Between Landscape and the Screen: Locative Media,Transitive Reading, and Environmental Storytelling

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Abstract

In what ways can the everyday citizen encourage sustainability and promote biodiversity in spaces that are as fragmented, industrial, and toxic as the city? This paper investigates how GPS-enabled platforms afford user experiences of what we call "embodied knowing" – learning through encounter, awareness through physicality – in urban wilds, which represent informal greenspaces on the edges of urban development. The locative mobile application that we have produced, *Global Urban Wilds,* complicates notions of time, space, and preservation in ruderal landscapes that survive in city spaces, demonstrating that they come into tension with layers of biodiversity, technological development, and settler culture in urban contexts such as Montréal, Canada. As such, we show how the app's mediation of these layers through a method of transitive reading promotes a user's critical negotiation and awareness of urban ecosystems in relation to today's "smart" city.

Keywords

Locative media, urban wilds, environmental storytelling, transitive reading, smart cities

Introduction

This paper investigates the affordances of locative media platforms for engaging citizen publics in issues of urban biodiversity, climate change, and settler culture, and

theorizes the pedagogical possibilities of embodied knowing. We introduce the *Global Urban Wilds* (*GUW*) locative media application and explore its reliance on transitive-reading practices for engaging users in environmental place-making. We reflect on how our GPS-enabled locative platform leverages the tension between the material and embodied experience of a local urban wild – the Champ des Possibles – and the story of the emergence of this greenspace in the evolution of the neighbourhood.

We make the following observations of the *GUW*'s mode of encouraging site-specific transitive reading as it emerges between spaces: First, we reflect on how the platform can be used to foreground the character of urban wilds – abandoned spaces in cities where foreign and native plant species thrive in conditions characterized by disturbed and degraded soil, toxicity, and heat – and the way this can serve as a vital resource for studying urban ecology, resilience, sustainability, and urban-based responses to climate change. Second, we explain how the design of this site-specific locative narrative works to complicate romantic ideas of retreat associated with greenspaces in urban contexts, and highlight how they are instead living archives of both settler and Indigenous environmental history. Third, we consider how the mediation of the users' experience of the urban wild, via locative media with its origins in digital culture and post-industrial information society, highlights affinities and contractions between notions of media ecology and urban ecology in the place-making goals of the app.

Finally, we reflect on how the experience of interacting among layers of text and real space – what Andrew Piper calls "transitive" reading (2012: 123) – allows for the emergence of new forms of reading, and of a knowledge that we describe as embodied. The "transitive properties of urban experience" (Piper, 2012: 127), where spaces take on layers of meaning through their histories, communities, and uses, necessitates a kind of reading that can move among such stratum and foster a deeper understanding of place-making. By exploiting the transitive reading practices and "digital doubling of place" that locative media affords (Moores, 2012: 13), we argue that *GUW* encourages the user to "actively form complex narrative links" (Greenspan, 2011) between landscape and the screen, the environment and its historicity, and their own embodied implication in this story.

The Champ des Possibles as a space of translation

The Champ des Possibles is an ideal setting from which to explore the affordances of a site-specific locative narrative concerned with the complex interaction between nature and culture in the environment. Framed by sixties-era industrial buildings that once housed the city's garment industry, the Canadian Pacific (CP) Railway tracks, and the walled garden of le Monastère des Carmélites of the Plateau-Mont-Royal of Montréal, the Champ was designated as a protected parkland in 2009, the result of a community-led movement to retain it as an informal greenspace instead of repurposing it for "development." The abandoned Saint Louis Rail Yard – that had come to be known as "the Maguire meadow" in Montréal's Mile End district – became the focus of a neighbourhood-based response to a proposal by the city to "revitalize" the adjacent industrial zone on the site's western edge. In reaction to the city of Montréal's proposed plan to absorb the Maguire Meadow into this space, extend a cross street, and open up the site for a municipal truck depot, the Mile-End Citizens Committee argued instead for the establishment of an urban wild, an idea spearheaded by a land-art project by Emily Rose Michaud.

Having become familiar with "the Field," Michaud, an interdisciplinary artist and educator, explains how she investigated the cadaster number of the site,[1] with the idea of developing an urban land-art project, only to discover that the city planned to buy the land from CP Rail for a street extension and truck depot. As Michaud recalls in an interview conducted for the *GUW* project:

> And I thought, "Okay so…" – I had been working with the Roerich symbol for at least three years prior […] and the more I thought of it, the more it just needed to happen. Because it is a symbol of cultural preservation and it actually literally means "Don't bomb here," and it was used in WWII Europe to be seen from above, to say "this place has cultural significance and it needs to be protected" (Michaud).

Michaud's interest in the Roerich symbol in her environmental art practice deserves further attention. As Michaud explains, the Roerich symbol, otherwise known as the "banner of peace" (USCBS, 2017), is composed of three red dots in a circle that could easily be identified from the air. Conceived of by artist Nicholas Roerich in 1935, the

symbol has been used since that time to mark sites of cultural and historical significance for preservation in the midst of military conflicts that might lead to their destruction. While Michaud was initially inspired by Robert Smithson's *Spiral Jetty*, she describes how she imagined her own land-art project on different terms, and sought out an urban location and a collaborative process in its creation: "I wanted it to be in an urban setting where there was lots of urban traffic is happening […] I wanted it to be a collective experience, and I wanted it to be a hands-on experience, I wanted it to be human powered" (Michaud). In November 2007, Michaud invited interested community members in Mile End to join her for a two-day event, where they worked to create a 312-square foot version of the Roerich symbol near the center of the Champ. She guided the group in a permaculture technique that recreated the Roerich symbol using of layers of cardboard, hay, and leaves, producing what she describes as "a drawing on the land" (Figure 1).

