before, during, and after each gardening session. After each visit, I would document these conversations in the form of handwritten field notes and recorded voice memos. Data collected during these informal conversations allowed me to follow up on things that required more clarification in the in-depth interviews. In the interviews I conducted, I subscribed to institutional ethnography interviewing techniques and asked participants to explain a typical workday to determine how educators are engaging with the zero waste policy and other textually mediated relations in their everyday experiences. In institutional ethnography, the notion of "work" is employed as a feminist construct to direct attention to any action that takes time, energy, and intent (D. E. Smith, 1987). Many of my informal conversations with teachers and school staff alike had suggested that when new policies (and, by extension, new work processes) emerged, this added more cumbersome bureaucracy and accountability to a typical workday. As such, to get a sense of the social, environmental, and institutional relations related to composting, I asked participants to describe their typical workday when their activities shifted because of new or different composting labour. Conducting interviews that overtly studied both policy and people's work allowed me to identify ruptures between what teachers and others were saying and doing in juxtaposition to administrative, municipal, and media accounts of zero waste and composting initiatives. In institutional ethnography, examining one person's account is not meant to illuminate everyone else's experiences; rather, looking at one person's understanding and experience can show us something about how these experiences are socially organized. Following D. E. Smith (2005), I have included different interview excerpts to help determine what social relations are organizing how we have all come to know and experience "zero waste" in unusually similar ways, irrespective of our divergent social positions.

Data and Textual Analysis

To uncover the organizing relations of zero waste and how it influenced the work of teachers and educational workers, my transcripts served as essential texts for further queries (DeVault & McCoy, 2006), and as the starting point of the research. I would ask myself, "Why is it that this teacher or principal is saying what they're saying?" I began coding and organizing my findings into distinct and aggregate categories corresponding to social, environmental, and institutional factors in relation to the notion of "composting" or "zero waste" that I was observing when present at different schools. As the analysis and early findings emerged, I shared my ongoing interrogations and observations with my research partners. When we collaboratively determined that a particular work process was troubling and hard to make sense of, I embarked on textual analysis, through which I traced people's experiences into specific policies and mechanisms that organize their work lives. Following an institutional ethnographic analysis, the research goal of my study was to analytically unite, define, and clarify tensions embedded in people's work, including my own, and not to theorize them.

My textual analysis had two main purposes. First, I needed to get a sense of the unnoticed social relations that were not explicitly addressed or expressed through participants' recounted experiences, but were shaping their everyday activities; and second, I aimed to show how texts influence work processes that are deeply rooted in and across people's everyday activities. In this study, it was essential to critically explore texts to reveal how they coordinate courses of action. In collaboration with my research participants, the analysis allowed us to trace threads of connection from local sites of schools into extra-locally organized systems of knowledge production and categorization where discourses and subjectivities related to "zero waste," "sustainability," and "climate" are synchronized (D. E. Smith, 2006). As G. W. Smith (1990) reminds us, these categorical expressions operate within various academic and policy discourses, but they do not "float free from the constraints of the social relations that they express" (p. 115). They also shape how people make sense of and form complex and continuously emerging social relations.

The Social and Environmental Relations of Zero Waste Schools

Climate policies cannot be explored without acknowledging the ruling relations of global and local economies, which limit political action and keep the discussion, ideology, and discourse encircling climate action somewhat confined (Eastwood, 2018). My research shows that notions of justice, a just transition, and the proliferation of labour on different scales were not fully considered during the piloting of Montreal's 2030 zero waste program. As mentioned above, to ensure that the 2030 zero waste commitments would come to fruition, the City of Montreal determined that schools needed to better adopt composting and waste reduction measures. However, the ecological objectives of the zero waste program were reconciled with neither social justice nor labour concerns. As many education workers united to support the policy enactment, their experiences highlight contradictions between climate goals and labour needs.

While the City of Montreal was aware that many schools had long-established composting programs in place, this fact was not meaningfully considered from a policy perspective. For example, one of the private school educators with whom I partnered (Franky) described composting as part of the everyday activities of the school.

> There's our compost bins down there. We have daily compost. Even the kids do it. So like, two kids go to the bins and they help sort it, and there's not a lot of [squeamish sounds]. It just simply is. Different classes take turns.

