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**RESEARCH ARTICLE**

# Longer Distance Cycling for Interspecies Mobility Justice in Canada

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This article explores how longer distance cycling, by rendering distance as a conceptual measure embedded in the production of space rather than an abstract quantitative unit, can advance interspecies mobility justice. The article theorizes longer distance cycling not as some specific number of kilometres, but rather as the social production of cycling space across gentrified central cities, struggling inner suburbs, outlying exurbs and rural countrysides. I argue that longer distance cycling can advance interspecies mobility justice—a theory of (im)mobilities and justice that includes other-than-human individuals and habitats as worthy of our positive moral obligations—by promoting socially inclusive and ecologically good cycling practices that redress the active travel poverty of marginalized and colonized populations, while replacing rather than augmenting auto roads with active travel routes that help humans respect other species. To explore this argument my analysis focuses on Canada, an extreme context for longer distance cycling. I offer a comparison of two case studies, situated on the country’s west and east coasts, Vancouver, British Columbia and Halifax, Nova Scotia, drawing on an ongoing ethnographic study of cycling practices and politics in Canada.

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**Keywords:** longer distance cycling; interspecies mobility justice; Canada; Halifax; Vancouver

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## Introduction

This article explores how longer distance cycling, by rendering distance as conceptual measure embedded in the production of space rather than an abstract quantitative unit, can advance interspecies mobility justice (Scott, 2020a). Mobility justice refers to how social equity, inclusion and accessibility are assembled through (im)mobilities. It seeks to cultivate the voices, capabilities and ways of knowing of marginalized and colonized populations and hold to account the kinetic elites and military-industrial powers who bear the most responsibility for climate change (Sheller, 2018, 2020). Interspecies mobility justice goes further, by including other-than-human individuals (e.g., dogs, crows and killer whales) and environments as worthy of the positive moral obligations and remedies owed to all vulnerable persons (Scott, 2020a; Donaldson and Kymlicka, 2011). It becomes impossible for longer distance cycling, where it foregrounds qualitative differences and inequities in the production of space, to ignore mobility injustices among sapiens but also between sapiens and other species.

In this article, I argue that longer distance cycling can advance, and become enriched by, interspecies mobility justice, by promoting inclusive and ecologically good cycling practices that connect the city to the countryside. By inclusive and ecologically good, I mean cycling practices and spaces that redress the active travel poverty of marginalized and colonized populations, especially Black and Indigenous peoples (Lugo, 2018; Hoffman, 2016; Jones et al., 2020), while replacing rather than augmenting environmentally devastating roads for cars with active travel routes that help humans connect with and respect other species of life (Scott, 2021a). By the city to the countryside, I mean cycling that traverses the (often incoherent, unconnected) gamut of urban, suburban and rural infrastructures for cycling, and the competing politics and cultural tensions around them. Defining longer distance cycling in this way, rather than by some particular purpose (e.g., leisure versus work) or arbitrary number of kilometres, sets up its confrontation with the social and political production of urban, suburban and rural space (Lefebvre, 1991).

At the same time, I argue that longer distance cycling, like cycling in general, is susceptible to serving the narrow ends of carbon capital and unsustainable production and consumption, reproducing the social and ecological ills of automobility, and making relations among sapiens, and between sapiens and persons of other morally worthy species, *less* just than they already were (Lugo, 2018; Golub et al., 2016; Scott, 2020b; Spinney, 2020; Popan, 2019). Longer distance cycling is, perhaps, especially susceptible. I attend to the possibility that its expansion may advance interspecies mobility injustice. After all, longer distance cycling in wealthy nations such as Canada thus far in the twenty-first century looks like a niche sport dominated by men touring around in fluorescent spandex suits (often with motor vehicle chauffeurs) along the provincial roads and highways that in North America cemented colonialism and industrialized habitat degradation in the first place.

My analysis focuses on Canada, an extreme context for longer distance cycling that “activates more actors and more basic mechanisms in the situation studied” (Flyvbjerg, 2006, p229). Alongside Canada’s formidable wilderness and physical distances, we must consider its extreme production and consumption of motor vehicles and fossil fuels. Belying its eco-friendly, nature-loving international brand, Canada produces among the highest per capita greenhouse gas emissions in the G20. The country’s relentless effort to publicly subsidize and expand its system of private automobility continues to widen the physical but also the social and political distances between central cities, where cycling is slowly becoming feasible, and Canada’s vast suburban and rural countrysides in between, which have been assembled almost exclusively for the motor vehicle—from coast to coast to coast.

Beyond its sprawling “car troubles” (Conley and McLaren, 2009), Canada offers a powerful case study of longer distance cycling because of the cosmopolitan country’s ongoing reckoning with settler-colonialism and environmental racism. Until the mid-20th century, “Canada” was an homage to the white, British farmer and his colonial metropole (Saunders, 2019). However, Canada has begun to confront its white supremacism, notably via its landmark Truth and Reconciliation Commission (2007–2015) and the largest class-action settlement in Canadian history aiming to facilitate reconciliation with Indigenous victims of Canada’s genocidal Indian Residential Schools. More recently, environmental racism legislation has seen progress on the national stage, seeking justice for Black Canadians and other racialized populations disproportionately impacted and displaced by ecological degradation and related health crises (Waldron, 2018)—such as pandemics. Canada’s reckoning with colonialism and racism as they intersect with our current ecological crises—climate change, but also habitat degradation and the mass extinction of nonhuman species—presents a propitious context in which to investigate just formations of longer distance cycling.

