

The Department of Civic Images: Nature, Technology, and Urbanism

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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Abstract

The modern city is the cradle of human activity, and through it humankind has both the ability to strip the planet of life and the ability to create thriving social and ecological systems. Strategic and interactive urbanisms that nurture multifarious ways of being in the world need to be formulated to save the natural world from ecological disaster. This paper traces the genealogy of the city from the unexplored wilderness to the to the conflux of technology and nature on city streets. Following the work of Neil Smith and William Cronon, this paper finds the roots of the urban system in the social construction of nature. Considering Martin Heidegger's thoughts on technology along with David Harvey's analysis of the urban system, it argues that city-building is a *technē*, an art which allows humankind to be at home with the world. As a part of this project, an interactive web application for gathering images and stories about urban spaces was created to provide a tool for citizen urbanism. The application, The Department of Civic Images, engages people in a dialogical urbanism that encourages citizens to see their environment as an intricate and valuable life network.

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Cities are fragile constructions, fluid realities: like a precipitate . . . they're the result of a constellation of elements converging at a given moment in time.

— Philippe Pons, qtd. in Wolfreys 173

Cities, and particularly the great metropolitan cities of modern times . . . are, with all their complexities and artificialities, man's most imposing creation, the most prodigious of human artifacts. We must conceive of our cities therefore . . . as the workshops of civilization, and, at the same time, as the natural habitat of civilized man.

— Robert Park, qtd. in Harvey 195

1. Introduction

Humankind has long been aware that we hold the power not only to stamp out entire ecosystems but also to obliterate itself from the face of the earth. As the Industrial Revolution turned urban areas into economic vacuums that sucked in raw materials and human labour power to feed the machine of mass production, urbanism became the new way of life, for better or worse. Today's cities need new tools to shape urbanism, suss out weaknesses, and build resilience. As hubs for production and consumption, cities are pivotal in solving the global environmental crisis. If we do not fix our urban system, we will not fix our environment. To save the environment is to revolutionize urbanism. The task of revolutionizing urbanism is not a simple one though. The most glaring shortcoming of the modern metropolis is its complete disregard for the rural. Culturally and economically, the country and the city seem incommensurable. From a perch on in a downtown penthouse, the countryside appears uncouth, short sighted, and bland. To the modern urban inhabitant, for whom milk comes from the grocery store, bread from the bakery, and clothing from a shopping mall, the countryside is nothing more than a pretty scene to drive by on Sunday afternoons, or a place to visit on long weekends. But from a bluff on the bank of a river, with field of canola to the North and wheat to the South, the din of the city sounds like groans of Sisyphus as he pushes the dead weight of the urban economy up the steep hill of progress only to collapse before he can reach the top. If the environmental revolution is an urban revolution, it must be one that repairs the urban/rural bifurcation, one that reveals our commingling inhabitation with the total environment, urban, rural, and wild.

The city is a tool for regulating economic flows. Through its economic position as the provider of both labour power and commodities for the market, the city is positioned to regulate the raw materials that flow into it and the commodities that flow out of it. Urbanism is the sum of

each citizen's actions within in the modern city; it is a strategic interaction with the urban system that allows citizens to engage in everyday life. The urban revolution requires a dramatic change in urbanism that allows citizens to inform urban space with meaning, rather receive dictates from their city. We need to change the way that individuals interact with their built and social environments and change the ways that cities interact with the rural, wild, and natural. This paper will provide a genealogy of urbanism by tracing its roots in the production of nature to the production of everyday life. As a part of this project *The Department of Civic Images*—located at civicimages.org—was created to enable citizen intervention in the process of urbanism. *Civic Images* is a tool for revolutionary, citizen-led urbanism. In analyzing the natural world and North America's progress from exploration to exploitation, we will be able to see how the city has come to function as an economic hub and can become the catalyst of a revolution in our relationship to the environment.

2. Revolutionary and Counter-Revolutionary Urbanism

David Harvey's *Social Justice and the City* posits a revolution in urban geography. He sets out to suggest that only a total and thoroughgoing critique of the current paradigm will result in a new, more humane, urban geography. Harvey explains that in any discipline there are three types of theory: 1) status quo theory, which prescribes the current social norm; 2) counter-revolutionary theory, which appears to be grounded in a new social norm but "obscures, beclouds and generally obfuscates . . . our ability to comprehend that reality"; 3) revolutionary theory, which is grounded in the new social norm it seeks and "can encompass conflict and contradiction within itself" (150-1). A revolutionary theory, Harvey explains, must be more than "another empirical investigation of the social condition of the ghettos":

In fact, mapping even more evidence of man's patent inhumanity to man is counter-revolutionary in the sense that it allows the bleeding-heart liberal in us to pretend we are contributing to a solution when in fact we are not. . . . Nor does [our task] lie in what can be only termed "moral masturbation" of the sort which accompanies the masochistic assemblage of some huge dossier on the daily injustices of the populace of the ghetto, over which we beat our breasts and commiserate with each other before retiring to our fireside comforts. This too is counter-revolutionary for it merely serves to expiate guilt without our ever being forced to face the fundamental issues, let alone do anything about them. Nor is it a solution to indulge in that emotional tourism which attracts us to life and work with the poor "for a while" in the hope that we can really help them improve their lot. (144-5)

If we are to revolutionize urbanism with the intent to save the natural world from an environmental disaster, we need a revolutionary theory that confronts the forces of urbanism at

their foundation. Any action that merely provides a surface-level change—a city-wide recycling program, geothermal heating, or green rooftops, for example—may merely displace environmental damage and promote the status quo under the guise of a “greening” program. To change urbanism, cities need concerned citizens who will critique and improve the city itself.

In recent years, New Urbanism has gained popularity as a design principal that can save our cities from their environmentally and socially destructive habits. New Urbanism started with the work of design team Andres Duany and Elizabeth Plater-Zyberk who have sought to describe a form of urbanism that values a city’s heritage, encourages economic investment in both the city and its region, and fosters healthy community development. New Urbanism’s emphasis on both environment and community makes it difficult to see anything wrong with its design principles. However, one only needs to look at how New Urbanism has been implemented to see that it is, in fact, a counter-revolutionary design principle that promotes the status quo. New Urbanist neighbourhoods are built to comfort their inhabitants. It is as if the understated middle-class aesthetics say “every thing will be fine” as New Urbanist residents lounge on their porches, knowing that the semipermeable paving surface on their driveway returns rainwater to the ground. Although this driveway is designed with healthy storm water management in mind, it is used in the housing market as a consumer product that tugs on the eco-friendly heart stings of the quasi-liberal middle class home buyer who has paid her penance for ecological destruction by dipping into her line of credit for a “green” house. Walking through a New Urbanist neighbourhood one can almost hear the LEED certified buildings, wild flower gardens, and EnerStar windows groan, “it’s OK, we’re saving the environment.”

Of course, a sarcastic critique of New Urbanism like this risks sounding ungrateful for the small mercy of a more environmentally friendly neighbourhood. The problem with many implementations of New Urbanism is that they are counter-revolutionary in our relationship with

the environment, resources, and social structure. New Urbanism has the appearance of offering a new mode of human habitation, but in the capitalist housing market, all efforts for community living or environmentalist design are usurped for the sake of generating a profit. New Urbanism's counter-revolutionary underpinnings are most evident in its nostalgic aesthetic and its attempt at shaping society through architecture. In the early twentieth century, the City Beautiful and Garden City movements garnered the attention city builders. The City Beautiful movement argued that cities need monumental architecture and beautiful public spaces to inspire citizens to be better people. Howard Gillette cites a contributor to the journal *American City* who argues that when a city provides good infrastructure, its citizens will become good people:

A city which does nothing except to police and clean the streets means little. But when it adds schools, libraries, galleries, parks, baths, lights, heat, homes, and transportation, it awakens interest in itself. The citizen shows some care for him. He looks upon it as his city, and not as a thing apart from him; he becomes a good citizen because of his city. (16)

The City Beautiful was not only concerned with providing good infrastructure, but infrastructure that was founded on a worthy tradition. Classical architecture was nominated as the icon of a good city, and schools, banks, and city halls were built to mimic the golden-age architecture of the Greeks. Randal Mason suggests, "By giving historical memory lasting form in the built environment, it was thought, the particular memory was endowed with power to reform the public at large" (qtd. in Gillette, 16). The City Beautiful movement, however, did not solve all the urban problems it was meant to. Urban decay, crime, or social unrest could not be inoculated with monumental architecture.