There were also previously established composting programs in public schools. However, the typical approach in public schools differed somewhat from the approach in private schools that had long-standing composting programs already in place, more available time, fewer students, and some curricular flexibility. Ben, the community relations coordinator of a Francophone school board, told me that most of the composting that occurred prior to the city's pilot program was organized by the schools' lunchtime programs, and not by teachers.

> The teachers don't touch it, the school doesn't touch it. Because when the teachers have their break is when the kids eat. So, the people who are with the children while they're eating are technically daycare staff, they're not teachers. It's them who decides to compost or not.

Ben further explicates what occurred when the city selected some of their schools for the composting pilot project in 2019.

> So, of…schools that were picked for the pilot project, none of them actually had a composting program. One school that was selected by the city already had a "Green Club" where they do gardening and all that, but they had never done a composting program before. They have a cafeteria. So, it seemed that the first five schools that were chosen had a cafeteria. We [the school board] were told by the city that because these schools had one central location where the food waste goes, at lunch at least, that's why they were chosen. And then, the City of Montreal liaison gave us two large bins for the caf [*sic*]. And so, then the teachers and administrators dealt with the city, and this work was then passed on to the custodians about how to deal with that. But that's not really where it ends, because guess what? It didn't really work. If you put two bins in a cafeteria, someone has to be regulating it, and it needs to be someone who has been trained, or at least cares. So, this is where some teachers stepped in.

From a zero waste and environmental perspective, it makes sense that the city would recruit schools without a composting program to adopt new composting measures. This would assist the city in reducing its waste and would concurrently engage new people in the actions of zero waste. What Ben states as most problematic here is that there was an assumption that the compost would simply sort itself. This shows a disjuncture between Montreal's commitment to C40 (Ville de Montréal, 2019), where they stated they would increase "communication and engagement efforts" and "offer…resources," and what actually transpired in local schools. Ben suggests that the only support and resources offered to schools by the city came in the form of two large composting bins. The introduction of these bins to schools without pre-existing composting programs and without further resources or support, while helpful, subscribes to neo-liberal rationalism. Not only were individuals tasked with attempting to implement the zero waste policy, the enactment of and instructions for the policy did not take into account that educators and students in some other schools had already figured out how to compost. In addition, by asking schools to now sort the organic matter into two large bins, the schools were tasked with additional social, educational, and ecological considerations, since these bins needed to be picked

up on a weekly basis and transported to an exterior waste management facility to be processed. Unfortunately, as I later learned through an informal conversation with Ben, on multiple occasions the city failed to pick up the bins, which translated to overflowing compost bins and, consequently, the organic matter going into the garbage instead.

In Ben's account, he notes how, when the implementation of city-mediated school composting did not work well, some teachers intervened. This reveals how the zero waste ideology, as manifested through discourse at the extra-local level, affected practice at multiple local scales and culminated in some teachers taking on additional labour to ensure that the composting initiative was progressing. Although not a part of Quebec's provincial curricula, with schools now being recruited to participate in composting initiatives, composting becomes an educational issue. While this re-instrumentalization of education to include zero waste programs could be interpreted as merely a practical issue of ineffective policy implementation, and as an inconvenience for the education workers involved, composting becomes a lens through which broader issues of labour politics and power imbalances can be viewed. Because the zero waste policy was created without the collaboration of teachers, school board employees, and principals, just transition scholars and political ecologists would deem this government intervention as a form of "eco-governmentality" (Brand, 2007, p. 617). In other words, composting in this example can be understood as a strategy imposed on school staff with hopes of easing tensions between and amongst climate action objectives, rampant global capitalism, and the goal of constructing "citizen subjectivities conducive to the often contradictory demands of the neoliberalized city" (Brand, 2007, p. 617).

Below, Ben outlines some of the early issues the recruited schools encountered with the City of Montreal's zero waste plan enactment:

> One of the reasons why the composting thing was such a slow start on our end is because we Green Club people had to do all of the work because the caretaking staff were like…this isn't part of our collective agreement.