Michaud's project caught the attention of neighbourhood stakeholders, local media, and ultimately, city officials. This land-art intervention, along with extensive networking and consultation by the Mile End Citizens Committee with the city, led to the designation of lot 2334609 as a friche urbain, or urban wild, in 2009.[2] Since that time, the roughly 'L' shaped plot of land that had previously been an unrecognized greenspace located on the fringes of the CP Rail's transportation corridor, has emerged as place that is celebrated for explorations of biodiversity, artistic expression, and community engagement. A place that has been a site for community mobilization since its inception, it has been guided by an assumption that "the knower is always implicated, geo-and body-politically, in the known" (Mignolo, 2009: 162).

There is much about the history of the neighbourhood of Mile End that created the conditions for the establishment of the Champ des Possibles to gain momentum. This community is known for its association with subsequent waves of working class Jewish, Greek, Italian, and Portuguese immigrants, affordable rents, a lively artistic community, and a culture that is open to ideas of difference and diversity. In *Translating Montreal*, Sherry Simon (2006) refers to the allophone Mile End district as both a practical and metaphorical "space of translation," a community characterized by "a diasporic consciousness," and "buffer zone that defines itself in opposition to the

polarized identities around it" (60). The idea of translation is also a particularly apt metaphor for describing the ecology of urban wilds.

Figure 1: Emily Rose Michaud Roerich Garden Project, November, 2007.
Photo: Emily Rose Michaud.

Urban wilds (also known in French as a terrain vague, parc naturel, or espace naturel) are described by plant scientists as abandoned ruderal landscapes made up of species of plants that are not necessarily indigenous to the landscape, and that have come to populate a "new location as a direct or indirect result of human action" (Hammond, 2014). As biologist Peter Del Tredici (2010) explains, an urban wild is defined as a "marginal or degraded urban land that receives little or no maintenance and is

dominated by spontaneous vegetation – a cosmopolitan mix of species that grows and reproduces without human care or intent" (300). "Ruderal landscapes," elaborates Del Tredici, "are typically associated with the margins of transportation and infrastructure, abandoned or vacant residential, commercial, and industrial property, and the interstitial spaces that separate one land-use function from another" (2010: 300). Given the extent of environmental change urban wilds have experienced, going beyond the "restoration model" of urban ecosystem management holds significant advantages for research on urban ecology (303). Human and transportation-linked changes in urban environments (like those associated with the Champ des Possibles), Del Tredici argues, typically destabilize existing vegetation patterns and promote the formation of entirely new plant associations better adapted to "elevated levels of carbon dioxide, altered solar radiation regimens, altered wind patterns, decreased humidity, increased ozone levels, increased soil and air temperatures, and extended growing season length" (2010: 303-4). Rather than seek to restore these landscapes to some kind pre-industrial status, Del Tredici argues that they demand an approach adapted to the new climatic and ecological conditions.

The interstitial ecological character of urban wilds, with their mixed biological heritage and improvisational modes of adaptation, share much with the idea of translation that Simon invokes in relation to Mile End, and a more-than-human identity that resonates with the character of the neighbourhood's human community. Mile End, argues Simon (2006), represents a "new in-between culture" that leaves behind "long-time tensions and polarized identities" (3). Cultural and linguistic translation in the context of Mile End, therefore, like the ecology that governs urban wilds, is engaged through "an ingathering of multiple influences" and "an awareness that *one's own* culture begins and continues through translation" (Simon, 2006: 60, emphasis in the original).

The *Global Urban Wilds* platform

The *GUW* platform is multilayered interactive locative narrative designed to be experienced in the Champ des Possibles using a mobile phone with GSP enabled content. A landing page welcomes the user in either English or French, and features an empty bird's nest (intended to underscore ideas of non-human agency in the space),

an image that will be slowly overlaid with trinkets (also called "found icons") associated with the history of human and non-human activities in the Champ (Figure 2).

Figure 2: Nest and found icons unlocked by user's proximity to GPS coordinates.
Artist, Beverly Didur, designer, Emma Saboureau.

The recorded introduction begins with a territorial acknowledgement that notes that "the Champ is located on the unceded Indigenous lands of the Kanien'kehá:ka (Mohawk) Nation" (Indigenous Directions Leadership Group), followed by a brief explanation of how to use the app to navigate the Champ des Possibles. In the corner of the landing page, a user clicks to another layer: a contemporary artist's hand-drawn map of the Champ that is whimsically illustrated to feature the field as the space of focus, but that also outlines the neighbouring railroad tracks, streets and key buildings that lie on the edges of the space (a monastery and early and mid-twentieth century factory buildings) (Figure 3).

Figure 3: Map interface, Champ de Possibles. Artist, Beverly Didur, designer, Emma Saboureau.

The familiar glowing blue dot ("you are here") of locative devices appears on the interactive map, and gives users a rough estimation of where they are situated in relation to a series of nine GPS locations, indicated by transparent bubbles. As users approach these geolocations that are tagged by GPS coordinates in the Champ, one of nine thematic icons are "collected" into the nest. Is it a glowing golden key? Or perhaps a buzzing dragonfly has landed? The icons appear by surprise in the nest as the user approaches the GPS location. The icons include things such as plants, an animated butterfly, a ladybug, and lost objects such as a train ticket, a ring, a cross, a key and a button. When touched by the user, the icons reveal a series of related pullouts that

feature written, recorded, and visual material associated with the layers of history and local activities and tethered to the space, including those of the Carmelite monastery, the CP Railway, and the garment industry, as well as custodians of the Champ, Les Amis du Champ des Possibles[3] (Figure 4).