The Garden City movement, under the guidance of Ebenezer Howard, advanced the thesis of the City Beautiful to argue that we needed a new kind of city that is entirely separate from existing industrial cities. Howard believed that his design principles could create

cooperative, peaceful communities that existed in harmony with the countryside. He writes, “Town and country must be married, and out of this joyous union will spring a new hope, a new life, a new civilization” (qtd. in Gillette, 25, emphasis removed). Gillette explains that each Garden City was meant to have a central public space—a museum, hospital, school, etc.—that was surrounded by a park and mixed density housing (26). The Garden City was nothing like the industrial urbanism known in Howard’s time. Although Howard never built a complete Garden City, he had an important influence on urban design during the early twentieth century and, as Gillette discusses, New Urbanism has taken many of his principles to heart.

New Urbanism’s most obvious adoption of the City Beautiful’s and Garden City’s principals is in its use of monumental architecture and park space. With its focus on walkable neighbourhoods that encourage residents to meet each other on the streets, New Urbanism claims to be the catchall solution to the environmental and social problems caused by modern city design. However, not unlike City Beautiful, New Urbanism attempts to induce good social behaviour with good design. In the words of Michael Sorkin, New Urbanism’s ideal resident is “a happy consumer committed to traditional family values” but its fallacy is:

the idea that architecture is not to be designed for people in all their messy, squalling, and delightful difference but as a means of assuring that they converge into behavioural sameness. Instead of towers in a park [New Urban] citizens will happily inhabit their dryvit Taras, rocking rhythmically back and forth on their obligatory porches, ears cocked for the tinkle of the approaching Good Humor man. (qtd. Gillette, 131)

In other words, the problem with New Urbanism is not in its intent, but in the rigid structure it provides. New Urbanism attempts to confront real and difficult urban problems with precisely delineated rules for architecture and street design and does not allow for organic growth, for changing uses, or for diverse expressions of urbanism. Its rigid rules and its middle-class appeal

have tempted some to call its neighbourhoods New Suburbanism (Trudeau, 425). A claim that Skaburskis substantiated when he found that Toronto's New Urbanist neighbourhoods had no effect on population density for their residents despite claims that New Urbanism promotes density (246). Gillette explains that although New Urbanists have had their critics, they look to the market for the answer (131-2). In other words, if people want New Urbanism, they will vote with their wallets.

In its reliance on the market exchange economy to decide what is "good" design, New Urbanism promotes a surface change in the way we view our homes and urban spaces. Its emphasis on community, sustainability, an environmentalism are merely tools for marketing yet another consumer product. As James A. Throgmorton puts it:

[New Urbanism's] creation presumes public places and inclusive deliberative processes that enable people to encounter diverse stories as a part of ordinary life, but [its] people are not likely to encounter such stories unless the Regional City's public spaces and inclusive processes already exist. (57)

The changes that New Urbanism causes may affect the environmental impacts of a neighbourhood's construction and use, but it does not address the environmental problem at its core. New Urbanism, of course, is merely one example of many "green" solutions that are merely counter-revolutionary bandaids to the environmental crisis the world is facing today. If we are to have a revolution that changes the way we interact with our environment, built or otherwise, it must be one that allows for a multitude of voices rather than having a solution dictated from above. City dwellers ought to be given the tools of urbanism and asked to participate in their city rather than being given architecture and being told how to feel about it. A city should not create good citizens; citizens should create a good city. To accomplish this task, citizens need new tools to voice opinions and open a discussion about urban form. However, we cannot go about this

blindly. To effectively engage in a discourse about urbanism and its close relationship with the environment, we need to understand how we arrived at the modern city, and what exactly the city does for us.

3. External and Universal Nature

The word “nature” has a complicated meaning interwoven with social construction and human experience. On one hand, to suggest that a something is “natural” implies that it is unmediated and real; it is valuable and truthful. On the other hand, we call tornados and earthquakes “natural disasters” to imply that these are things outside of human control. The natural world, in both these senses, is something separate from human society. As Langdon Winner suggests, “To invoke ‘nature’ or ‘the natural’ in discussions about social life is in effect asserting: ‘This is real, this is trustworthy. I am not making this up’” (122). “Nature” implies an absolute reality outside of human existence. In *Uneven Development*, Neil Smith suggests that there are two ways of understanding nature: external and universal. External nature, he says, is the nature of grizzly bears, ferns, and stones. This is the extra-human world separated from culture and devoid of human inhabitants. Along with external nature we have universal nature or human nature. Universal nature implies “that human beings are every bit as natural as the so-called external aspects of nature” (11). Smith suggests the external conception of nature is a middle-class ideology because through this conception of nature, industrial capitalism has appropriated raw materials and turned them into commodities. Although these two natures appear to be dichotomous, they become conflated as they are employed to justify human activity in the non-human world. Smith suggests that fragments of this dichotomy can be found in the Judeo-Christian intellectual tradition and were picked up by Francis Bacon and eventually reified in the philosophy of Immanuel Kant (12-3).

The Judeo-Christian tradition does not only contain fragments of this dichotomy, but today’s manifestations of Christianity, especially in Protestant traditions influenced by Puritanism, are heavily entrenched in the external and universal understanding of nature. In the

first chapters of Genesis humankind receives a mandate from God to subdue the earth and have dominion over every living creature (external nature) and later, in the second creation story, man is doomed to toil against the earth (external nature) for survival, all the while knowing that he is nothing more than dust (universal nature). From here all the way through to the final chapters of Revelation where the Apostle Paul sees the holy city descend from heaven to fulfill God's mandate of peaceful dominion over the earth, the Bible is deeply entrenched in the external/universal dichotomy of nature. Smith argues that Bacon, Kant, and eventually every modern scientist prized apart this dichotomy to study nature without suggesting they were pushing the mystery of God aside. Smith explains:

[F]rom Bacon onward it is commonplace that science treats nature as external in the sense that scientific method and procedure dictates an absolute abstraction both from the social context of the events and objects under scrutiny and from the social context of the scientific activity itself. (14)

Where science pursues knowledge of the external world devoid of human obstruction, religion pursues an understanding of the universal world. With these fields set apart, science and religion are able to progress in tandem, exerting their control over two seemingly distinct domains.

As Elizabeth Bird notes, scientific discovery is often regarded as a factual representation of the natural world. However, the sciences ought to be recognized as being embedded in social and technical systems that limit the veracity of their claims (255). Bird argues that Nature, external from human experience, is something we will never know:

Drawing on Marx's assertion that the world cannot be understood adequately in the abstract but only through one's actions, it follows that any attempt to understand nature is precisely one of acting upon "nature" so that it can never be the same from one moment to the next. (257)

In other words, humankind's position in space and time limits its perspective on the reality it sees. Observations about the external world are as much interpolations of human society into a foreign entity as they are interpretations of human imbrication in the object of study. In the same line of reasoning, Smith, paraphrasing Alfred Schmidt, states, "nature is mediated through society and society through nature" (33). Thus society and nature can only be understood as a dialectical interaction. Summarizing Latour, Bird explains that scientific discovery does not reveal new ways that the external world works. Rather, it reveals a new way that the social construction of nature can be applied to and carefully replicated in the natural world. When a new technology is popularized outside of the laboratory, rather than proving the laws of science we are proving our ability reproduce laboratory conditions outside of the lab (259-60). For example, in the digital technology industry, scientific discoveries that allow for faster, smaller processors, or higher resolution touch screens, are recorded and refined until the laboratory conditions can be reproduced as a consumer product. A new consumer technology becomes available when the digital technology industry discovers a production process that encapsulates the laboratory conditions in a hand-held device or fiberoptic cable. In this way, external nature is a socially constructed mode of experiencing the non-human world. It is too easy to take for granted the assumption that science explicates the inner workings of the natural world when, in fact, science reveals the inner workings of human society's relationship with the natural world.