In conversation with Ben and other teachers, I came to understand that what Ben refers to as "Green Club" is made up of climate-engaged teachers, school staff, and school board employees. Each person I spoke with, all of whom worked at different schools, described a Green Club as a group of people who typically took on additional work to ensure that students had the opportunity to participate in lessons focused on environmental actions.

When composting emerged as a priority, it seemed like each individual school's Green Club assumed the additional labour of managing composting efforts. Without expanding on how policy makers at the city and school board levels did not initially consider who would actually take on different compost-related tasks like sorting and transporting waste, and how this might intersect with labour relations and collective bargaining agreements, it is important to underscore how each school is a unique system with its own set of patterns, behaviours, and peculiarities. Ben next brought into view what some teachers did to prepare:

> So, what one teacher did, which is amazing, is that she trained her students in composting She was like, "You are gonna be regulating this." So, now what they do is they go around with bins themselves and they get the kids to put all of the waste in them, and then they put the waste into the [collection] bins, the custodian puts the bins out to the curb, and they all eat in the gym. So, it's easy.… Now another school, they really want a composting program. Mrs. Carla got the city to come in to work with the staff. They figured it out. Now they have a composting program. So slowly, slowly, every school is going to have a composting program. Now, what we suggested to [the division of the school board that communicates with the city] is that we can come in and train our own staff. And, because we really have a rapport with the people who work at the daycare, I can go in and be like, "Hey, we're going to do the composting, let me field any questions," instead of like an external person coming in from the city or something. They don't know how to talk to us in a way where we're going to get the message.

Above, Ben highlights how two teachers are taking on additional labour to prepare their respective schools' participation. One educator opted to work with the city on structuring the kind of compost support that would be most materially pertinent for their context, while another educator motivated their students to participate during instructional time. In both cases, Ben's account makes visible the time, effort, and intent that teachers and school staff are devoting to supporting this policy, which included one teacher and her students losing instructional time. In addition to teachers taking on this kind of "composting work," Ben also notes that the training for composting would be more effective if it were organized internally at the level of the school board, and not by the City of Montreal. From a policy outlook, this raises an important consideration about funding,

awareness, and resources. Given that many people who were not included in this zero waste policymaking process needed to take on this additional work, what might a policy now look like if teachers and other school board staff were included in the shaping of it? These labour contradictions and power imbalances that had organizing and extractive work effects on teachers and others are misaligned with the guiding values of the zero waste program, and are in direct conflict with the tenets of just transitions within global agreements for climate action more broadly.

Another climate-engaged educator with whom I worked (Julie) pointed to an entirely different problem that emerged from the introduction of composting: conflicts with colleagues. While working in the garden one lunch time, Julie mentioned that some teachers refused to participate in composting because of who was leading it. I followed up with Julie about these conflicts and the reasoning behind them, then reproduced the informal conversation in my field notes.

> I think overall my colleagues are sick of hearing from "hippie Julie." There's a lot of eye rolling. The conflict that I'm thinking of is a personal one between myself and my former associate teacher. He used to support Green Club, but since we had a disagreement last year, we've barely spoken. Last week he looked me in the eyes while putting organic matter into the garbage.

In contrast to Ben and Julie feeling that the schools where they worked were slow to take up composting, Marie-Josée, a public school principal, demonstrates how her school started a composting program the same year they were selected as a zero waste school:

> We just started a composting project. We have an administrator…she brought that idea to students during assemblies, and it was around the same time that our school was chosen to be part of the city's new composting plan. And, after that, some students came to see her and were interested in starting a Green Committee and compost team, bringing composting in and doing a lot of publicity for recycling, because we felt that things were not being recycled. And, in the cafeteria, everything was being thrown in the garbage. And so, she [the administrator] finally found a teacher who was interested.

Here, Marie-Josée admits that for a composting program to be implemented in a school, the labour falls onto teachers and students. I asked why fostering this kind of an initiative falls to teachers and, by extension, students, and Marie-Josée further explicated that:

> Because we [school administrators] can't do it, there's too much. But again, it comes back to what is important to the administrator and to the teacher personally, and then that person brings their values to the table. We talked about it often and informally. And then, a teacher got on board, and it just came together.