Figure 4: Ladybug found icon with pullout content.
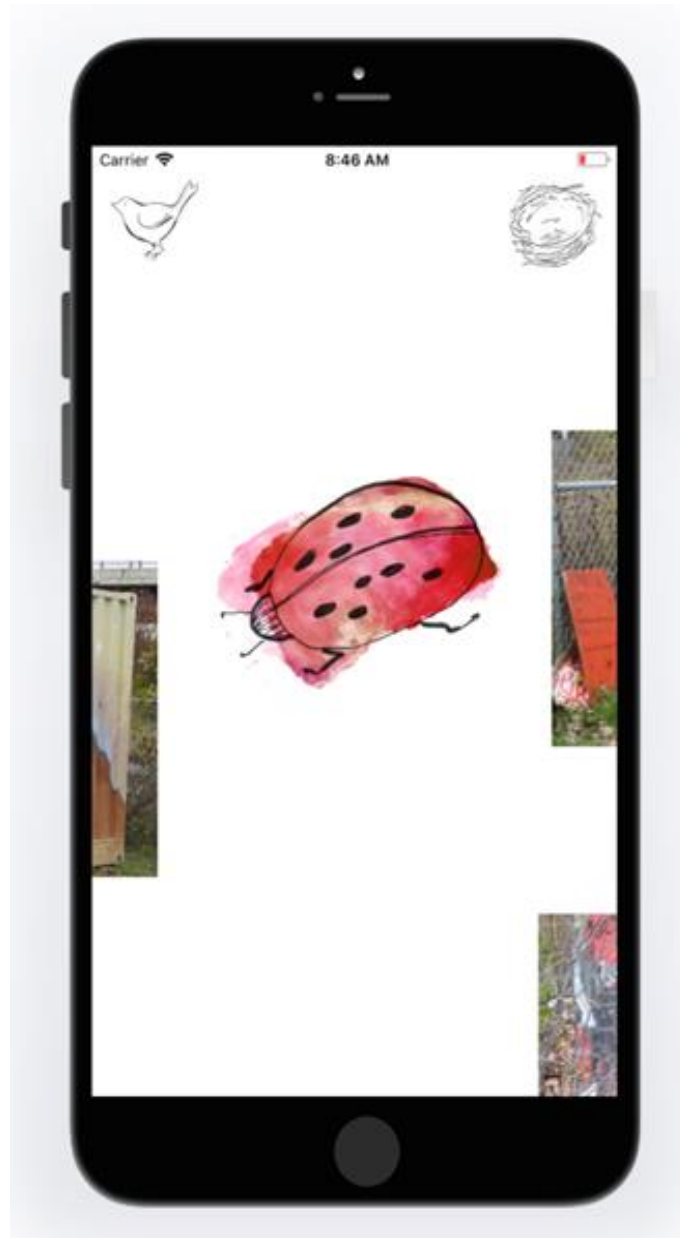**Artist Beverly Didur, designer Emma Saboureau.**

Additionally, the icons unlock segments of interviews with different stakeholders: artists such as Michaud, experts in urban ecology and indigenous plants, members of Les Amis du Champ des Possibles, and residents and workers located in the surrounding area. Though the faint bubbles act as prompts for where a user may want

to roam, the *GUW* also includes many hidden GPS cues that unlock found sounds and videos that are tied to different seasons and moments of the day in the Champ, adding an element of surprise to the user's palimpsestic experience of the space. Multiple visits to GPS locations provide access to different layers in content, a feature that prioritizes interactivity and keeps the repeated use of the app fresh for frequent visitors. The *GUW*'s palimpsestic layers include, therefore, alternate models of time, different human histories and activities associated with the space and its edges, as well as what actually lives in the Champ's fields and beneath its very soil.

Figure 5 *Lignes des désir / Desire Lines--GUW* **prototype, April 2017 (photo by Lai-Tze Fan).**

As part of the app development process, in April 2017, the team behind the *GUW* project constructed an interactive digital installation called *Lignes des désir / Desire Lines*.[4] This installation featured a miniaturized floor-map version of the Champ des Possibles, embedded with QR codes corresponding to the site's walking paths and locations. In particular, the digital installation outlined the Champ's desire lines – paths that are created by constant use by visitors who visit or traverse the Champ on an everyday basis, rather than pathways established by paved walkways that predetermine

movement in the space. As with the design of the *GUW* app to be used in the Champ, the model of the GPS interface in the lab allowed the user to choose randomly which QR codes to scan to unlock icons and content, and was by no means fixed in single, predetermined order (Figure 5). By reflecting on the way users interact with these various pathways and access layers of content anchored by GPS coordinates throughout the Champ using mobile platforms, we wish to evaluate the ways in which technologies and technological infrastructures affect users' approaches to reading and engaging with real spaces, and how they might intervene in the activity of place-making.

Rethinking "smart" and speed in the context of smart technology, cities, and users

The design of *Global Urban Wilds* has had from the onset an objective of *defamiliarization,* which we understand according to Jason Farman's (2014) definition in "Site-Specificity, Pervasive Computing, and the Reading Interface." Noting that the effort of "getting people to reimagine a technology they are extremely familiar with (and the places transformed by these technologies) is similar to asking them to get lost in their own homes," Farman nevertheless holds that locative narrative projects have the potential "to 'defamiliarize' people with their places and the technologies that mediate these places" (2014: 5). The imagined user of *GUW* is a distracted one; they live in an urban region that has a rich history and a fast future. For them, computing is ubiquitous, and they encounter spaces such as the Champ des Possibles not as a space for dwelling, but as a space of passage always on the way to something else. Spaces of passage and commuting could be called "familiar" in their unextraordinary quality; to the unassuming or the pedestrian *on their way,* the Champ presents itself as another lot, another field of grass and weeds, another place to walk their dog, another short-cut to the metro station. In "Deep Time of Media Infrastructure" (2015), Shannon Mattern reflects upon the ways in which residents of what are now called "smart" cities are set up to not pay attention in this way. She argues that, by design, smart cities:

> often *design out* opportunities for unplanned (and un-modern) modes
> of communication: streets seem intended primarily to shuttle people
> from one telecommunication station to another, rather than to foster

face-to-face interactions; and building facades are constructed of anti-graffiti materials (Mattern, 2015: 102; emphasis added).