The suggestion that human society is separate from nature is an extension of the Cartesian dualism of mind and body. As Bertrand Russell explains, Descartes's primary contribution to philosophy was to bring "to completion, or very near to completion, the dualism of mind and matter which began with Plato . . ." (567). According to Russell, the Cartesian system allowed the parallel worlds of the mind and of matter to be studied without reference to each other. The external and universal conceptions of nature are tied to the parallel worlds of

mind and matter. In the body, the human being is a constituent of nature (universal), but in the mind, human society is separate from nature (external). Both universal and external nature are metaphors that come out of humankind's embodied action and its struggle to find meaning despite the limitations of embodied existence. Judith Gerber, quoting George Lackoff, explains, "as soon as one gets away from concrete physical experience and starts talking about abstractions or emotions, metaphorical understanding is the norm" (4). Nature in both these senses is what Gerber calls an ontological metaphor. Ontological metaphors, she explains, are "closely related to our experience of physical objects and substances. . . . [and require] an artificial boundary around a physical phenomenon . . ." (4). The term "natural resource" is a metaphor that maps the concept of nature to the concept of a material for production; it draws an artificial boundary around nature as a part of the production process. When human actions are described as natural or unnatural, on the other hand, the concept of nature is mapped to the human mind. In both external and universal nature, the abstract concept of nature is given an artificial boundary in a physical material or in the human body. Later Gerber posits, "[T]he mappings undertaken when constructing metaphors are *grounded in the body and in everyday experience and knowledge*" (4-5). In other words, the metaphors of external and universal nature are based on the everyday experience of the entities to which the term "nature" is applied.

In Canadian and American art and poetry, metaphors of nature are most distinctly circulated as what Neil Smith calls poetic nature. Poetic nature is the nature of poems, painting, photography, and novels, and in Canada and the United States, it is represented in two dominant modes: the pastoral and the sublime. The pastoral promotes an ideal, healthy human interaction with natural space. In its emphasis on the spiritual quality of "good" human inhabitation of the countryside and it is connected to the picturesque painting style. M. H. Abrams explains that the pastoral has its roots in the third century B.C. poet Theocritus, whose

work focused on Sicilian shepherds. Later, Virgil imitated Theocritus' poetry, and the style became a popular way for urban observers to represent the countryside. In the pastoral, the urban observer projects a "nostalgic image of the supposed peace and simplicity of the life of shepherds and other rural folk in an idealized natural setting" (Abrams, "Pastoral"). The Christian tradition latched onto the pastoral and connected its idealism back to the Garden of Eden. Today's restoration ecology has a strong connection to the pastoral and its yearning for a simpler country-life lived in harmony with the earth. Alexander Wilson explains that restoration ecologists believe "humans must intervene in nature, must garden it, participate in it" (115). This was the mandate of Fredrick Law Olmstead, who is responsible for restoring the American Niagara Falls to an ostensibly more natural condition and argued for the proper care and maintenance of in Yosemite National Park (Sprin, 91).

The picturesque, on the other hand, is a painting style that is developed during a transition between Neoclassicism and Romanticism. *The Oxford Dictionary of Art* comments, "Picturesque scenes were . . . neither serene (like beautiful) nor awe-inspiring (like Sublime), but full of variety, curious details, and interesting textures" ("Picturesque"). The picturesque most often framed landscapes in a way that hinted at a divine presence in nature while drawing attention human activity. The picturesque painting style borrows its awe-inspiring aspects of nature from the sublime, but the transcendent power of nature is often muted. In Canada, the picturesque was used to represent frontier landscapes as large tracts of land that, although awe-inspiring, were manageable and inhabitable by immigrants. Leslie Dawn posits that although the picturesque never established a coherent theory, it gained traction with eighteenth and nineteenth century writers and artists especially in British colonies (197). Quoting W.J.T Mitchell, Dawn points out that in Canada the picturesque persisted because of its ability to represent nature as a place for an imperialist society to inhabit:

[The] semiotic features of landscape, and the historical narratives they generate are tailor-made for the discourse of imperialism, which conceives itself . . . as an expansion of landscape understood as an inevitable, progressive development in history, and expansion of “culture” and civilization into a “natural” space in a progress that is itself narrated as “natural.” (197)

In Canada, the picturesque can be seen in the works of Cornelius Kreighoff and Lucius O’Brien, among many others. Kreighoff, who is known for *The Habitant Farm* (fig. 1) and *The Toll Gate* (fig. 2), painted rural Quebec scenes that were intriguing to the urban observer. Kreighoff’s works represent an idealized rural life much like the pastoral, but his use of landscape to frame his paintings puts him in the picturesque tradition. His depictions of rural Quebec turn the habitant people into fixtures in the landscape. In his work, the people embody ideal rural citizens who act as curios characters for the urban observer.



Fig. 1. Cornelius Krieghoff; *The Habitant Farm*; 1856, oil on canvas, National Gallery of Canada, *National Gallery of Canada*; Web, 2 Aug. 2012.



Fig. 2. Cornelius Kreighoff; *The Toll Gate*; 1861; oil on canvas; National Gallery of Canada; *National Gallery of Canada*; Web; 2 Aug. 2012.

Lucius O'Brien, on the other hand, is best known for *Sunrise on the Saguenay* (fig. 3), *A British Columbian Forest* (fig. 4), and his extensive work with George M. Grant's anthology *Picturesque Canada*. *Sunrise on the Saguenay* and *A British Columbian Forest* are more distinctly Romantic than Kreighoff's work because they represent humankind as dwarfed by the awesome size of nature. However, O'Brien employs the picturesque conventions of framing the scene with rolling hills or dense vegetation to prevent the viewer from being pulled into the transcendent awe of the sublime. In *Sunrise on the Saguenay*, the expansive wilderness is offset by the productive labour depicted at the bottom of the scene. Canada's landscape is seen here as expansive yet inhabitable place as the people on the shores of the Saguenay work in soft, early morning light. In *A British Columbian Forest*, the vegetation casts a muted, diffuse light on two resting workers. In spite of the massive forest behind them, the workers are safe in this lush landscape. As Dawn suggests, Canadian landscape painting has been obsessed with "property and territorial control," the

propagandistic transmission of national identity,’ and the ability to represent ‘pictorial colonization’” (198). Through works like these Canadian painters laid the foundations for a Canadian landscape myth where external nature is seen as both a storehouse of resources and as an awe inspiring spectacle. The myth of Canadian land was that it was vast and powerful, but



inhabitable and productive.

Fig. 3. Lucius O'Brien; *Sunrise on the Saguenay, Cape Trinity*; 1880; oil on canvas; National Gallery of Canada; *National Gallery of Canada*; Web; 2 Aug. 2012.



Fig. 4. Lucius O'Brien; *A British Columbian Forest*; 1888; watercolour over graphite on wove paper; National Gallery of Canada; *National Gallery of Canada*; Web; 2 Aug. 2012.

In the United States, landscape came under a different aesthetic rule, one that is as equally founded in domination and control as the Canadian landscape myth, but this time, land is something to be penetrated, claimed, and controlled. This confluence of the frontier myth and the sublime aesthetic is what William Cronon calls “wilderness.” Wilderness is both a frontier that can be conquered and an awe inspiring place that embodies the incomprehensible power of external nature. Wilderness, in Cronon’s view, is a myth that draws an artificial boundary around a landscape to map the incomprehensible concept of an external nature onto trees, mountains, and waterfalls. The wilderness myth is reproduced in American paintings, literature, and politics. Cronon explains, “Wilderness hides its unnaturalness behind a mask that is all the more beguiling because it seems so natural. As we gaze into the mirror it holds up for us, we too easily imagine that what we behold is Nature when in fact we see the reflection of our own unexamined longings and desires” (69-70). In other words, wilderness is a myth that humankind