The global pandemic of 2020–2021 raised the stakes of this investigation in three ways. First, it became impossible to ignore the structural (im)mobility injustices facing colonized and racialized populations in Canada who suffered disproportionately from COVID infection and mortality. Second, COVID, a zoonotic disease borne of ecological degradation, triggered a societal surge of public interest in, and appreciation of, nature and vulnerable animals, plants and ecosystems. Third, COVID lockdowns released a pent-up torrent of public demand for safer active travel routes and greenways—even in car-dominated suburbs (Buehler and Pucher, 2021). In fact, the pandemic pushed Canada's federal government to invest \$400 million in active travel and (more impressively) start defining its first ever national active travel plan, the National Active Transportation Strategy (Government of Canada, 2021). Canada, at long last, has a (sort of) national cycling plan. How (and whether) these three threads come together is the critical question facing longer distance cycling and its capacity to advance interspecies mobility justice after COVID.

This article proceeds by theorizing longer distance cycling and its relations to interspecies mobility justice in the next section, before turning to a comparative analysis of these relations in two contrasting cases on two different oceans, Vancouver, British Columbia and Halifax, Nova Scotia. My analysis draws from a larger, ongoing research project on cycling in Canada that started in 2014, which initially focused on city cycling, but has slowly expanded to include cycling outside of cities when it started to consider how people cycle to, and with, nature (Scott, 2020a, 2020b, 2021a, 2021b). The study relies on mobile video ethnography and a 'go-along' methodology (Scott, 2019) to investigate how people practice and successfully accomplish cycling across several major cities in Canada. The data used to support my observations and findings in this article come from twelve such ride-alongs conducted in Halifax and Vancouver, supplemented with six interviews with planners and cycling advocates, my own experiences and mobile observations of cycling in these places as well as documents of various kinds (e.g., government plans, municipal memoranda, advocacy organization literature, community cycling events and films and relevant media). My focus lies not on peoples' experiences of longer distance cycling, but rather on the wider production of space and justice in which these experiences unfold across different Canadian contexts.

### **Theorizing longer distance cycling as a matter of justice**

Where can longer distance cycling go? It is tempting, as a planner or economist, to pin down "longer distance" as a specific number of kilometres cycled by an individual. Trips that range more than five kilometres seems like a sensible definition in Canada, where trips <5km are generally viewed as "short"—and, as such, in cycling's wheelhouse (in higher cycling nations with superior cycling networks, in Europe for example, 8 or 10 km might be more appropriate). "A key characteristic of cycling trips," according to leading applied cycling researchers in Canada, "is that the majority are less than five kilometres long," including three quarters of all cycling trips in Toronto, for example (Ledsham et al., 2012). This pattern extends to Canada in general, and over time, at least in terms of commuting: the "median one-way distance was little changed for workers who cycled to work (2.8 km in 1996 versus 2.9 km in 2016)" (Statistics Canada, 2017). However, by this definition longer trips (>5km) are treated not just as abnormal, but also as a deterrent to cycling, one which planners are advised to overcome by using shorter distance cycling potential to evaluate neighbourhood cycling prospects (Verlinden et al., 2019). This approach admittedly works well for expanding cycling in dense, prewar neighbourhood grids adjacent to downtown cores, adding to higher quality cycling infrastructure where it already exists. It works less well outside of these old streetcar suburbs, where population densities drop and land uses homogenize, and it risks 'black boxing' longer distance cycling as something that may happen but whose internal workings remain mysterious.

To illuminate longer distance cycling, I propose a definition based not on abstract quantitative units tied to individual behaviour, but rather on a qualitative understanding of distance based on the production of space as a fundamentally social process shaped by politics, power and hegemonic automobility (Lefebvre, 1991). Despite the association of longer distance as a deterrent to cycling, increasing trip distances is nevertheless seen as a pivotal way of increasing cycling activity (Verlinden et al., 2019), and cities across Canada are slowly building out active travel networks (or planning to) within and beyond the orbit of central cities, inspired by early multiuser pathway networks such as Québec's Route Verte. This increases the possibility of cycling *across* radically different spheres of mobility—from gentrified central cities where most cycling currently takes place to struggling inner suburbs, greenfield exurbia and rural country. Irrespective of abstract kilometres, I define longer distance cycling as practices, plans and routes for cycling that travel across these different mobility spheres, which (very broadly) track the evolution, stratification and sprawl of Canadian towns and cities. This definition confronts cycling with qualitative distances gauged by these spheres' competing and divergent political cultures, colonial infrastructures and fast fraying relations with more-than-human environments. It is impossible for longer distance cycling, configured thusly, to ignore Canada's most salient interspecies mobility injustices.