In the above passage, Marie-Josée is speaking to the work processes that enable this composting project to happen. Following institutional ethnography, my prerogative here is to determine how "it" (in this case, composting at schools) comes together as series of actions and social relations. As the interview continued, I learned that for a composting program to come together, a teacher first needs to agree to be the point of contact, and taking on this role would be in addition to their full-time teaching load. Then, the same teacher would need to submit a "general proposal," which would then need to be approved by the school's principal, and "if students need to miss classes or things like that, then it comes back to [the] staff council and governing board." As demonstrated by Marie-Josée, bringing a composting initiative together refers to a complex of social relations—such as the uncompensated labour of teachers and students and loss of instructional time—all of which come into play before any communication with city officials, and long before any organic matter is placed in the correct bin.

Taken together, the above accounts make visible the different scales of power and social relations that are taken for granted by policy makers. Composting might appear to be a straightforward educational act; however, the research findings suggest that composting efforts and notions of zero waste in schools are dependent on the labour and care of students and multiple education workers, including custodians, teachers, daycare workers, principals, and others who fell outside of the scope of this study. While policy makers do not intentionally seek to complicate the work lives of those who are required to assist in policy enactment, having a more robust understanding of what it takes to enact a zero waste policy in schools raises important issues around labour and justice. Eastwood's (2018) research shows that policy makers and other professionals are hooked into different institutional relations that shape the organization of their work. By focusing on

the social organization between climate change mitigation policies and schools, I draw closer attention to how uneven power inequalities can arise and how and where to co-generate solutions and imagine alternative possibilities.

Discussion and Conclusion

My research findings speak to multiple social considerations and contradictions in relation to the enactment of Montreal's zero waste plan. Like many of the city's green and/or environmental initiatives, the Zero Waste 2030 program (Ville de Montréal, 2019) includes layers of good intentions from both social and environmental perspectives; however, these layers are threaded through a complex web, making it difficult to determine if composting is actually working as a climate change mitigation strategy. More specifically, my research shows the incongruities between and amongst the values and intentions espoused in the zero waste policy about providing multiple resources, accessibility, and equitable benefits across the population (C40 Cities, n.d.-a), and how the policy in actuality extracted more unpaid labour from front-line workers.

The different qualitative data demonstrate the complex interplay of social and policy relations in shaping the experiences of educational workers. I recognize, however, that the study's scope is limited to Montreal. To fully understand how these kinds of power dynamics unfold in other cities and countries in the context of the climate emergency, additional and broader research is needed to examine the *transferability* of my research findings. This study calls for a more expansive and inviting understanding of a just transition in which teachers are meaningfully included in the decisions and policies that impact their work lives. As such, I strongly recommend that future research investigate whether and how teachers elsewhere might be experiencing similar challenges, such as additional labour and power imbalances, especially given the need for, and importance of, socially just climate policies in response to the ever-evolving climate crisis.

In this closing section, I revisit institutional ethnography's analytic research commitment of starting with people and their experiential knowledge (D. E. Smith, 2006), and apply my perspective by returning to people, especially the key actors of this project, whose work and commitments helped with the early implementation of Montreal's zero waste program. The following conditional statements are inspired by pre-figurative politics (Raekstad & Gradin, 2020) and critical scholarship on just transitions (Bouzarovski,

2022; Velicu & Barca, 2020). The statements relate to the different schools and educators with whom I work and highlight how I and others have been interacting with the municipal government, exploring how to make policies more equitable. Each statement is designed to provide educators and organizers with alternative actions to hierarchical municipal governance models and includes implications for action with the intention of making climate change mitigation efforts and policies more equitable.

First, thinking through shifting how an environmental policy like zero waste is socially organized, if outside parties like governments or researchers are recruiting schools in climate change mitigation efforts, then I strongly recommend that educators, students, and other stakeholders participate in the policy creation, development, and, most importantly, the evaluation of these programs. Far too often, the outcomes of climate mitigation initiatives are measured by particular impacts imposed by sustainability discourse, global environmental agreements, and government standards that do not correspond with the lived reality of teachers, other education workers, and students. Moreover, I also argue that, for something like zero waste or composting to be relevant and add educational value for both teachers and learners, composting needs to be more explicitly incorporated into core curricular areas (French, English, Math, and so on) and not only used or monitored during Green Club, or before or after school hours and during lunchtime. This would require municipal and provincial collaboration.