projects onto nature for its own purposes; wilderness says more about the culture that created it than the landscape itself. Cronon argues that until the late eighteenth century, wilderness was seen as “‘deserted,’ ‘savage,’ ‘desolate,’ ‘barren’—in short, a ‘waste,’ the word’s closest synonym” (Cronon, 70). He suggests that in the Christian tradition landscapes on the margins of civilization were seen as deserted wilderness. However, the Bible contains a dual scripting of wilderness. It is both a barren wasteland and a place where God meets his people—a place of desolation and revelation. In the Old Testament, God’s prophets come out of the wilderness to with a message for Israel and they retreat to the wilderness again to listen for God’s command. In the New Testament, John the Baptist is described as a “voice crying in the wilderness” (Matt. 3:3; Mark 1:3, KJV) preparing people for Jesus’ message, which harmonizes with the prophetic vision of Isaiah in the Old Testament (Is. 40:3). Here, the wilderness is a place far from civilization where people come for a deep spiritual encounter. In the book of Mark, Jesus goes to be baptized by John immediately before he exiles himself to the wilderness where he confronts temptation but reveals himself to be righteous. Later, in Revelation 12, the wilderness is the place where a woman, who is thought represent the Christian church, flees to escape the battle between Michael’s angels and the dragon that is thought to represent Rome (Dunn and Rogerson, 1554). Nonetheless, the last mention of wilderness in Revelation is in chapter 17 where a woman, this time representing Rome (1562), sits upon a beast “having a golden cup in her hand full of abominations and filthiness of her fornication” (17:4, KJV). The New Testament wilderness myth encompasses renewal, challenge, refuge, desolation, and revelation. In other words, wilderness is a myth that plays on the analogous significations of a desolation and revelation. It is only when God’s people are removed from the entrapments of human society that they can discern His voice in the wilderness. In this way, Cronon’s list of adjectives for wilderness could be

turned on their head. To be wilderness in the spiritual sense is to be lush, refined, cultivated, fertile, and, most of all, life-changing.

In the United States wilderness was primarily seen as a wasteland, but in the late nineteenth- and early twentieth-century it was apparent that the American frontier was vanishing and, with a deep sense of ennui, people looked to the wilderness as a symbol of a profound and foreign landscape. Cronon explains, “The wastelands that had once seemed worthless had for some people come to seem almost beyond price” (71). The Biblical image of wilderness had been entirely turned around and wild land now represented a holy place, Cronon explains. While attacking supporters of the O’Shaughnessy Dam in Yosemite National Park, John Muir writes, “Their arguments . . . are curiously like those of the devil, devised for the destruction of the first garden—so much of the very best Eden fruit going to waste; so much of the best Tuolumne water and Tuolumne scenery going to waste” (Cronon, 72). Considering Muir’s comment, Cronon concludes, “Satan’s home had become God’s own temple” (72). Nevertheless, what Cronon fails to notice is that Muir has not turned the wilderness myth around, but instead, he has abandoned the wilderness myth for pastoral images of nature. Rather than suggesting that the Hetch Hetchy Valley is an unknown frontier—it clearly is not since it is within the boundaries of a national park at this time—he is evoking images of nature as the Edenic garden to make his argument. By damming the Tuolumne River, humans are failing to live up to their mandate to take care of God’s creation and are threatened to forever dwell outside of God’s will. Writing in 1912, Muir was echoing the words of Fredrick Law Olmstead who, in 1864, argued that Yosemite should be preserved because its “‘natural scenery’ promoted human health and welfare,” as Anne Whiston Spirn puts it (92). The wilderness in Muir’s argument, is everywhere but the Hetch Hetchy Valley. Despite Muir’s pastoral images of the Hetch Hetchy Valley, wilderness had taken a distinct turn from being a primarily place of desolation to being primarily a place of revelation.

As the frontier began to vanish from the American landscape, America culture began to celebrate wilderness areas as icons of an idealized past. The frontier, in short, was “the powerful sense among certain groups of Americans that the wilderness was the last bastion of rugged individualism” and was disappearing quickly (77). The image of the frontier is most powerful when it is most threatened by civilization, a threat that heightens the observer’s awareness of the wilderness’s sublime vistas. Unlike desolate wastelands, sublime wilderness is a place imbued with God’s voice. In the words of Immanuel Kant, “The Sublime may be described in this way: It is an object (of nature) the representation . . . of which determines the mind to regard the elevation of nature beyond our reach as equivalent to a presentation . . . of ideas” (qtd. in Žižek, 202). The sublime object of nature is a representation of an unmediated Reality. According to Slavoj Žižek, Lacan expands on Kant’s definition by arguing that the sublime is “an object raised to the level of the (impossible-real) Thing.” Žižek continues, “We can now see why it is precisely nature in its most chaotic, boundless, terrifying dimension which is best qualified to awaken in us the feeling of the Sublime: here, where the aesthetic imagination is strained to its utmost, where all infinite determinations dissolve themselves, the failure appears at its purest” (203). Nature in the sublime aesthetic is pure, true, Real, Nature. In European and American writing, the sublime experience came out of a struggle against nature to find, as Henry Thoreau describes, a “vast” place “such as man never inhabits” (qtd. in Cronon 74). The sublime aesthetic is a secularized version of the revelation we see in the Biblical tradition. Where Biblical writers look to wilderness to find God, secular writers look to wilderness to find purity and truth. In the American tradition, wilderness was fashioned from the sublime’s awe inspiring power and the frontier’s beckoning call for exploration. In the twentieth century, as industrial capitalism fuelled the growth of cities and began taxing the land of resources, the wilderness’s frontier came under increased threat. But as its own demise is an integral part of its vitality, the myth of wilderness has thrived.

At the end of the nineteenth century, the Canadian government began to recognize the importance of preserving the wilderness. Without reserves, the land was constantly under threat to be turned into a wood lot, quarry, or gravel pit. By establishing Banff National Park in 1885, Canada took its first step in ossifying the wilderness, giving it boundaries, entries and exits, hotels, and hiking paths. As Cronon puts it, “Wilderness suddenly emerged as the landscape of choice for elite tourists, who brought with them strikingly urban ideas of the countryside through which they traveled” (78). National parks became the embodiment of the wilderness myth: ideologically laden spaces that at once proclaimed nature’s retreat and industrial capitalism’s willingness to preserve the environment. From the safety of view points and ski hills, urban tourists encounter the sublime in a controlled wilderness experience. The impossible real Thing that vacationers seek is packaged up in the parks and allowed to reveal its transcendent power on long weekends and during summer vacation. However, it is not enough to simply recognize this problem with wilderness. As Cronon argues, the trouble with the wilderness myth is that it becomes “the standard against which to measure the failings of our human world. Wilderness is the natural, unfallen antithesis of an unnatural civilization that has lost its soul” (80). Wilderness, a place we have created out of our own longings and desires, a place to which we measure our seemingly broken society. Cronon continues:

The dream of an unworked natural landscape is very much the fantasy of people who have never themselves had to work the land to make a living—urban folk for whom food comes from a supermarket or a restaurant instead of a field, and for whom the wooden houses in which they live and work apparently have no meaningful connection to the forests in which trees grow and die. (80)

Today, wilderness is an ideology against which human society measure its success. It is an unattainable standard, a beacon of human failure. Part of wilderness’s impossible existence is that

it encompasses a flight from history, as Cronon says. To be wilderness, land must be empty of human inhabitants, vast and seemingly uncontrollable, yet awe inspiring in its unknowable complexity and beauty.

The myth about wilderness contains both its most deplorable characteristics and its redeeming feature. As Cronon puts it, “If we put too high a stock on wilderness, too many other corners of the earth become less than natural and too many other people become less than human, thereby giving us permission not to care much about their suffering or their fate” (85). In Canada, the failure to regard seemingly “less than human” societies is nowhere more apparent than in the treatment of aboriginal and Métis people. Ian S. MacLaren notes that when Jasper Forest Park became Jasper National Park in 1909, the superintendent forced out all the Park’s Métis inhabitants:

Its first acting superintendent, John W. McLaggan, lost no time in ordering all hunters’ guns sealed and deputing Lewis Swift, the lone white homesteader, to ensure they were. McLaggan offered and paid compensation for buildings and other improvements to six families of mixed blood . . . inhabiting homesteads in the [Upper Athabasca River Valley] and told them all to leave. Only their departure, not their destination concerned him. (335)

To McLaggan and the incoming white tourists, this land would not appear to be wilderness if it were settled and cultivated. Any remote sign of permanent, non-tourist-related human inhabitation would undermine the sublime ideology behind the wilderness. Only recently has it become known, MacLaren notes, that over two-dozen groups “consider the valley a part of their abiding heritage” (335). However, the wilderness ideology has a redeeming quality—a quality that needs to be taken out of the context of wilderness and seen in everyday forms of nature.