The objective of the *GUW* project has therefore been to draw attention to the unseen, in which the Champ, as a heterotopic site within the city, may be examined for how it foregrounds questions of ecological and environmental sustainability, community efforts to preserve local as well as historically significant sites, and the waves of history in Montréal, including colonialization, migration, and economic development.

The app may be critically situated in many avenues of discussion in locative media theory, including in relation to:

i)   notions of "smart" in smart cities and environments;

ii)   site-specificity and ways to mediate, read, and write *location* through mobile media;

iii)   the critical intention to defamiliarize, whether through technology or in order to defamiliarize a technology itself;

iv)   locative technologies and media infrastructure.

Where there are some tensions in these areas, they have been considered and negotiated in the design and research stages of developing *Global Urban Wilds*.

First, we consider these topics as they may be perceived by users in an era of technological savvy and speed that is framed by computational ubiquity, efficiency, and being "smart." The undergirding thematic of speed in particular is described by Paul Virilio in *Speed and Politics* (1977) as characteristic of an accelerated culture, the drive of which he calls "dromology." When speed urges people to pick up the pace without consideration for what is left behind (read: reflection or historical consciousness), the opposite appears to be *reading,* as, in Virilio's mind, "reading implies time for reflection, a slowing down that destroys the mass's dynamic efficiency" (1977: 31).

Critiquing the dromology of the "smart" city, we consider Shannon Mattern's argument that "a media city that makes no provisions for a layering of communicative

infrastructures, that wipes away the deep time of urban mediation, is more stupefying than smart, more machine than metropolis" (2015: 102). The notion of the "smart" city reflects a politics of western urban development in the 21st Century, including the role of ubiquitous computing in how we think of our living spaces, our community engagements, and issues such as technological infrastructure and gentrification. Against dromological speed and the idea of what is and is not "smart," mobile media and media scholars inquire into the definition of "smart" in relation to physical spaces. In particular, Jason Farman in *Mobile Interface Theory* (2012) ponders over the connection between place and information that "alter[s] the capabilities that information has over the city" and thus how we come to constitute a city as "smart" (6). He argues that "environments become 'smart' by having sensing and responsive abilities" (6), the capacity of which could be said to be intrinsically linked to mobile media and the walking subjects who carry them.

In our own approach to smart tech and smart cities, we keep in mind that Montréal is a major technological hub in Canadian and global contexts, and that it has seen in recent years several developments to establish itself this way – to establish itself as a leader in tech infrastructure as well as culturally advanced, organized, and "smart."[5]

Site-specificity and reading via locative media

The smart city, layering information over physical space, begins to show its ontological complexities in how we think of it and move through it. By this, we refer to the simple (but wildly dynamic) negotiation of the user between material and digital spaces, selves, and representations. For instance, Lai-Tze Fan (2017) notes the ontological negotiation between what she calls the material *here* (a user's physicality in a real location) and the virtual *here* (a user's represented location upon a screen), both of which aim to establish a user's presence in an imagined space. Site-specificity is therefore interesting for the ways in which a specific location "embraces the characteristics of the location, including its histories, cultural conflicts, communities, and architectures (to name only a few), [which make] these aspects foundational for the experience of space" (Farman, 2014: 3).

The complexities of interpreting site-specificity are drawn out by Adriana de Souza e Silva and Jordan Frith (2014) in their discussion of the "presentation of location,"

whereby places associated with location-specific information "acquire dynamic meanings depending on the types of site-specific information attached [to] them via location-aware mobile interfaces" (35). De Souza e Silva and Frith's focus on the term *location* rather than place, "refer[ring] specifically to a particular geographical location (measurable by longitude and latitude coordinates) embedded with location-based information" (39). "*Locations* are places," they argue, "and therefore composed of networked interactions, social interactions, and meaning" (39).

Farman adds that the locality and specificity of place constitutes a long-standing "tension between proximity and distance, as it is mirrored in tensions between intimacy and foreignness, has historically been a part of the ways we use our mobile media" (2012: 4). Beyond these spatial encounters, we are also deeply interested in physical encounters with the histories of a location, which deepen the ontological complexities of a mediated space through creating what we will describe as location depth, or, the layers of text in one location.

Our approach towards this depth or layers of location is in acknowledgement of the unique and intertwined histories and cultures that inform the Champ des Possibles. The greenspace exists in an urban context that creates dissonance for those nearby: the Ubisoft video game company, the Canadian Pacific Railway tracks, and a nunnery are only a few structures that literally and historio-culturally frame the Champ. On an ecological level, it had been chosen for preservation for the indigenous plants and wildlife that it holds. It is imperative in our site-specific research that we negotiate between these material circumstances and their virtual representation through a methodology that we call embodied knowledge or embodied knowing: learning through encounter, awareness through physicality. We are partial to the way Nanna Verhoeff and Clancy Willmott describe in "Curating the City: Urban Interfaces and Locative Media as Experimental Platforms for Cultural Data" (2016) that site-specific artworks can serve as platforms "for reflecting on the movements of people and the circulation of data and images across platforms, the urban context as living and layered archive, and the activity and gestures that are elicited by a variety of screen-based, cultural interfaces" (117). Indeed, the notion of a space as a living and layered archive

deeply informs our approach to the complex histories of a space such as the Champ, including settler politics and waves of immigration.