If Montreal's municipal government is committed to "ensuring benefits are distributed equitably across the city population" (C40 Cities, n.d.-a, "To achieve these bold targets" section), then they should also consider providing additional funding and labour to local schools to acknowledge the immense efforts required in the development and upkeep of these kinds of climate policies. With social and environmental justice at the centre of these conditions, and based on ongoing conversations with teachers and school staff, I encourage governments and others with power to: (1) engage, recognize, and compensate teachers and other school staff for their time, feedback, and expertise on issues that impact them to better ensure that these environmental policy initiatives can more fully actualize climate change mitigation outcomes; (2) incorporate teacher- and school-based reactions within emerging and evolving project intentions, especially with respect to the proposed project budget; (3) commit to transparency that allows local schools, teachers, education workers, and organizers to receive meaningful and detailed updates on climate change mitigation data, benchmarks, and budgetary allocations; and (4) rather than contracting/hiring

techno-managerial "experts" from outside of the school and its community, hire local climate-engaged teachers and school staff to manage the initiatives. As schools continue to be a site for social and environmental policy implementation, my research shows how a lack of teacher participation and support results in barriers to realization.

With the the Canadian government announcing a National School Food Policy to address issues of hunger and health inequities amongst Canadian youth and to "build food literacy and promote environmentally sustainable practices" (Employment and Social Development Canada, 2024, p. 9), it appears that schools and educational workers will once again be called upon to support this timely program. Unfortunately, decades of ongoing austerity reforms to public education (Evans & Fanelli, 2018; Nichols, 2019), coupled with a growing list of unmet social and health needs (e.g., child and youth mental health programs, food insecurity) that schools are being tasked with addressing, means that teachers are not structurally supported to take on this important new work. Unless all community actors feel that they are part of these climate change mitigation and just transition initiatives, social and environmental efforts will continue to ring hollow.

Climate change mitigation or activism is not something that people, schools, and society succeed or fail at. It's not binary. Everything individuals and communities do to reduce emissions and raise awareness makes a difference. All climate change mitigation efforts from cities, schools, and individuals ought to be applauded and encouraged for attempting to better improve and adapt to the current climate crisis. As a society and as climate-engaged educators, however, we must never pretend that better is ever good enough.

Acknowledgements

The author would like to thank Colin Hastings for his thoughtful review of an earlier draft of this article. The generative comments and suggestions offered by Carrie Karsgaard, Patrick Howard, and the anonymous peer reviewers of the *Canadian Journal of Education* were very helpful for enhancing the conceptual engagement of this work. This research is funded by the Fonds de Recherche du Québec.

References

Berryman, T., & Sauvé, L. (2016). Ruling relationships in sustainable development and education for sustainable development. *The Journal of Environmental Education*, *47*(2), 104–117. https://doi.org/10.1080/00958964.2015.1092934

Bouzarovski, S. (2022). Just transitions: A political ecology critique. *Antipode*, *54*(4), 1003–1020. https://doi.org/10.1111/anti.12823

Brand, P. (2007). Green subjection: The politics of neoliberal urban environmental management. *International Journal of Urban and Regional Research*, *31*(3), 616–632. https://doi.org/10.1111/j.1468-2427.2007.00748.x

C40 Cities. (n.d.-a). *Towards zero waste accelerator.* https://www.c40.org/accelerators/zero-waste/

C40 Cities. (n.d.-b). *Montreal*. https://www.c40.org/cities/montreal/

CBC News. (2019, November 29). *22 Montreal schools to start composting as part of city's zero-waste project*. https://www.cbc.ca/news/canada/montreal/montreal-schools-compost-zero-waste-pilot-project-1.5377875

Cornea, N. L. (2019). Urban political ecology. In *Oxford bibliographies*. Retrieved June 1, 2024, from https://doi.org/10.1093/OBO/9780199874002-0203

Devault, M. L. (2006). Introduction: What is institutional ethnography? *Social Problems*, *53*(3), 294–298. https://doi.org/10.1525/sp.2006.53.3.294

DeVault, M. L., & McCoy, L. (2006). Institutional ethnography: Using interviews to investigate ruling relations. In D. E. Smith (Ed.), *Institutional ethnography as practice* (pp. 15–44). Rowman & Littlefield.