By idealizing a distant place, humankind is sloughing its responsibility for the places we inhabit every day. If the only place that has transcendent value is the wilderness, then a back yard, the park down the road, or pavement on the street has little meaning. These banal places become representations of our failure to live up to wilderness's transcendent power rather than our immediate and real everyday environment. In the words of Cronon again, "Wilderness gets us into trouble only if we imagine that this experience of wonder and otherness is limited to the remote corners of the planet, or that it somehow depends on pristine landscapes we ourselves do not inhabit. Nothing could be more misleading" (88). The power of wilderness is its ability to highlight the Otherness of the forest, deer, waterfall, or mountain. Simply in the sheer number of trees, a forest represents an incomprehensible, complex network of life that is completely foreign to urban humans. What so many fail to see is that the birch sapling sprouting up between the paving stone of a back yard patio, came from the same lineage as an entire forest of birch trees. The seed for that sapling may well have fallen out of a crease in a tent as it was unrolled to dry after a weekend of hiking. The bits of nature that we encounter every day, the plants in our garden, the water in flowing from our tap, or rain clouds blowing over, are very much a part of the natural world of the Other. "The special power of the tree in the wilderness," Cronon says, "is to remind us of this fact. . . . By seeing wilderness in that which is most unfamiliar, we can learn to see it too in that which at first seemed merely ordinary" (88). Rather than reflecting our own inadequacies, wilderness should teach us to see and value the Other, to see the wild and the unknown, in the everyday.

It is all too easy to imagine natural spaces as special and protected while forgetting the environment in which so many of us live: the city. Although Cronon's wilderness is unique to American culture, the Canadian tradition is closely related. O'Brien's picturesque paintings of western Canada borrowed heavily from the sublime aesthetic to portray the astonishing power of

Canada's wilderness. In both traditions representations of landscape are, as Michael Sorkin puts it, "both . . . [a] celebration and . . . a profound symptom of disconnection from the land" (56). These myths about nature abrogate the ethical value of land from which coal, natural gas, and oil is taken and allow the ideology of external nature to dominate the discourse. If wilderness is the only place worth preserving, then destroying natural landscapes to extract resources is justified because these places do not embody ideal nature. Neil Smith argues, "[The] poetic journey into nature starts off where the scientific journey ends; if the poetic journey begins from the externality of nature which it strives to universalize, the scientific journey accepts the universality of nature—as matter or as space and time—which it strives to continually convert into an external object of labor" (27). The poetic constructions of nature—pastoral, picturesque, sublime, frontier, and wilderness—are ideologies of nature that are universalized in attempt to justify territorial expansion and control over wild land, but once that control has been attained, the scientific journey takes over and the poetic journey is limited to reserve land. Smith suggests, "[The ideological function] no longer acts as a 'rhetorical screen' to justify the conquest of external nature, nor a moral vision to stimulate social behavior suitable to the ruling class. These functions have come together. The effect is still one of conquest—or more accurately control—and the target is still social behavior" (29). Ideologies of nature that were once used to conquer new lands, are now used to conquer the working class and, according to Smith, class segregation is built into the ideology of nature:

The exclusion of concrete labor from the universality of nature is not just a means of denying the working class its history, nor simply a ritual acquiescence to the delicate sensitivities of the leisured classes, for whom, upon being confronted with the real source of their wealth, the very sight of working brings on a swoon. . . . The possibility of the

socialization of universal nature is ultimately denied not on the basis of historical experience but by the contradiction with external nature. (30)

Cronon's conclusion that we must attend to the nature, suss its shortcomings, and free it from the grips of political ideology is closely in line with Smith here. However, Smith would argue that to be truly aware of this ideology's power, we must be careful to not set its transformative power in an unattainable future or an idealized past. As Smith shows in his discussion of Alfred Schmidt's *The Concept of Nature in Marx*, utopian visions often lead to counter-revolutionary ideas, which are mere obfuscations and reimplementations of the status quo.

It is important to reiterate Smith's critique of Schmidt here for two reasons: first, Schmidt's work is seen as the first comprehensive attempt to read Marx ecocritically (Castree, 17), and second, Smith's critique of Schmidt's utopianism will prove useful when we look at Heidegger's understanding of modern technology. At the basis of Schmidt's argument is the concept of a metabolic relationship between humans and nature. In Schmidt's terms, "[M]en incorporate their own essential forces into natural objects [and] natural things gain a new social quality as use-values.' Hence 'nature is humanized while men are naturalized'" (qtd. in Smith, 34). Through this metabolism a dialectic relationship between "man" and nature arises:

Nature becomes dialectical by producing men as transforming, consciously acting
Subjects confronting nature itself as forces of nature. Man forms the connecting link
between the instrument of labour and the object of labour. Its dialectic consists in this:
that men change their own nature as they progressively deprive external nature of its
strangeness and externality, as they mediate nature through themselves, and as they make
nature itself work for their own purposes. (qtd. in Smith, 35)

It is here that Schmidt diverts from Marx's analysis of nature. Schmidt concludes that Marx was ultimately utopian because he "had in mind the *total automation* of industry, which would change

the worker's role more and more into that of the technical 'overseer and regulator'" (37). In Schmidt, external nature is a thing of the past, an era where "nature is appropriated through agriculture and is therefore absolutely independent of men . . . 'men' are therefore 'abstractly identical with nature. They lapse, so to speak, into natural existence'" (40). But in the bourgeois era, Schmidt continues, "where men succeed in universally mastering nature, technically, economically and scientifically by transforming it into a world of machines, nature congeals into an abstract in-itself external to men." Smith paraphrases Schmidt's argument, "That is, the universal conception of nature is appropriate to the pre-bourgeois era while the external conception best depicts the 'bourgeois era'" (40). Smith points out that Schmidt's recreation of the external/universal dialectic here, is a result of his misapplication of Marx's dialectic *vis-à-vis* Hegel and Kant. Kant had difficulty with the bifurcation of the Subject and the Object, explains Smith, and he ultimately failed "to reconcile an active creative Subject with and Object existing 'in-itself.'" Hegel succeeded where Kant left off by "dissolving the Object into the Subject" and it was left to Marx "to reconstruct the dialectic: to prize apart Hegel's eventual identity of Subject and Object without at the same time making them irreconcilable as in Kant" (41). Schmidt succeeds in placing Marx between Kant and Hegel, Smith argues, but in the end, he relies more on Kant's dualism than Hegel's unity, which results in his counter-revolutionary interpretation of nature in Marx and his emphasis on the ideology of the external/universal dualism.

Schmidt's error, an error that Smith claims is endemic in the Frankfurt School, lies in his emphasis on the distinction between use-values and exchange-values (47). Smith remarks, "He begins by emphasizing that an examination of nature must focus on the realm of use-values, which he distinguishes sharply from exchange-values" (43). In addition, Schmidt emphasizes, "The exchange-value of a commodity has no natural content whatsoever" (43). The separation of use-values and exchange-values is essential to Schmidt's thesis that socialism will result in the

domination of nature to such an extent that “man” will become an overseer in the technological process extracting, arranging, and processing of use-values. However, Smith explains that Marx never meant for use-value and exchange-value to be rigidly separated. In *Grundrisse* explains:

The *particular nature of use value*, in which the value exists, or which now appears as capital’s body, here appears as itself a *determinant* of the *form* and of the action of capital; . . . nothing is therefore more erroneous than to assert that the distinction between use value and exchange value, which falls outside the characteristic economic form in simple circulation . . . falls outside it in general. (qtd. in Smith, 43)

In other words, Marx did not see use-value and exchange-value as distinct from each other but merely as different representations of capital. Therefore, when Schmidt suggests that humankind will be liberated through the total automation of production, he fails to see that in turning nature into an external object to be manipulated, nature has turned back on “man” and placed him on call as a use-value for operating machinery and overseeing production.