Locative media and imperial infrastructure

Much locative media theory engages with the affordances of different platforms with less reflection on the context and content of specific projects.[6] The *GUW* locative media project, on the other hand, represents a form of research-creation that is "practice-led" and serves as "a methodological and epistemological challenge to the argumentative form(s) that have typified much academic scholarship" on mobile media (Chapman and Sawchuk, 2012: 23).[7] As a research-creation project, the *GUW* app is tethered to a specific geography, audience, and platform that intervenes into more general scholarship about mobile media and locative narratives in particular, and plays with conventions associated with maps. An artist's hand-drawn map used in the *GUW* platform to navigate the space of the Champ includes the image of a nest that accumulates the found icons associated with different layers of history and human/nonhuman activities in the space. By emphasizing that the user's experience of the space is contingent on the tension between movement and content, the *GUW* project pushes back against dominant ways of thinking about cartography; the map interface positions space and time within a "mutually dependent dialogic relationship," and begins with a fundamental question about "*whose* space we are talking about" when in the Champ (Sharma in Farman, 2014: 85). In "Map Interfaces and the Production of Locative Media Space" (2014), Farman comments on the "overemphasis" on spatial dynamics in locative media, drawing on Sarah Sharma's observation that "[c]ivilizations that emphasize space over time tend to be imperial powers, involved in conquering space at the expense of the maintenance of culture over time" (2014: 84).

Though the *GUW* platform includes a map interface that serves as a guide to the limits and location of the locative experience, and helps users seek out the different layers of content tied to GPS coordinates throughout the urban wild, it places this map "under erasure" at the same time. The *GUW* project as a whole is geared toward *questioning* imperial attitudes toward space by disrupting settler attitudes toward wild landscapes as uninhabited (*terra nullius)* and outside time, and instead, emphasizes the fact the Champ des Possibles and the city of Montréal are located on unceded Mohawk territory. Similarly, where settler gardening can tend toward privileging the restoration

of indigenous plants while obscuring their relationship to Indigenous culture (past and present), the map is tied to layers of content that problematize this occlusion, highlighting the co-presence of indigenous plants and the involvement of the Indigenous community in the construction of the First Nations Garden at the Jardin botanique de Montréal. Finally, where "global capital depends on spatially biased culture" (Sharma in Farman, 2014: 84), the choice to anchor the app in a previously neglected industrial landscape, sometimes rendered as a white or blank space on city maps (because it is neither a curated park, residential area, or active center of commerce), the *GUW* app troubles the normalized spatial assumptions associated with urban mapping conventions by asking the user to recenter their self in a ruderal landscape as a part of their community.

The *GUW* project is also oriented toward Lefebvre's notion that space "should be understood as produced co-stitutively with bodies" and that "space is always produced and practiced; it is not a given" (Farman, 2014: 85). Where pedestrian commuters who cross through the Champ des Possibles may have established a routine for how they pass through the space, the *GUW* app encourages them to move through the space in new ways – to linger in the space longer than usual, wander, and be surprised by found sounds and video along the way, and investigate the layers of text, audio, and visual content unlocked through their proximity to GPS coordinates tagged on the map at different points in the field. Where maps may be associated with "objective facts" about space, and the digital maps of smartphones are tied to a history of "surveillance and control, made possible by the spread of cutting-edge technologies" (Holmes, 2004), the *GUW's* use of this imperial technology, overlaid by the artist-drawn map, is conscious of this history even while it also seeks to subvert it. The Montréalaises who enable "location services" on their iPhones to use the *GUW* app cannot, therefore, be simply reduced to figures in Althusser's (1971) theory of "ideological state apparatuses," users who are hailed by "computer coded radio waves" that Holmes (2004) describes as "an electromagnetic 'hey you!'" – when the app acknowledges but also critiques the imperial origins of this infrastructure. The app does not, therefore, naively mobilize the cultural politics associated with Global Positioning Systems (and their imperial and military origins), but rather it anticipates them, and appropriates them within its own autocritique. While Holmes laments that "all too often in

contemporary society, aesthetics is politics as décor," the *GUW* engages with the ideology of map interface, and works to make visible and subvert its cultural bias.

Critics such as Drew Hemment (2006) point to the irony that geo-annotation apps like the GUW privilege embodied experience in local contexts, but depend on satellite systems located far from the local contexts, and thus take for granted a "transcendent frame of reference and Cartesian space" (352). As Hemment explains, "[l]ocative art's condition of possibility is a prior abstraction, and as a consequence its emphasis on location is accompanied by a distancing from embodiment, physicality and context, which – within such a reductive understanding of spatiality – becomes a mere residue of the coordinate system" (2006: 352). Hemment also points to the fact that locative experiences are often restricted to small groups and esoteric gallery contexts. "In place of the richness of embodied experience of the world," Hemment fears that "many projects offer the challenge of roaming the environment while squinting at a tiny screen and clunky menu, separated by a barrier of bad usability" (2006: 351). The relation between the satellites that make up the grid that locative arts rely on is not, however, lost on the team that has worked on the *GUW* app, nor is attention to the usability of the interface, with much emphasis placed on the use of recorded sound and simple navigation tools to allow the user to balance their attention between the location and the mobile app.