Eastwood, L. E. (2018). *Negotiating the environment: Civil society, globalisation and the UN*. Routledge. https://doi.org/10.4324/9780203073971

EcoSchools Canada. (n.d.). *Foodcycler for schools*. https://ecoschools.ca/foodcycler-for-schools/

Employment and Social Development Canada. (2024). *National school food policy*. https://www.canada.ca/content/dam/esdc-edsc/images/programs/school-food/reports/national-policy/4624-National_School_Food_Policy-E.pdf

Environment and Climate Change Canada. (2024). Waste and greenhouse gases: Canada's Actions. Government of Canada. https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/municipal-solid/waste-greenhouse-gases-canada-actions.html

Evans, B. M., & Fanelli, C. (Eds.). (2018). *The public sector in an age of austerity: Perspectives from Canada's provinces and territories*. McGill-Queen's University Press.

Everitt, T., Engler-Stringer, R., & Martin, W. (2022). Operationalizing sustainable food systems through food programs in elementary schools. *Canadian Food Studies*, *9*(3), 124–146. https://doi.org/10.15353/cfs-rcea.v9i3.482

García-Prats, M., González, D., Moral-Vico, J., Madrid-López, C., & Sánchez, A. (2023). Implementing community composting in primary schools: First experiences at Universitat Autònoma de Barcelona, Spain. *Engineering Proceedings*, *37*(1), 37. https://doi.org/10.3390/ECP2023-14730

Gordon, D. J. (2024). Political economy of just urban transition. *Nature Climate Change*, *14*(3), 208–209. https://doi.org/10.1038/s41558-024-01942-2

Harris, C. (2019a, October 16). *Montreal wants to bar grocery stores from throwing food in trash*. CBC News. https://www.cbc.ca/news/canada/montreal/food-waste-montreal-donation-grocery-zero-waste-ban-1.5323700#:~:text=As%20part%20of%20its%20plan,environmental%20cost%2C%20an%20economic%20cost

Harris, C. (2019b, October 18). *How the City of Montreal plans to go 'zero waste'.* CBC News. https://www.cbc.ca/news/canada/montreal/montreal-zero-waste-grocery-compost-textile-recycling-1.5325319#:~:text=The%20city's%20goal%20is%20to,a%20public%20meeting%20in%20November

Heynen, N., Kaika, M., & Swyngedouw, E. (Eds.). (2006). *In the nature of cities: Urban political ecology and the politics of urban metabolism*. Routledge.

Kaika, M. (2005). *City of flows: Modernity, nature, and the city*. Routledge.

Krueger, R. (2007). Making 'smart' use of a sewer in Worcester, Massachusetts: A cautionary note on smart growth as an economic development policy. *Local Environment*, *12*(2), 93–110. https://doi.org/10.1080/13549830601133128

Léveillé, J.-T. (2019, November 28). Le compostage arrive dans certaines écoles de Montréal. *La Presse*. https://www.lapresse.ca/actualites/environnement/2019-11-28/le-compostage-arrive-dans-certaines-ecoles-de-montreal

Liboiron, M., & Lepawsky, J. (2022). *Discard studies: Wasting, systems, and power*. MIT Press.

McClintock, N. (2021). Nullius no more? Valorising vacancy through urban agriculture in the settler-colonial 'green city.' In C. O'Callaghan & C. Di Feliciantonio (Eds.), *The new urban ruins: Vacancy, urban politics and international experiments in the post-crisis city* (pp. 91–108). Policy Press.

McClintock, N. (2024). Of plots and plantations, wilderness and frontiers in *The City after Property*. *Urban Geography*, *45*(5), 912–919. https://doi.org/10.1080/02723638.2024.2328400

McClintock, N., & Guimont Marceau, S. (2022). Settler-colonial urbanisms: Convergences, divergences, limits, contestations. *Urban Geography*, *44*(2), 273–277. https://doi.org/10.1080/02723638.2022.2125663

McClintock, N., & Morris, G. (2024). Urban geographies of waste. *Urban Geography*, *45*(4), 518–527. https://doi.org/10.1080/02723638.2024.2319437

Miller, D. (2020). *Solved: How the world's great cities are fixing the climate crisis*. University of Toronto Press.