4. The Technological Enframing of Nature

In Marx nature and humankind exist in a dialectical relationship where the antipodal external and universal natures are employed to suit the desires of the ruling class. Nature is at once an external object of study and a universal characteristic of being. Marx argues that through the labour process, nature is transformed by human kind and, in turn, human kind is transformed by nature:

Labour is, in the first place, a process in which both man and nature participates, and in which man of his own accord starts, regulates, and controls the material re-actions between himself and nature. He opposes himself to nature as one of her own forces. . . . By thus acting on the external world and changing it, he at the same time changes his own nature. (Marx quoted in Smith, 54)

In its external form, nature is produced by human society as a material for human labour. Nature is the “material substratum” of every day life, as Smith puts it (49). In Marx’s terms, “Labor . . . is ‘the prime basic condition for all human existence, and this to such an extent that, in a sense, we have to say that *labor created man himself*’” (Smith, 56, emphasis added). Marx, here, is in line with Martin Heidegger who, in the words of Michael E. Zimmerman, argued, “The fundamental way in which entities ‘are’ for [humans] is as ready-to-hand” (139). In Heidegger’s terms, “ready-to-hand” can be distinguished from “present-at-hand.” An object that is present-at-hand is a mere thing, separate from the subject (external nature). As Zimmerman explains, “Philosophers have traditionally presumed that entities are really first present-at-hand and can become tools under certain circumstances” (139). In the scientific world of external nature, entities are present-at-hand objects of study. The natural world, separate from human existence, can be tinkered with and examined without consequence. Ready-to-hand objects, though, are

tools that extend human interaction and experience (universal nature). When the scientist looks at a cell through a microscope, she recognizes the microscope as a tool, not a mere object. The scientist's microscope is a ready-to-hand tool, but the cell she examines is a present-at-hand object. Heidegger argues that humans first experience things as useful objects before they see them as entities to study. In order to see entities as present-at-hand *Dasein*, Heidegger's word for humanity's ability to understand the being of things (xxii), adopts "the attitude of a passive spectator or observer, for whom what was once a useful device now becomes a mere 'object' with certain properties analyzable by specific scientific procedures, and so on" (139). In other words, Heidegger argues that human existence is formed through tools (universal nature), and when *Dasein* separates itself from everyday life, it is able to see its environment as a world of things (external nature) rather than tools. As Zimmerman puts it, "[T]he human way of manifesting itself is to be engaged with things, in making and doing and using, and with others, in speaking and acting and sharing, and with oneself, in deliberating and thinking and choosing" (140). In both Marx and Heidegger we see that human experience of the world is always mitigated by work. In Marx labour creates the world and in Heidegger tool using creates the world.

Although Heidegger and Marx argue for a similar definition of human kind here, Heidegger wanted distinguish himself from Marx. Where Marx defines humans as the labouring animal, Heidegger defines humans as "world building" (192). Heidegger is insistent that humans are not simply an elevated form of animal life and he emphasizes that there is not a hierarchy of value from animals to humans. According to Zimmerman, Heidegger "believed modern humanity's ontological understanding had declined to the point that humans could conceive themselves only as clever animals whose aim was security and power" (165). Heidegger's emphasis on authentic production "aimed to show that man is not truly 'free' when he turns the earth into a gigantic factory for satisfying his boundless cravings for security, power, and

pleasure” (165). Zimmerman explains that Heidegger thought the fundamental difference between humans and animals is that animals “cannot apprehend their presencing or that of other entities” (192). Humans, on the other hand, understand their coming to be and the being of other things. Thus, humans are “world building” and animals are “world poor” (192). Animals are bound to the “self-enclosing structure” of their behaviour and cannot apprehend “that and what things *are*” (192). Human beings, capable of apprehending presencing, are world building in that they can perform work, “i.e., the activity of disclosing things” (192). However, Heidegger insisted that animals’ ability or lack of ability, to apprehend the world does not make them lesser beings than humans:

We are indeed accustomed to speaking of higher and lower animals, and yet it is a basic error to suppose that amoeba and infusoria are less complete animals than elephants and apes. Every animal and every kind of animal is just as complete as every other. With all that has been said, it becomes clear that the talk of world-poverty and world-building is from the start not to be taken in the sense of an evaluated rank-ordering. (qtd. in Zimmerman, 193)

In separating his theory from the naturalistic understandings of human origins, Heidegger is able to do away with a hierarchy of being. If humans are simply different forms of being rather than advanced forms of being, their existence is no more complete than that of the fern or field mouse. Nevertheless, he emphasized, “The human body is something more than an animal organism “ (193). In other words, for Heidegger different ways of being do not result in a rank ordering, but *Dasein* does result in a unique ability to respond to the world; a response-ability, one might say.

In Heidegger’s and Marx’s unique arguments for the special nature of human being, we see that tools and labour create humankind. For Heidegger, and as we will see later in Neil Smith’s interpretation of Marx, industrial technology threatens to bind up and store human

labour and for later use. This binding and storing, Enframing as Heidegger calls it, results in alienated workers and consumers who have forgotten their “primary obligation and possibility—to preserve entities and to guard the self disclosure of being—for utilitarian considerations” (Zimmerman, 196). Alternatively, mindless technological being befores human response-ability to the world. Heidegger outlines his concern with standing reserve in *The Question Concerning Technology* where he attempts to suss the essence of technology. Technology, for Heidegger, is not simply telephones, light bulbs, and typewriters. These things are tools, technological indeed, but they are not the essence of technology. The essence of technology lies in revealing. Heidegger calls revealing *alētheia*, or *veritas* in Latin and “truth” in English. *Alētheia* is the revealing work done by the artisan; it is *poiēsis*, a bringing forth, by human hands. Heidegger explains, “*Technē* is a mode of *alētheuein*. It reveals whatever does not bring itself forth and does not yet lie here before us, whatever can look and turn out now one way and now another” (13). In other words, technology is a way of bringing forth or presencing a world. It is through technology that *Dasein* builds a world in which entities presence themselves. But modern technology, says Heidegger, is a different kind of revealing, “The revealing that rules modern technology is a challenging . . . which puts to nature the unreasonable demand that it supply energy that can be extracted and stored as such” (14). So Heidegger’s argument goes: through using tools humankind reveals a world, in the sense of *poiēsis*, (i.e., bringing forth) but modern technology places demands on the world to sate the appetite of industrialism. In Heidegger’s terms, “The earth now reveals itself as a coal mining district, the soil as a mineral deposit” (14). The world has lost its malleable potential and is now structured according to the demands of modern technology. Through modern technology the world is put on standing-reserve: “Everywhere everything is ordered to stand by, to be immediately at hand, indeed to stand there just so that it may be on call for further ordering. . . . Whatever stands by in the sense of standing-reserve, no longer stands over

and against us as object” (17). Once industrial technology has examined and determined the use-value of the present-at-hand (i.e., universal) natural world, it becomes a ready-to-hand extension of human being, a resource (i.e., external).

Through modern technology, humankind is challenged to order the natural world as standing-reserve. This challenging is Enframing, explains Heidegger: “Enframing means the gathering together of that setting-upon which sets upon man, i.e., challenges him forth, to reveal the real, in the mode of ordering, as standing-reserve” (20). In other words, Enframing is modern technology’s amplified demand that humankind take inventory of the natural world to place it on standing-reserve. The forest is no longer a complex ecosystem, but a source of timber. The mountains are no longer a geological formation, but a storehouse of coal. Humans is no longer unique beings, but merely the orderers of things. However, human ability to apprehend presencing is what can save it from thoughtless labour. As modern technology puts increasing demands on humankind to order the world as standing reserve, humans become lost in the objectlessness of standing-reserve: “[Man] fails in every way to hear in what respect he ek-sists, from out of his essence, in the realm of exhortation or address, and thus *can never* encounter only himself” (27). In this position, as the orderer of things, humankind can either fall into Enframing—a falling into thoughtlessness in an attempt to assuage the anxiety of finitude by allowing the world to remain concealed (Zimmerman, 146)—or take action by keeping watch over concealment and unconcealment. *Dasein* is not only an ability to recognize the presencing of beings, but an ethical response-ability to watch over unconcealment. In simpler terms, if we are irresponsible, we will see the world as nothing more than a stockpile of resources and, in our ordering and cataloguing of these resources, we become nothing more than a resource for managing resources. Humankind is truly free, so long as we listen and hear, so long as we attend

to and respond to the natural world (Heidegger, 25). If we shirk our response-ability, we shirk our freedom.