Though it is true the embodied experience the app seeks to produce in relation to the Champ des Possibles relies on a satellite grid, the app content must be downloaded to the mobile phone, and it cannot be accessed unless unlocked on location through physical proximity to the GPS coordinates. In addition, where Hemment points to "the reliance in locative arts on the clinical precision of digital tracking and the emphasis on point-to-point correspondence" (2006: 352) as another unacknowledged contradiction in locative media practices, the *GUW* app acknowledges the fact that GPS accuracy is *not entirely reliable*, and is affected by receiver quality and atmospheric issues. Jill Didur's previous locative project, *The Alpine Garden MisGuide* (2015), took advantage of this variability in GPS accuracy to enhance the sense of wandering and unpredictability in the app's focus on the culture of colonial plant hunting and alpine garden aesthetics at the Jardin botanique de Montréal. Similarly, Teri Rueb's locative experience, *Drift* (2004), amplifies the unpredictability of GPS signals, where the

Watten Sea (where the app is designed to be used), "becomes a metaphor for hertzian space as visitors are invited to wander among layered currents of sand, sea and interactive sounds that drift with the tides, and with the shifting satellites as they rise and set, introducing another kind of drift" (2004). Far from a reified gallery space, as described by Hemment as the usual space for locative experiences, the *GUW* app is situated in a previously abandoned industrial zone that is nevertheless a commuter corridor for a digitally literate audience, and the app intends to engage users around issues of sustainability, gentrification, settler colonialism, urban wilds, and climate change.[8]

Urban wilds as shadow places

While the diasporic character of the human and nonhuman community in and around the Champ des Possibles is something the *GUW* project highlights, the app also guards against the potential erasure of the precolonial role Indigenous communities have played in shaping the environment and landscape on the island of Montréal. This, however, requires a somewhat counter-intuitive resistance to efforts at re-indigenizing the biological agents in the Champ. As Susan Martin has argued about the trend toward "native gardens" in the Australian context, "[t]he planting of what 'belongs' in [different greenspaces], in some cases attempts to erase culture from that equation, and assert origin rather the originality – to return to untouched nature (notably an idea of untouched nature without people)" (Martin, 2015: 105). Writing about her own artistic intervention into the Champ in 2014, *The Possible*, Cynthia Hammond points out it is somewhat contradictory for members of the community to lament that "the 'wildness' of this space is being lost," when groups such as Les Amis du Champ des Possibles intervene to promote biodiversity in the space (2014).[9] "It is important to remember," writes Hammond,

> that the Champ would not be what it is if not for the railway track and
> oil-stained soil that were the unlikely basis for its current profusions,
> likewise, if not for the looming mega structures that rim the terrain
> which determines how much sun reaches the various species below,
> and equally if not for the human activities, near and far, which have
> reached or shaped the Champ (Hammond, 2014).

Moreover, Hammond notes that urban wilds are also a register of "the long history of imperialism and human colonization, which have brought many non-indigenous plants to Canada, Quebec, and thus the Champ" (2014). Meditating on why some community members might be unwilling to "release nature from the grip of the nature-culture binary," Hammond speculates that "the desire for the Champ to be – to look? – 'wild' helps to mitigate postindustrial realities in Montréal, as in other formerly urban areas" (2014). To Hammond's assessment, we add that the emphasis on the 'wild' in urban wilds, also potentially contributes to an erasure of the colonial past that has shaped land use throughout the island of Montréal, and acts as a potential balm to the unexamined colonial status of Quebec and Canadian settler culture.

The Champ in this respect is understood as a "shadow place" in Val Plumwood's sense. As Sarah Besky (2017) points out, "affectively charged places that tend to spark ecological consciousness…are frequently sustained by shadow places" (19). Elsewhere in Montréal, some questioning of the *terra nullis* associated with the island's wild or picturesque spaces has begun. The summer of 2017 saw the Belvédère Outremont, in nearby Parc Mont Royal (designed by Frederick Law Olmsted in 1876), renamed as Tiohtià:ke Otsira'kéhne (Mohawk for "the place of the big fire"), recalling the precolonial era when fires were lit on top of the mountain by First Nations to signal the village of Hochelaga as a gathering point. In September 2017, the city of Montréal also removed the name of British General Jeffery Amherst (who supported the idea of giving blankets infected with smallpox to exterminate Indigenous communities), from a downtown roadway, and launched new coat of arms for Montréal, featuring an icon of a white pine at its center, a symbol of the Haudenosaunee Confederacy, a reference to the founding peoples of the city. Though the Champ des Possibles represents a much-needed greenspace in a densely populated section of the city, it risks becoming a "shadow place" – a place created for the enjoyment of others at the expense of the island's Indigenous communities. As Plumwood (2008) explains, "much contemporary environmental theory […] focuses on place as a locus of continuity, identity, and ecological consciousness" while disregarding the "places of economic and ecological support" that underpin those same locations.

> Ostensibly place-sensitive positions like bioregionalism evade rather than resolve the problem of the split [between idealized homeplace and the places delineated by our ecological footprint], by focusing exclusively on singular self-sufficient communities, thus substituting a simplistic ideal of atomic places for recognition of the multiple, complex network of places that supports our lives (Plumwood, 2008).

The *GUW* app's transitive reading practices discourage the creation of urban wilds as "singular self-sufficient communities" (Plumwood, 2008), and instead highlight the fact that the Champ des Possibles is located on unceded Indigenous territory. This critical layer of history underpins a complex network of narratives that make up the app's content and operation.

In its stewardship of the site, Les Amis du Champ des Possibles attempts to navigate the competing and interrelated issues connected with toxic remediation, promotion of biodiversity, accessibility, settler culture, gentrification, and social justice. In dialogue with this mandate, therefore, the *GUW* project avoids more traditional methods of public engagement, such as didactic signs or plaques, that fail to invoke multiple rather than singular ways of knowing the Champ. We curate the users' experience of the space through locative media (such as smartphones and tablets) that use GPS receivers to pull up layers of content on screen (images, sound, and text), specific to particular locations in the Champ. The app and its transitive reading practices play a pedagogical role in translating local attitudes toward the urban wild, and gardens, and greenspaces more generally, while also engaging visitors and new residents in the already established ways of looking at and moving through the Champ on a daily basis. The *GUW* locative platform allows visitors to theoretically, aesthetically and discursively explore the ways in which they are entangled in a space, and therefore to open up new questions about the status of urban wilds and their local and global influences.