Mobility justice research, surging in recent years, revolves around the insight that some persons and communities' freedom to move and dwell hinges on others' diminished mobilities and displacement (Verlinghieri and Schwanen, 2020; Cook and Butz, 2019). Mimi Sheller (2011, 2018), in particular, has advanced the concept by relating uneven mobilities divided by race, gender, sexuality, class, ability and citizenship to ecological crises including climate change, notably by the way wealthy countries have baked fossil-fuelled motor vehicle dependency into the built environment. Sheller's theory of mobility justice places embodied everyday experiences of (im)mobility in the context of interscalar challenges with which longer distance cycling must contend:

When a child, or a college student, or an underpaid bicycle-delivery person cannot ride safely in the streets without the likelihood of being hit by a careless car driver, there is an injustice of social protection that distributes the harms of automobility upon the most vulnerable. ...When a city and its surrounding suburbs are built in a way that makes most people living in them automobile dependent, there is an injustice for those without automobiles and for those affected by the air pollution, traffic and potential crashes created by excessive automobile dependency. When an urban redevelopment project puts a multi-lane highway through a working-class neighborhood, dividing it in half and obliterating homes and businesses, or when a new light-rail line bypasses poorer areas and brings the service only to the better off, there is an injustice enacted in spatial organization. When a rural community is left without transport services, and cannot access healthcare, education or Internet connections, because they have all been concentrated in cities, there is another kind of infrastructural mobility injustice (Sheller, 2020, p13).

To this list of injustices we must add gentrification fuelled by cycling infrastructure, what Lugo (2018, p141) describes as a "new colonial urbanism" catering to predominantly white, "car-free" kinetic elites. These mobility injustices, while not unique to Canada, are pronounced in this very wealthy country, owing to its low cycling rates, national housing crisis and the fact that most of its (settler-colonial) infrastructure, compared to the "old world," was built only after the arrival, and in the service, of automobility (Scott, 2012). And yet, as note Cox and Koglin (2020, p4), "even in European cases celebrated for high cycling modal share, cycling

continues to encounter marginalisation.” The ongoing infrastructuring of space for automobility represents, in fact, a global crisis for cycling growth and mobility justice—one whose ramifications ripple far beyond the anthropocentric concerns of our own species.

A leading edge of mobility justice considers how to bring other-than-human individuals and communities into the purview of our positive moral obligations to one another. Post-pandemic mobility justice cannot simply be about sapiens (Harari, 2014), or about fixing “the environment” simply so sapiens, just us, can continue to flourish. There are geoecological and biological reasons for this; there are also moral reasons, which are less understood and appreciated. Building on the human rights project of the twentieth century to protect all vulnerable persons who have a subjective sense of themselves and of a good life (Donaldson and Kymlicka, 2011), interspecies mobility justice explores how some species’ freedom to move and dwell hinges on others’ diminished mobilities and displacement, so we can all set about on making better relations among differentially mobile species (Scott, 2020a). Morally relating species, this perspective emphasizes how the mobility injustices facing marginalized humans and marginalized other-than-human individuals are interlocking and mutually reinforcing. The unbridled production and consumption of automobility—including ever-expanding roads that have fractured the terrestrial world into over half a million fragments, most too small for significant wildlife—has undermined the lives and relations of both humans and other highly intelligent, social species of life (Forman et al., 2002; Carrington, 2016). Fuelling habitat degradation, mass extinction and climate change, automobility’s “dark design” (Jensen, 2019) is a central source of interspecies mobility injustice.

Cycling offers a simple, yet powerful, tool for countering automobility’s dark design with self-propelled transport enjoying almost zero carbon emissions and vastly less roadkill. A crucial factor beyond cycling’s negligible emissions is its capacity to afford civil, awe-inspiring encounters with other-than-human individuals and habitats. Research on such encounters is still emerging, but early evidence suggests that, especially when guided by Indigenous knowledge and perspectives, cycling with nature—for example, taking the time to notice and appreciate the lives and practices of trees, mycelia and birds—helps people confront and rethink human supremacism and colonial mindsets predicated on domination (Howse and Libby, 2021; Scott, 2020a, 2021a; Donaldson and Kymlicka, 2011). In what follows, my exploratory analysis builds on this early evidence by investigating how the production of cycling space might grow these conditions necessary for interspecies mobility justice over longer distances across multiple spheres of mobility. On the way, I explore the material and political obstacles that threaten to undermine these conditions.

In sum, longer distance cycling can advance interspecies mobility justice by helping redress the interlocking injustices facing marginalized and colonized populations—including non-sapient persons—who have been subjected to environmental racism and genocide. To do so it must replace, rather than augment, roads for cars with more equitable non-motorized routes that help people gain respect for non-sapient life while moving across multiple spheres of mobility. These spheres include cities with advanced cycling politics and infrastructures, but also suburbs, exurbs and rural countrysides—places that are often overlooked by urban-centric cycling knowledge, and where it may not easily translate (Cooper and Leahy, 2017).