Morena, E., Krause, D., & Stevis, D. (Eds.). (2020). *Just transitions: Social justice in the shift towards a low-carbon world*. Pluto Press.

Moser, S., Fauveaud, G., & Cutts, A. (2019). Montréal: Towards a post-industrial reinvention. *Cities*, *86*, 125–135. https://doi.org/10.1016/j.cities.2018.09.013

Mykhalovskiy, E., McCoy, L., & Bresalier, M. (2004). Compliance/adherence, HIV, and the critique of medical power. *Social Theory & Health*, *2*(4), 315–340. https://doi.org/10.1057/palgrave.sth.8700037

Nichols, N. (2019). *Youth, school and community: Participatory institutional ethnographies*. University of Toronto Press.

Raekstad, P., & Gradin, S. S. (2020). *Prefigurative politics: Building tomorrow today*. Polity Press. https://doi.org/10.1080/09644016.2020.1741768

Recyc-Québec. (n.d.). *Coin parents-enseignants*. https://www.recyc-quebec.gouv.qc.ca/citoyens/mieux-consommer/zone-jeunesse/coin-parents-enseignants/

Smith, D. E. (1987). *The everyday world as problematic: A feminist sociology*. Northeastern University Press.

Smith, D. E. (1999). *Writing the social: Critique, theory, and investigations*. University of Toronto Press.

Smith, D. E. (2005). *Institutional ethnography: A sociology for people*. AltaMira Press.

Smith, D. E. (Ed.). (2006). *Institutional ethnography as practice.* Rowman & Littlefield.

Smith, G. W. (1990). Political activist as ethnographer. *Social Problems*, *37*(4), 629–648. https://doi.org/10.2307/800586

Snell, D. (2018). 'Just transition'? Conceptual challenges meet stark reality in a 'transitioning' coal region in Australia. *Globalizations*, *15*(4), 550–564. https://doi.org/10.1080/14747731.2018.1454679

Stephens, T. A., Black, J. L., Chapman, G. E., Velazquez, C. E., & Rojas, A. (2016). Participation in school food and nutrition activities among grade 6–8 students in Vancouver. *Canadian Journal of Dietetic Practice and Research*, *77*(3), 148–153. https://doi.org/10.3148/cjdpr-2016-003

The Canadian Press. (2022, December 12). *New UN project office focused on sustainable cities to open in Montreal*. CBC News. https://www.cbc.ca/news/canada/montreal/montreal-new-un-office-1.6683480

United Nations Environment Programme. (2022). *UN biodiversity conference (COP 15).* https://www.unep.org/un-biodiversity-conference-cop-15

United Nations Environment Programme. (2023a). *Cities and nature.* https://www.unep.org/topics/cities/cities-nature

United Nations Environment Programme. (2023b). *Ozonaction: About Montreal protocol.* https://www.unep.org/ozonaction/who-we-are/about-montreal-protocol

Velicu, I., & Barca, S. (2020). The just transition and its work of inequality. *Sustainability: Science, Practice and Policy*, *17*(S2), 263–273. https://doi.org/10.1080/15487733.2020.1814585@tsus20.2020.17.issue-S2

Velicu, I., & Kaika, M. (2017). Undoing environmental justice: Re-imagining equality in the Rosia Montana anti-mining movement. *Geoforum*, *84*, 305–315. https://doi.org/10.1016/j.geoforum.2015.10.012

Ville de Montréal. (2019). *Plan d'action du plan directeur de gestion des matières résiduelles de l'agglomération de Montréal. Montréal, zéro déchet 2020-2025*. https://www.makingmtl.ca/zerowaste.

Ville de Montréal. (2020). *Montréal climate plan: Objective carbon-neutral by 2050.* https://montreal.ca/en/articles/montreal-climate-plan-objective-carbon-neutral-2050-7613

Zero Waste Canada (n.d.). *Zero waste education and training*. https://www.zerowastecanada.ca/education-training