Multiple layers and temporalities

In our theoretical approach to designing the *GUW* app, we were also inspired by the symbol of the Roerich for its rich thematic meanings in locative depth and layers of time, culture, and embodied experience or presence, and the circular shape of the nest

on the app interface recalls Michaud's project. In our attempt to represent the interconnected factors that shape and nurture such culturally and historically salient sites, we read into the Roerich's symbolism of three circles – representing the past, present and future – as well as their suggested unity in heritage sites and objects. How does the present inform our possible futures – including destructive ones, whether for cities or the environment? How is the present shaped by our pasts? As our age is one of "smart" cities, sustainability, and ecological death at once, it has never been more urgent to embrace these questions and to re-visit the kinds of narratives that we have constructed to represent time.

As a temporal model, the Roerich is a symbol of circuitous and simultaneous time and demands a reading for presence as well as for change and transition. Reading for presence and transition in turn means reading for historical depth (the minute, the forgotten, and the overlooked), and dynamicism (catalysts, obstacles, and processes). In the field of the Champ, plants and other species are themselves influenced by transitions to the environment around them, including pollution, pedestrian interaction, histories of communities, infrastructure, and, of course, the transitioning seasons. The liveliness of the Champ's inhabitants lends to them a simultaneity of past, present, and future that could itself be described as embodied presence.

Relative to the larger infrastructure in which locative media are situated, we are conscientious that the Champ provides access to a greenspace for a unique constituency of users. It also serves as a commuting corridor for workers who pass through the space from a local Metro station on their way to the Mile-End neighbourhood. As mentioned above, these are people who are already very literate in mobile media, recalling that *for* mobile media, as Rita Raley (2010) notes, there is a broader context of "ubiquitous computing, the incorporation of information and communication technologies (ICT) into nearly all aspects of our environment, the presence of computing devices 'everyware'" (301). In this sense, the meaning of the Roerich still holds: it was designed in 1935 in the midst of modernist ideals and structures that were regulated and standardized according to a model of Fordist industrial time. The Roerich symbol pushes back against notions of time that are saturated with "progress" and forward-moving linearity, which are shaped by systems of production and reproduction, instead suggesting an attention to multiple states of

time at once. Indeed, the Roerich prompts ways to think about historiocultural space – including about the environment and natural ecologies – that are arguably dysfunctional for capitalism, resisting a capitalism that insists on extracting histories, resources, and forced values from space. Multiplicities in layers and simultaneities reveal that real spaces have, and have always had, alternative meanings that linger as shadows. *GUW* intends to express that these spaces are now haunted, because we have not forgotten about their complicated networked histories, and precisely because they cannot be erased.

Locative media can leverage such layers of meaning. As scholars such as Shaun Moores have discussed, locative media allow for the user's more agential negotiation between digital screens and material spaces. The *GUW* platform is structured to leverage such a productive tension between reading and viewing critical, creative, and archival materials in the context of a site-specific installation. The pedagogical opportunities afforded by tying the experience of place to the experience of reading is one that has received much attention by scholars of locative media. For instance, Brian Greenspan (2011) argues that "locative media represents a productive hesitation between literary fiction, documentary, audio-visual installation, and site-specific theatrical performance" (1). The *GUW* app enhances this aspect of the digital interface by encouraging the user to engage in the practice of searching out GPS locations indicated on a hand-drawn map interface marked with small green bubbles. As users are pulled into different zones of the Champ in search of GPS locations where the environmental history and cultural value of the Champ are explored, they also unwittingly unlock unmarked "found sounds and videos" along the way – fragments of other seasons, weather events, as well as human and non-human activities (dog walkers, cyclists, skaters, singers, pollinators, migrators, commuters).

Transitive reading as embodied knowledge

Despite the performativity associated with locative media, the experience of reading, listening, and viewing visual and written media relies heavily on the idea, as Greenspan describes, of being "transported to fictional worlds" away from one's immediate context (2011: 3). However, it is this understanding of the experience of absorbing media content that the *GUW* capitalizes on, while at the same time tying the experience

of this content to a particular location in the Champ through the location of GPS codes. As Greenspan explains, locative media "mobilize printed literature's traditional mode of decontextualized engagement within a spatial context in ways that often *interfere* with the performance of place, foregrounding the productive tension between the traditional experience of fictional transportation and new modalities of mobility that constitutes our present medial condition" (2011: 2). The *GUW* platform exploits the "spatial tension between conventionally sedentary modes of engagement with [media content] and more dynamic, continuous and complex models of spatial interaction" that locative technologies allow for in the urban wild (Greenspan, 2011: 4). In other words, while, on the one hand, digital media make it harder for us to get lost in the action of absorbing media when the screen is anchored to place through things such as GPS coordinates, on the other, the material the *GUW* ties to specific locations in the Champ pull us away from place or temporality. Moreover, while users can download the app to their iPhones from anywhere in the world, they cannot unlock the context tagged to the app icons without visiting the Champ des Possibles to explore different GPS locations. In this sense, locative media counters the disembodied, decontextualized experiencing of media online in stationary ways by forging what Andrew Piper describes as "corporal connections […] between what we've seen and where we've seen it" (2012, 121).

Piper also identifies a paradox in the relationship between reading space and experiences of text: whereas "in a world of locative media, it is increasingly hard to get lost," at the same time, "we no longer lose ourselves in reading" as well (2012: 122). Again, the way that he describes transitive reading is as the negotiation of layers of meaning – again, what we are calling location depth – that exist in the space of a city, and they are "transitive" in the ways that we encounter and experience the "transitive properties of urban experience" (Piper, 2012: 127). These spaces are read – but not in the way we have seen before; the complexity, subjectivities, and life force tied to real space weave into them real histories, communities, memories, and politics. Through transitive reading, sites of reading and "material encounter" are also brought into the foreground, including, as Piper points out, libraries and bookstores (2012: 127), but also, we add, the greenspace associated with the Champ.