### **Cycling out of Vancouver**

Vancouver may be an ideal region to grow longer distance cycling. As the most compact municipality in Canada (hugged by mountains and ocean), the City of Vancouver was the first city in North America to put active travel (walking and cycling) at the top of the priority list through its pathbreaking 1997 Transportation Plan, and today it enjoys the highest proportion of commuters using active travel among Canada’s largest metropolitan areas (Statistics

Canada, 2017). One district east of downtown has a cycling mode share of 17% (Verlinden et al., 2019). Active travel is a priority in part because it forms a piece of Vancouver's climate emergency planning (City of Vancouver, 2017). Furthermore, the City of Vancouver is a national leader in planning for Reconciliation with local First Nations, by incorporating Indigenous perspectives and place names into City services and conducting "colonial audits" of parks and other public spaces (City of Vancouver, 2020).

Metro Vancouver, the sprawling (2,883 km<sup>2</sup>) federation of municipalities that surrounds the City of Vancouver, also enjoys a history of (relatively) progressive planning, passing regional growth strategies starting in the early 1990s that promoted more compact urban development around transit nodes to support non-auto options. Strong latent demand now exists across Metro Vancouver for living in a walkable, cycle-able neighbourhood, as reflected in real estate prices (Frank and Bigazzi, 2020). Reconciliation, like active travel, is growing outside the City of Vancouver in Metro Vancouver, notably through the Great Blue Heron Way (GBHW), the vision of Respected Tsawwassen Elder x<sup>w</sup>asteniya (Ruth Mary Adams) for a single, region wide active travel pathway connecting First Nations around the Salish Sea—from the city to the countryside.

In short, Vancouver represents what Flyvbjerg (2006) calls a critical, "most likely" case study: if advancing interspecies mobility justice through longer distance cycling fails in and around Vancouver, it will likely fail in other jurisdictions with far less fortuitous planning conditions.

Following the Great Blue Heron Way in the City of Vancouver and adjacent City of North Vancouver, cyclists travel through a gentrified central mobility sphere, one that maps onto a suite of preexisting, high quality, and fast expanding cycling infrastructures. Sweeping seamlessly around Stanley Park in Vancouver's natural urban core, the GBHW encompasses dedicated cycling space along a seawall in an urban wilderness of deep cultural and geographical significance for the x<sup>w</sup>məθk<sup>w</sup>əyəm (Musqueam), Sk̓wx̓wú7mesh (Squamish) and səlílwətaʔ (Tsleil-Waututh) First Nations—MST for short—on whose traditional, ancestral and unceded territories Vancouver sits. From Stanley Park, dedicated bike lanes cross Vancouver Harbour and continue as shared pathways in North Vancouver, connecting the GBHW to Squamish (Mission) and Tsleil-Waututh reserve communities. As a small, yet important step towards decolonizing cycling, North Vancouver includes signage to mark places along this network in the Squamish language (see **Figure 1**)—something MST Nations have called for (MST Futurism, 2020). Riding southeast out of the other side of Stanley Park, cyclists encounter the city's iconic and thriving nesting site for the Great Blue Heron Way's eponymous bird, an awe-inspiring scene (for both myself and my research participants) when the herons, whose species (globally in decline) faces tremendous pressure from habitat loss, are fledging. Outside the park cyclists enter neighbourhoods adjacent to downtown with a generous network of 1) dedicated bike lanes on high-traffic roads and intersections, and 2) traffic-calmed side streets or neighbourhood bikeways (equipped with signals at busy roads) (also called greenways). This mix of infrastructures not only forms the bedrock of city cycling promotion (Nello-Deakin, 2020); it also creates a safe and lively atmosphere in which people cycling have the time and space to notice more-than-human life.

Vancouver's central mobility sphere is characterized by high quality cycling and supporting transit infrastructure that fosters the economic prosperity of colonized populations through environmentally innovative, high end real estate. After turning south and riding across Burrard Bridge's dedicated bike lanes—North America's busiest cycling route (Perkins 2018)—the GBHW passes through Squamish Nation lands at the south end of the bridge, and site of Seńákw, a curious 3 billion dollar, 12 tower collaboration between the Squamish Nation and luxury real estate developer Westbank. Billed as the largest First Nations economic



development project in Canadian history (see <https://senakw.com>), Señákw is a net zero carbon mega project poised to amplify central Vancouver's already high active travel rates—but also its gentrification. Heading west from Señákw, the GBHW shepherds cyclists onto shared pathways and traffic calmed routes by beautiful beaches on Vancouver's West Side—one of the wealthiest enclaves of people in Canada that, ironically, fought off new cycling infrastructure at first, even though it would increase property values and happiness, because it took away space for driving their luxury motor vehicles. Tellingly, when the pandemic hit—nearly everywhere revealing and magnifying inequities—many of Vancouver's cycling spaces got even better, through a Slow Streets program installed on, and extending, pre-existing bike-ways. New, tactical traffic calming measures (plastic bollards, pylons, wood barricades and cement blocks) created yet more safe cycling space in already cycle-thriving places—including Stanley Park and connecting streets (see **Figure 2**) (Scott, 2021b).