Humankind's response to the threat of Enframing, argues Heidegger, should be to *let be* entities which presence themselves. To let be means to watch over unconcealment and allow entities to be free of political constraints. Zimmerman explains that Heidegger had two understandings of presencing. Firstly, in Zimmerman's words, there is "the *aletheia*-logical, or truth-like conception of being" (225). *Alētheia*-logical being is the appearing, presencing, or self-manifesting of an entity that occurs in the "clearing . . . constituted by human existence" (225). Secondly, Heidegger argued for an *ousia*-logical being which is a growth or blooming of being in the sense that a flower presences itself by sprouting, budding, blooming, and wilting. Blooming is spontaneous and independent of the clearing constituted by human existence (Zimmerman, 225). However, the activity of *ousia*-logical being contradicts the stasis of *alētheia*-logical being. Zimmerman notes that some critics think that in the 1930s Heidegger resolved this conflict by discarding *ousia*-logical being in favour of *alētheia*-logical being. However, in *The Question Concerning Technology*, written in 1954, *ousia*-logical being comes alongside *alētheia*-logical being:

Physis, the arising of something from out of itself . . . is *poiesis* in the highest sense. . . . For what presences by means of *physis* has the bursting open belonging to bringing-forth, e.g., the bursting of a blossom into bloom, in itself. . . . In contrast, what is brought forth by the artisan or the artist, e.g., the silver chalice, has the bursting open belonging to bringing forth not in itself, but in another . . . in the craftsman or artists. (10-1)

Zimmerman notes that in the later part of his life Heidegger emphasized *alethia*-logical being over *ousia*-logical being because he "no longer conceived of presencing and unconcealment primarily in terms of the transcendental being-structure of human *Dasien*, but instead defined the openness of human *Dasein* as being 'appropriated' (*erignet*) as the site through which presencing occurs"

(226). That is to say, *ousia*-logical being pointed towards a transcendental ontology which posits a Real that may be apprehended through careful observation and reasoning. Heidegger turned to *alētheia*-logical being because it placed emphasis on the singularity of entities as they reveal themselves in the clearing of human existence. His later discussions of *technē* as an authentic producing focussed on building a world in which humans can let entities be whole and complete in their singularity. The conflict between *alētheia*-logical and *ousia*-logical being is never entirely resolved in Heidegger's thought, contends to Zimmerman, but his emphasis on letting entities be beckons humankind to take pride in their response-ability to keep watch over presencing.

In Heidegger's terms, we can take a fresh look at national parks and wilderness reserves. Where the wilderness and picturesque ideologies have been imbued in these places to make them represent preserved natural landscapes, we see nature standing in reserve for the tourist industry. National park boundaries serve to place forests, rivers, and wildlife on standing reserve for the wilderness ideology. In Jasper National Park, the Canadian Government recently approved a private tourist company's proposal to build a viewing deck over the Sunwapta Valley with a "30-meter glass-floored observation area" ("Parks Canada Approves Discovery Walk"). The viewing deck will be jut out over the valley and provide a vista of the Sunwapta River and the Columbia Icefields to tourists for \$15-30 ("Icefields Skywalk"). The site for this tourist attraction is along the Columbia Icefields Parkway, and will be built on what is now a roadside pullout with no entrance fee. Residents of Jasper and advocates for the park claim that the viewing deck is an atrocity to what the park stands for and will damage the valley's delicate ecosystem. Unfortunately, the viewing deck is no different from the park itself. It is merely one more way that the wilderness is put on standing reserve for the urban tourist's aesthetic enjoyment. By privatizing this vista of the Columbia Ice Fields and the Sunwapta Valley, nature is being held in suspension while it performs for the tourist's eye. Put on standing reserve in this way, our national parks are, in the

words of Mick Smith, “hanging dearly onto bare life above the gallows-drop of global capitalism” (103). The privatization of wilderness reserves threatens the vitality of these spaces and their myriad inhabitants by turning them into mere use-values for the tourist industry. M. Smith suggest that in doing so we have “forgotten the ‘nature’ of our being and, we might add, our being in nature. . . .What it now threatens is the end of the world as anything other than an ethical- and political-free trade zone, a profit-driven system of circulating resources” (105). By circumscribing wilderness with national park boundaries, represented as globs on maps or tollbooths on highways, we have cultivated reserve land as a tourist spectacle and abrogated the *wildness* of land outside of these borders. Of course, by making this argument, one runs the risk of sounding ungrateful for saving at least one parcel of land even if it is turned into a tourist commodity.

The response to national parks should not be one of self-centred pleasure. Parks should not be places imbued with ideology but places that serve as a reminder of the wildness of our very being. Seeing a grey wolf on the hiking path should not inspire wonder because it is a rare phenomenon, but it should inspire wonder because that wolf exists in and of itself, without our being there to see it. The wolf’s presencing should speak of the unique and irrevocable Otherness of the places we inhabit and the beings that are there with us. To untangle the natural world from standing reserve, and by extension the human from the centre of nature, nature must, in the words of M. Smith, be freed from “*all claims of sovereignty*, to release [it] into [its] singularity” (103). To let entities be we must that recognize the Other as having meaning and purpose beyond what we would otherwise make of them: “Letting be attends to the openness of the world, it ‘means letting oneself in on the open realm and its openness which each and every thing-that-is stands into, the openness, as it were bringing along with it’” (M. Smith, 108). To let be is to be in community with, argues M. Smith, “It is to strive to keep open the possibility of

attending to what that being *is* in its (indefinable) essence and also to recognize any *ability to respond* to that being's existence that can imply an ethical *responsibility*" (108). To let be is humankind's most supreme calling, our only true response-ability.

However, we must be careful with Heidegger here. As noted above, his two conceptions of being are conflicting but he chose to focus on *alētheia*-logical being to emphasize humankind's unique responsibility to watch over presencing. Although Heidegger shunned any anthropocentric or naturalistic ontology, he has what Zimmerman calls a "residual anthropocentrism" (243). Perhaps it would be more accurate to call this "irrevocable anthropocentrism" though. *Alētheia*-logical being relies on humankind's clearing, or opening up of a world in which entities presence themselves. Without the human in *alētheia*-logical being, there is no revealing, no *alētheia*, no thing. Heidegger's anthropocentrism can be seen in *The Question Concerning Technology* in his discussion of authentic production. Heidegger emphasizes that there is an authentic form of producing that does not involve modern technology. Zimmerman explains:

While small workshops were being degraded by factories, and while skills of many artisans had been degraded by modernist influences, nevertheless handiwork had to be understood and appreciated in its ontological dimension if there was to be any hope of discovering an alternative to modern technology. (154).

In *The Question Concerning Technology* Heidegger compares industrial technology to the technology of a seemingly simpler past. He suggests that mechanized farming challenges the soil of the field to bring forth fruit but the work of the peasant does not, or that the windmill does not set upon the wind to provide energy to be stored up, but is moved at the wind's blowing (14-15).

Heidegger contrasts the modern forester to labour of the past:

The forester who, in the wood, measures the felled timber and to all appearances walks the same forest path in the same way as his grandfather is today commanded by profit-

making in the lumber industry, whether he knows it or not. He is made subordinate to the orderability of cellulose, which is then delivered to newspapers and illustrated magazines.

(18)

In all three of these examples, the earth is challenged to bring forth energy. The peasant needs the soil to produce food, the windmill will not operate without the wind's blowing, and the forester's grandfather required the earth to produce trees so that he can fell them. The difference between these past forms of labour and the kind of labour found under industrial capitalism is that technology amplifies Enframing by breaking tasks down into minute, detailed operations. Industrial capitalism's insatiable hunger for resources places higher demands on humankind to place the natural world on standing reserve. The essence of forester's task is identical to that of his grandfather's except that he is now driven by a profit-making resource system rather than his unique skill of providing people with timber. The same analysis can be applied to the peasant. The mechanized food industry places voracious demands on the earth, climate, and sun to produce vegetables, grains, and livestock but the essence of these demands are no different from the essential tasks of the peasant farmer. The peasant places portions of land on standing-reserve to bring forth the same produce, but on a smaller scale. The peasant is not Enframed by the capitalist resource system, yet he still must produce food merely for his own survival. As Heidegger's definition states, Enframing is not the demand for resources, but the gathering together of a demand for resources (20). It is a condensation, accentuation, and potentiation, of a demand that existed prior to modern technology.