Transitive reading as we develop it from Piper's descriptions, therefore, is indeed the depth and simultaneity of multiple histories, spaces, identities, and ecological modes – and transitive reading occurs among these layers, as we can mediate through different kinds of experiences of reading. What is at stake here is the experience and value of being lost, which is not to say that one is hopelessly looking for a destination, but rather, that there is value in exploration as movement *without* direction. While city spaces are read, that we are not being lost in their "texturology," as Michel de Certeau (1984: 198) describes it, is owing to the emergence of "smart" cities that are more functional than fun. These are spaces within which we may not know how to get lost, and therefore, indeed, how to lose ourselves.

Our methodology is therefore one of *being in* and *moving through,* or, embodied knowing. The transitive reading practices orchestrated by a locative narrative like *GUW* span the space between the urban wild and its polyphonic archive, and offer an electronic palimpsest that "layer[s] reading on top of real space in an interactive way" (Piper, 2012: 123). The time spent in a space such as the Champ des Possibles allows one to familiarize oneself with types of human and non-human experience, an embodied undertaking of knowledge that is twofold. First, embodied knowing encourages mediation of meaningful layers separately and together. Second, it can be leveraged through locative media to take embodied experiences in new directions. We encourage what Lai-Tze Fan calls a locative "wandering" – dérive in the psychogeographical tradition – as users explore different parts of the Champ des Possibles to engage with content, some of which can be anticipated and some of which is a surprise. Wandering in this sense pushes against the definitive path-making and path-taking of urban streets and industrial organization. Against the finality of commuter desire lines, users may find themselves participating in and performing disruption.

Through the app, one thing that may strike the user is the spatial and ideological contrast of the Champ from urbanity (which features speed, growth, industrialism, toxicity), as the urban wild exists as a counterpoint, exposing to users the need for further inquiry and consciousness of the precisely non-urban and non-human. Within embodied knowledge is the process of transitive reading, whereby productive hesitation is achieved through the user's negotiation of layers of meaning as they both

encounter embodied knowledge and are defamiliarized from ways of thinking "smart" or "green" in idealized or otherwise idyllic ways. In this sense, *GUW* encourages a pushback against ideas of "green" as a compensatory idea or space that offers a pastoral relationship to nature. The Champ becomes not just a place for citizens to go to distract themselves from climate change, or settler culture; through its spatial and critical differentiation from the city space, it puts pressure on users and urban spaces alike to take "green" more seriously. Whereas the regular visitor to the Champ crosses on their way to work or on a stroll with their dog, we are asking people to wander, linger longer than they normally would, akin to how graffiti unsettles the pedestrian by defamiliarizing otherwise authoritarian space and routine. Arguably, to pause and to wander are the opposite of commuting. Even where the desire lines in the grass of the Champ designate the physical markings of users' movement towards an ultimate destination, the app's design intends to add depth to this experience, and to foreground embodiment and multiple temporalities.

Through the varied and layered contexts that *GUW* includes, to be in spaces such as the Champ – and to be there doubly through a virtual trace – is to participate in its liveliness, an embodied knowing through the discovery of found sounds, rich histories, and echoed stories that we wish to represent as materially rooted to footprints left on grass, in ecologies, and over time. Embodied knowledge is in this way a method of resisting the abstraction and forgetting of environment (in the many senses of the word), including the material specificities of the Champ and its contexts. To be within such specific locations is to imbue onto them new meanings as well as to witness at once their pasts, presents, and futures.

Situating the citizen in an idea of the city as networked and as digital, performance and performative disruption emerge as transitive reading requires users to move through space, and to engage with material space, objects, and real sociocultural contexts and histories. We aim for the app to engage in, as Raley describes, "the production and support of an 'actively creative' critical consciousness, such that we who participate in the narrative learn to navigate and inhabit the city in a better way" (2010: 307). Towards an actively creative and critically conscious user, we also aim to encourage users to thus think about spaces such as the Champ in a different way: instead of treating them as commuters through ways akin to a paved walkway, a bus, or a subway extension, the

Champ can be reframed as a space of change and interaction, a space to return to and linger.

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Notes

[1] The Champ is located on lot 2334609.

[2] See also online details of Michaud's project such as http://roerichproject.artefati.ca/roerich-garden/introduction/

[3] We are grateful to the Les Amis du Champ des Possibles for their ongoing collaboration with us as we develop the *GUW*. Information about Les Amis du Champ des Possibles can be found at https://amisduchamp.com/

[4] The *Lignes des désir / Desire Lines* team included contributions from Jill Didur (principal investigator), Lai-Tze Fan, Emma Saboureau, Eric Powell, Beverley Didur, Pippin Barr, and Jess Marcotte.

[5] For example, the immersive *Cité Mémoire* mobile app allows users to interact with projections in Old Montréal that tell the district's history. Also, Montréal holds an annual Digital Spring art festival.

[6] Edited collections in this area include *Locative Media* (Wilken and Goggin 2015), *The Mobile Story* (Farman 2014), and *Mobility and Locative Media* (de Souza e Silva and Sheller 2015).

[7] "As a form of cultural analysis," note Chapman and Sawchuk, "research-creation partakes of the spectacle of the work of art and its demonstration of alternative frameworks for understanding, communicating, and disseminating knowledge" (2012: 23).

[8] The *Alpine Garden MisGuide* is available for download in the iTunes Apple Store. The *Global Urban Wilds* app is in its pilot stage, with more user tests planned for the spring of 2018 and launch in fall 2018.

[9] Hammond undertook her project after CP Rail carried out unauthorized track maintenance in the Champ that destroyed the plants and insects in one section of the newly dedicated greenspace.

Acknowledgement

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