When COVID struck, some suburbs—especially inner ones with little cycling space and isolating, homogenous land uses—were understandably less concerned with tactical urbanism than fighting off the novel coronavirus infections overwhelming their ICU beds. By catering to wealthy, established families and global kinetic elites, many Canadian central cities, and especially Vancouver, have displaced immigration, essential workers and racialized forms of poverty to inner suburbs—where COVID, aside from long term care homes and mass slaughterhouses staffed with precarious temporary foreign workers, hit the hardest (Saunders 2020). Outside the City of Vancouver, the Great Blue Heron Way passes through marginalized inner suburbs which do not map easily onto Metro Vancouver's family of municipalities but rather emerge in pockets of, for example, Richmond, Langley and Surrey, which face active transport poverty. Longer distance cycling runs less smoothly, for fewer kinds of people, in this



checkered suburban mobility sphere. Gone are the dedicated tracks protecting cyclists along busy arterials and traffic calmed greenways, replaced inconsistently by painted bike lanes and sketchy shoulders on highways—but also multiuser trails running through parks and along dikes and coastlines that afford meaningful, civil encounters with biodiversity in globally important coastal ecosystems and riparian communities, including the largest salmon-producing river in the world. By consolidating safer route connections through Surrey, moreover, the GBHW aims to make cycling safer and more accessible for marginalized Indigenous and Asian Canadians outside of central Vancouver's wealthy orbit.

The Great Blue Heron Way seeks to consolidate a socially inclusive, interurban network of facilities as separated from motor vehicles as possible by focusing advocacy on closing the most glaring route gaps for cycling and walking between the city and the countryside. Unfortunately, these gaps typically fall under the jurisdiction of a provincial Ministry of Transportation and Infrastructure more accustomed to building up modernist automobility structures than taking them down. These gaps include a flyover highway to Vancouver's International Airport in Richmond and one to a massive container port in Delta, as well as Massey Tunnel, a divided four-lane highway traffic tunnel beneath the Fraser River (below sea level) connecting Richmond with Delta. The political cultures holding together these ecologically disastrous high modernist roads—locked in by rising demand for air and marine mass transport, but also by legions of auto commuters in electorally pivotal suburbs—are more problematic than the material infrastructures themselves.

The Massey Tunnel, which completely excludes active travel, poses a particularly daunting hurdle for the GBHW and longer distance cycling in Metro Vancouver. Opened to cars in 1959, this colossal tube of concrete and steel is vulnerable to collapse by an earthquake, reviled by commuters for its congestion and slated for replacement. After a labyrinthine review (Ius, 2019), a task force dominated by suburban mayors endorsed in 2019 what appears to be the winning plan for a replacement: a new, eight-lane immersed tunnel! Active travel, clearly an afterthought, remains in limbo, fighting for its own, dank little side tunnels below the sea.

As Metro Vancouver's suburban mobility sphere sprawls via ever-widening highways—undermining its own plans for more compact regional development—the picture in exurban and rural spheres is more mixed. On one hand, exurbs (outer suburbs at the rural interface)

beyond the pale of commuting distance to Vancouver, such as fast-growing communities in the Hope Valley and Kamloops regions, are fueling automobility growth by expanding infrastructures for the exclusive use of fast motor vehicles that effectively thwart future longer distance cycling—especially after the pandemic legitimated remote work and led to panic real-estate buying and feverish speculation outside big cities. As in the case of suburbs, longer distance cycling here encounters intractable route gaps. On the other hand, small pockets of cycling, notably mountain biking, are growing within these communities—notable because some mountain biking trails have been quicker than urban routes to embrace decolonization (Lucas, 2021). While mountain biking is also part of the disturbingly unsustainable yet burgeoning luxury practice of heli-biking, it nonetheless forms an important part of cycling out “in the sticks” (Cooper and Leahy, 2017) and offers a dynamic subculture with which longer distance cycling can advance interspecies mobility justice.

E-biking offers another emerging kind of cycling that carries tremendous potential for expanding it to and from “the sticks.” E-bikes allow riders to travel further than possible though conventional cycles, offer new opportunities for folks who would not otherwise cycle, replace some trips that would have been taken by car (Jones et al., 2016), and create support for “cycle highways” where e-bikes can travel faster than conventional cycles (Lieropa et al., 2020)—although faster speeds (>30km/hr) and linear highways, mimicking the environmental disconnection of automobility, threaten to undermine the capacity of e-cyclists to engage with (or even notice) local, other-than-human individuals and environments.

A work in progress, the Great Blue Heron Way marks a bright spot for decolonizing cycling in Canada with strong potential to advance interspecies mobility justice. The GBHW is the vision of Elder Ruth Mary Adams of Tsawwassen First Nation. Unlike European-inspired plans fuelling cycling gentrification and “colonial urbanism” (Lugo, 2018), the GBHW champions an explicitly anti-racist and ecological agenda—“a Trail of Reconciliation,” in Elder Ruth’s vision, that connects all her relations. This Trail enjoys the support of a diverse local, regional and provincial team of cycling advocates (Adams et al., 2020). They aim to realize Elder Ruth’s vision of a regional network for sustainable mobility that joins and recognizes First Nations around the Salish Sea and Fraser River, whose unceded territories have been, and continue to be, exploited, polluted and sundered by infrastructures for the industries, logistics and housing tracts of settlers. Building on progress in extending coastal pathways in Tsawwassen, the GBHW attempts to heal rifts caused by highways for the “free” circulation of motor vehicles. It also aims to repair marginalized multispecies communities and relations with salmon, crab, herons, orcas, bogs and sacred middens, by designing and authoring the Great Blue Heron Way through First Nation knowledge and place names on way-finding signs for active mobility in First Nation languages.

### **Cycling out of Halifax**

If Vancouver represents a critical, “most likely” case study of advancing interspecies mobility justice through longer distance cycling, Halifax represents what Flyvbjerg (2006) calls a critical, “least likely” case study: if it succeeds here, it probably can elsewhere, particularly in other jurisdictions with more fortuitous planning conditions. Halifax has one of the lowest proportions (1%) of commuters who cycle, at the municipal level, in Canada (Statistics Canada, 2017). In sharp contrast to the compactness (115 km<sup>2</sup>) of the City of Vancouver (the central municipality of Metro Vancouver), Halifax constitutes one sprawling (5,490 km<sup>2</sup>) regional municipality (amalgamated under neoliberal justifications), most of it suburban and rural. Therefore, Halifax’s urban active travel promotion, more than Vancouver’s, is drowned out by suburban politics and development. Halifax has expanded cycling tepidly compared to other cities in Canada, only recently creating a plan (City of Halifax, 2017) to grow cycling at the

expense of the car, and then failing to meet its modest goals. Similarly, Halifax has pursued policies addressing Reconciliation and climate change, but compared to Vancouver and other cities in Canada, they are less advanced and integrated with transportation. There is no such thing as a Great Blue Heron Way around greater Halifax.

While Halifax is starting from a low floor, the city may nevertheless catalyze transformative change. The city is represented in Canadian Parliament by an urban planner who in March 2021 stood in front of a DIY bike co-op in Halifax to announce Canada's first national investment in active travel and associated National Active Transportation Strategy (Government of Canada, 2021). Public opinion research suggests Haligonians show high levels of support for building dedicated bike lanes and thinking that such lanes will "make a community a better place to live"—suggestive of latent demand for cycling (Scott, 2020c). In just the last couple of years, Halifax has constructed several protected bike lanes in its southern urban core. However, the location of this bold, all ages and abilities infrastructure that took away space for the car raises the question, who is it for?

Halifax's central mobility sphere is strikingly similar to Vancouver's, only smaller. It features a gentrified, luxury condo-spouting urban core on the south end of the Halifax peninsula that caters to wealthy, established families and global kinetic elites. That Halifax's protected bike lane network, five streets strong as of 2021, fails to touch the northern half of the urban peninsula, the historically impoverished end and long-standing home for many Black Nova Scotians, threatens to make the new network look like "white lanes" (Hoffman, 2016). To be fair, not everyone who lives in Halifax's south end is wealthy, and the city has plans to extend bike lanes throughout the peninsula (City of Halifax, 2017), and it makes sense to target the best lanes where the demand is—cycling mode share for south end Halifax is nearly 10%, 9 points above that of the municipality as a whole (Verlinden et al., 2019). And yet, it is notable that the city's protected cycling network maps directly onto the most privileged urban district in Atlantic Canada.

Halifax responded to the surge in demand for active travel under COVID, like Vancouver, by rolling out Slow Streets in summer 2020. Deploying bollards and blockades to slow down motorists and exclude through traffic, these Slow Streets added an additional 20% distance to Halifax's bicycle network—relatively high compared to other mid-sized cities in Canada (Fischer and Winters, 2021)—and reached into Halifax's north end. Guided by Halifax's City of Halifax (2017), the Slow Streets even crossed Halifax Harbour into the north end of Dartmouth, a marginalized inner suburb. Overall, Halifax's Slow Streets were fairly balanced across incomes areas (Fischer and Winters, 2021). These results are impressive, because Halifax lacks a network of traffic-calmed bikeways like Vancouver, on which the latter relied as an anchor for Slow Streets. This helps explain why Halifax's Slow Streets lacked resilience. Both Vancouverites and Haligonians complained by summer's end in 2020 that Slow Streets failed their mission of slowing down motorists and filtering out through traffic. But while Vancouver doubled down, trading in for stronger, concrete barriers and relying on hard-won public acceptance of existing bikeways, Halifax, lacking such a foundation, folded its Slow Streets before summer's end.

Halifax's lack of traffic-calmed bikeways, either temporary or permanent, poses a significant problem for gearing longer distance cycling towards interspecies justice. Cities rely on these bikeways to safely ferry cyclists between the suburbs and biodiverse spaces like parks, fragmented as they are by roads. Halifax's slow build out of bikeways, against the backdrop of highway expansion across the entire province, threatens to hem cycling into either the urban core or sporadic islands of suburban and rural space for cycling. Halifax's suburban mobility sphere, like Vancouver's, is materially and politically dominated by ever-widening freeways, new housing tracts and established communities who perceive bike lanes as a cultural threat

to their car-based ways of living. For example, the installation of a 680m bikeway on Dhalia Street in Dartmouth, a tiny yet pivotal connecting piece in a fledgling suburban all ages and abilities network (City of Halifax, 2021), saw post-pandemic approval only after overcoming strong community backlash—focused, as is so often the case, on the loss of free parking (Berman, 2020).

The transformation of Dhalia Street, however, might also be read as a kind of canary in the coal mine for an Eastern Canadian capital ready to close glaring route gaps that leave cycling to the hardy, privileged few. The longer distance cycling network of which Dhalia is a part eventually weaves around the ponds, lakes, rivers and parks that make up the Shubenacadie Canal system, an ecologically vital water highway connecting Halifax Harbour all the way to the Bay of Fundy. The production of space for cycling, mainly though trails shared with walking, is slowly working its way up the Shubenacadie system, assisted by its induction into The Great Trail of Canada (originally called the Trans Canada Trail)—a donor-driven project spanning 24,000 kilometres across all 13 Canadian provinces and territories completed in 2017 (see <https://thegreattrail.ca>). Like the Great Blue Heron Way, the Great Trail encompasses existing routes and strategically offers support for new ones. Cycling the Great Trail along the Shubenacadie system engages people with, and helps people appreciate the worth of, some of Nova Scotia's richest remaining biodiversity. For example, cyclists encounter, and learn how to respect (with help from educational materials from the Shubenacadie Canal Commission), beavers, turtles, white-tailed deer, squirrels, dragonflies, eagles, ospreys and ducks. Still, the expansion of high-speed roads and highway-oriented development that presses in on the Shubenacadie ecosystem threatens its integrity—much like highways rammed through Indigenous communities undercut their flourishing.

In sharp contrast with Metro Vancouver and the Great Blue Heron Way, Halifax cycling routes and The Great Trail of Canada currently fail to include Nova Scotia's most marginalized and colonized populations—exacerbating rifts between humans in ways that also undermine mobility justice between species. These populations include the Mi'kmaq, who have lived in what became Nova Scotia and other Maritime provinces for over 10,000 years. Nova Scotia has 13 Mi'kmaq First Nations. The Mi'kmaq call "Shubenacadie" (a French settler corruption) Sipekne'katik, which served as a vital transport route between their summer camps on the shores of Halifax Harbour and winter camps in the densely forested interior (Shubenacadie Canal Commission, 2019). While Mi'kmaq First Nations have expressed interest in active travel as a way of reconnecting with the land and improving health, thus far little has come of it. This leaves their space for active travel disconnected and vulnerable to the abuse and violence of motorists on highways built beside or directly through Mi'kmaq communities. It also means that active travel itself is unable to learn from the Mi'kmaq and their invaluable ecological knowledge and capabilities. Descriptive signage and place markers along existing routes, including the Great Trail, describe Nova Scotia's colonial history and geography, yet make no mention of whose traditional and unceded territories the Trail occupies.

Similarly, when The Great Trail of Canada curls along the Atlantic Ocean through outlying exurbs on Halifax's Eastern Shore—leveraging a popular rails-to-trails program that repurposes disused rail lines for active travel—it circumvents and bypasses major Black communities in East and North Preston. The failure of cycling space, in general, to reach Black Nova Scotians perpetuates an old pattern in Halifax. It reinforces the mobility injustice by which Black Loyalists and Black Refugees were initially channeled outside the city during the 18th and 19th centuries into undesirable areas less suitable for growing crops by the British State. Halifax's new "white lanes" (Hoffman, 2016) reflect and reinforce its razing of Africville in the 1960s, the only Black community with a toehold on the peninsula, under the odious pretext of highway-driven urban renewal (Rutland, 2018). Today, the highways that sprouted from

this “renewal” both choke and divide the city with traffic yet continue to expand into wilderness areas—provoking a dangerous crisis of ecological degradation treated far less urgently by Nova Scotia than climate change or pandemics. By failing to include its most marginalized and colonized populations and habitats, Halifax’s production of longer distance cycling space echoes, and reproduces, the ongoing conditions for colonialism, slavery and environmental racism under which Black and Indigenous communities have long been displaced, fragmented and excluded (Waldron, 2018).

Compared to Vancouver, Halifax seems like a strong case of interspecies mobility injustice—and yet, some plans that Halifax has pursued in just the past couple of years for new cycling space do not ignore social and ecological inequities. For example, Halifax, in collaboration with Black community stakeholders, plans to engineer an active travel greenway for what is now Africville Park on the northern tip of the peninsula—a place of deep significance for Black Nova Scotians that remains isolated by the very highway infrastructure that Halifax used to help justify Africville’s demolition. Another notable example is work by Halifax’s Ecology Action Centre, a leading environmental charity, to bring bike repair tools, training and donated bikes to racialized communities and Mi’kmaq nations in exurbs and rural areas outside the city’s privileged urban mobility sphere (see <https://ecologyaction.ca/pop-bike-hub>). Active transport planners for the City of Halifax, furthermore, have been quietly talking about naming Mi’kmaq places and routes in the Mi’kmaq language. Therefore, even as Halifax is not doing nearly enough to protect or repair marginalized communities and habitats, there remains significant cause for hope.

### **Conclusion: The long road to decolonizing cycling**

This article explored how the production of space for longer distance cycling can support and grow through novel notions about mobility justice that encompass complex inequities between humans but also between humans and other species (Scott, 2020a; Donaldson and Kymlicka, 2011). Both longer distance cycling and interspecies mobility justice are fast-evolving ideas. My exploratory analysis does not offer definitive claims about their relations, so much as create a foundation for further research and debate. On the basis of two carefully selected cases (Flyvbjerg, 2006), I showed how the production of longer distance cycling in Canada might cultivate the conditions necessary for interspecies mobility justice, by promoting inclusive and ecologically good cycling practices that break from automobility’s dark designs and maltreatment of marginalized lives and colonized communities. Rather than associate longer distance cycling with some particular number of kilometres, I defined it as the production of space across different spheres of mobility: gentrified central cities, struggling inner suburbs, far-flung exurbs and rural country. The competing political cultures and infrastructures across these different, yet interconnected spheres bring to the fore prominent interspecies mobility injustices facing the production of cycling as a whole—between the city and the countryside.

I took Vancouver as a most likely case of advancing interspecies mobility justice. The evidence suggests that, indeed, both the city and the region of Metro Vancouver show encouraging signs of expanding cycling systems to help redress the active travel poverty of marginalized and colonized populations, while bringing humans together with other-than-human individuals and environments in civil, meaningful ways that support interspecies mobility justice. The Great Blue Heron Way emanating from Tsawwassen First Nation and Respected Tsawwassen Elder x<sup>w</sup>asteniya (Ruth Mary Adams) offers an inspiring example. At the same time, longer distance cycling in Metro Vancouver, thus far, has yet to replace automobility and instead serves to augment it, as existing and new high-speed infrastructures restricted to motor vehicles persist in blocking people cycling from entering or leaving suburbs and outlying exurbs.

By exacerbating climate change, habitat degradation and mass extinction of nonhuman life, new highways for the car in Metro Vancouver arguably constitute a generational interspecies mobility injustice, one whose grim ecological effects will manifest over decades. Additionally, advanced gentrification, a housing affordability crisis and anti-Black racism (redlining) that was baked into private property and real estate across the Pacific Northwest region of Canada and the United States, undercuts the City of Vancouver's otherwise impressive cycling network by threatening to make it the preserve of privileged and wealthy kinetic elites.

I took Halifax as a least-likely case of longer distance cycling advancing interspecies mobility justice. The evidence is more mixed than I had anticipated. Certainly the city's lack of bikeways, its confinement of protected bike lanes in an extremely wealthy area of the city, and its abiding commitment to expanding its own restricted access motor vehicle infrastructures in ecologically vulnerable areas across the province suggests deepening interspecies mobility injustice. However, in only the past two years Halifax seems to have charted a new course (in part by pursuing existing cycling plans more ambitiously). Halifax's Slow Streets program in response to the pandemic, while ephemeral, broached important socioeconomic divides. Nevertheless, Halifax's enduring legacies of anti-Black racism and colonialism, and their dark connection with highways in some of Canada's most infamous cases of environmental racism, inflict the city's roll out of active travel. Intergenerational trauma poses a formidable moral challenge for longer distance cycling and the justice of active travel in twenty-first century Halifax.

Comparing most likely cases with least likely ones helps tease out the range of a problem and identify which actors and networks are central. The range of longer distance cycling in Canada, stretching between Vancouver and Halifax across a continent, is determined not by kilometres, stamina, hi-tech gear or even e-bikes, but by exclusive, high-speed motor vehicle infrastructure. More powerful than roads themselves are suburban political cultures that lock in their future expansion from coast to coast to coast. The actors and networks most central to longer distance cycling in Canada are cities, protected bike lanes and traffic calmed bikeways that promote gentrification and usually implode before reaching the suburbs—although exurban and rural space for cycling is slowly expanding. In the extreme context of wealthy, car-choked Canada, cycling can seem sometimes as if it is trapped in white male privilege and stuck bouncing off the walls of wealthy, pre-WWII districts next to downtown cores. Yet, as it reckons with its settler-colonialism and environmental racism, Canada offers a wealth of cases to not only explore interspecies mobility justice, but also what it might mean to decolonize active travel studies.

Mobility in Canada is changing faster than you might think. Pathways and trails for active travel, inside and outside cities, are growing but also joining up, hunting for creative ways around motor vehicle highways with help from Indigenous, regional and even national visions of routes for active travel that breach the suburbs and beyond. As Canada's first National Active Transportation Strategy (Government of Canada, 2021) rolls out an information infrastructure for producing cycling space, sorely needed planning capacity will percolate into peripheral areas and deprived regions where expensive and controversial dedicated bike lanes are not always the answer. Pragmatically, the success of longer distance cycling in Canada after COVID will depend not on implementing a new, top-down interurban network of bike lanes that re-colonize and gentrify the country, but rather on knitting together tens of thousands of existing pieces and places where cycling of diverse kinds already lives—including Indigenous communities with deep experience in promoting multispecies flourishing. If Canada can advance interspecies mobility justice through longer distance cycling and rise to the ecological challenges of the twenty-first century, it needs to treat active travel as seriously, and fund it comparably to, automobility. Compared to what Canada spends on motor vehicles, their fuels and highways, a \$400 million investment in active travel is basically nothing.

## Competing Interests

The author has no competing interests to declare.

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