In some ways Heidegger's argument here is almost identical to Schmidt's. Heidegger sees the peasant in the field as "abstractly identical with nature" and the mechanized food industry as an attempt to rule over nature (Smith, 40). In his utopian image of the pre-industrial world, Heidegger envisions nature as a universal part of being where authentic producing involves a

synthesis of the Subject and the Object. The silversmith does not manufacture a goblet, but draws out from the silver a form he sees within it. The pre-industrial labourer is unified with the objects he works with. What Smith calls the pre-bourgeois era and the bourgeois era Heidegger would call pre-industrial and industrial eras. Smith, summarizing Schmidt, says, “[T]he universal conception of nature is appropriate to the pre-bourgeois era while the external conception best depicts the ‘bourgeois era’” (40). Smith’s statement could be rewritten in Heideggerian terms to say, “The ready-to-hand conception of nature is appropriate to the pre-industrial era while the present-at-hand conception best depicts the industrial era.” However, Heidegger did not hold fast to a rigid bifurcation of readiness-to-hand and presence-at-hand. *The Question Concerning Technology* is part of what Zimmerman calls “later Heidegger” whereas *Being and Time* is part of “early Heidegger.” In early Heidegger, Zimmerman explains, we see a strong distinction between readiness-to-hand and presence-at-hand but in later Heidegger complicated the boundary between the two and saw modern technology in light of both external and universal nature (153). In *The Question Concerning Technology* Heidegger’s ennui for a simpler, more natural past, is a result of his changing opinion on external and universal nature. His thesis that modern technology threatens humankind with Enframing comes out of in interplay between readiness-to-hand and presence-at-hand, but fails to consider the ways in which the peasant may be Enframed by his pre-capitalist society. While Heidegger succeeds in exposing modern technology’s threat to humankind and turning the Subject/Object dualism around by positing an instrumentalist ontology, his theory is still very much grounded in “the anthropocentric trail blazed by this Christian and Cartesian predecessors” (Zimmerman, 144). Human understanding of the world will always be limited by human embodiment. Heidegger does not call for a triumphant humanism, but, rather, an authentic, attentive, and self-reflexive ontology. Glorifying in the human perspective and posturing as “lord over the earth” will only result in humankind being

lost in the objectlessness of Enframing (Heidegger, 27), but taking care and watching over the worlds we build through technology will lead to a more authentic revealing.

Where Heidegger sees modern technology as a threat to humankind's being, Marx sees it as holding the potential for revolution. In Marx's view, technology in the hands of capitalists, results in Enframing, but technology itself can liberate the labourer from the constraints of the workday. In *Capital* Marx writes:

[A]ll means for the development of production transform themselves into means of domination over, and exploitation of, the producers; they mutilate the labourer into a fragment of a man, degrade him to the level of an *appendage of a machine*, destroy every remnant of charm in his work and turn it into a hated toil; they estrange from him the intellectual potentialities of the labour-process in the same proportion as science is incorporated in it as an independent power; they distort the conditions under which he works, subject him during the labour-process to a despotism the more hateful for its meanness; they transform his life-time into working-time, and drag his wife and child beneath the wheels of the Juggernaut of capital. (qtd. in N. Smith, 73-4, emphasis added)

The producers here are guilty of turning the labourer into an appendage of the machine. Capitalists gather together the labour power of the proletariat and set upon it, as if it were a mere resource for extraction, to produce capital. The machine is a dangerous tool in the hands of the capitalist. Where Heidegger warns that modern technology threatens humankind with an inhumane Enframing, Marx asserts that industrial capitalism penetrates the labourer's life to such an extent that it restructures the very things he values and places him and his family on standing reserve as labour power, a mere use-value. In Zimmerman's terms;

Marx warned . . . that machines must not be 'fetishized,' i.e., depicted as independent agencies. Rather, they must be understood as what they really are: the complex means of

production ordered up by the capitalist economic system. In Marx's view, the technological means of production are not in and of themselves anything alienating. (214)

Heidegger, on the other hand, warned that technological production is part of a global system devoid of class, or economics. Technology threatens to Enframe whether it is in the hands of capitalists or socialists. However, Heidegger's view of authentic production can be applied to Marx in a way that curtails utopian interpretations of Marx's thought.

Although Marx himself was never explicitly utopian, he proposes an end of history where humankind lives in "a community without ethical and political differences" (211, M. Smith). Marx assumes, then, that there is a truer, more ethical, way of going about political economics. Unlike Schmidt, Marx never claims that human society can attain this perfect world. Neil Smith falls prey to this error as well. Although he critiques Schmidt's utopianism, Smith concludes his chapter on the production of nature by claiming, "Truly human, social control over the *production* of nature, however, is the realizable dream of socialism" (91, emphasis original). While claiming that Marx is not utopian, N. Smith himself believes that socialism can solve our global environmental crisis. M. Smith points out, quoting Jean Luc Nancy, that Marx's latent idealism is embedded in Marx's understanding of the source of value: "But what, since Marx, has nonetheless remained unresolved . . . [is] the world of proper freedom and singularity of each and of all without claim to a world beyond-the-world" (M. Smith, 211). In Marx, the world of freedom and singularity comes from outside the thing itself. Zimmerman explains, "Like Hegel, Marx shared the Biblical view that history has a reason, purpose, basis, meaning, foundation, or goal. . . . Whatever was to happen *after* the attainment of the 'Absolute' (Hegel) or of 'authentic communism' (Marx) would be events consistent with a completed and relatively perfect world" (254). Applying Heidegger to Marx, here, solves the problem of having an attainable Absolute. Understanding proper production as attentiveness to objects' singularity causes the reason,

purpose, and meaning of history to dissolve. Entities have freedom and singularity in and of themselves and through authentic production humankind can let entities be in their singularity rather than Enframing and constraining them to be what the technocratic system demands.

5. The City: A Technology for Enframing

Our current environmental crisis hinges on this: our environment is seen as a resource to be extracted and exploited for the sake of progress. In *The Whale and the Reactor* Langdon Winner argues, “The issues that divide or unite people in society are settled not only in the institutions and practices of politic proper, but also, and less obviously, in tangible arrangements of steel and concrete, wires and semiconductors, nuts and bolts” (29). Enframing, in other words, is woven into the built environment. Humankind have quite literally framed itself into a resource system for technocratic production. As David Harvey explains, resources are no longer commodities that enter into a production cycle as raw material, e.g., coal entering into the production cycle as a source of fuel, but are produced commodities themselves. The concept of resource has been “extended to things like amenities and open space, but there is still an unfortunate tendency to think of resources as ‘natural’” (68). Resources are seen as “natural” because once an object enters the economic system, it enters the objectlessness of standing reserve where there is no differentiation, only use-values. As Marx puts it:

Nature becomes for the first time simply an object for man-kind, purely a matter of utility; it ceases to be recognized as a power in its own right; and the theoretical knowledge of its independent laws appears only as a stratagem designed to subdue it to human requirements, whether as the object of consumption or as the means of production. (qtd. in Harvey, 214).

Nevertheless, as Heidegger explains, humankind enters the realm of resources too. As a resource set to the task of arranging resources, the labourer is subsumed by the object of her labour. Not only is her product indistinguishable from the materials she works with, but she is indistinguishable from the task she performs. “Natural” loses all meaning in the objectlessness of

standing reserve and thus, created space, human labour power, and raw materials are all seen as natural resources for generating surplus. As “human resources,” “human capital,” “creative capital,” or “social capital,” people are nothing more than the profits they produce in capitalist system. The market exchange system forms the basis of capitalist economies and is built into the environments humans call home. In Harvey’s words, the city is a “gigantic resource system, most of which is man-made” (68), it is a complex technology for gathering resources, placing them on call, and generating surplus. Through the city, humankind is put on standing reserve as labour power and subjected to the technocratic force of the urban system.

If the city is a resource system for generating surplus, it is important to understand what Marx meant by “surplus.” Harvey, quoting Harry W. Pearson, explains that surplus is often defined as the “material means and human services that are in some sense set aside or mobilized apart from the existing functional demands which a given social unit—a family—a firm—a society—makes upon its economy” (218). This definition of surplus falls apart though when we see that social form dictates economic form. A society may change its structure and deem new material means or human services a surplus and others essential. In a society that is formed around a religious hierarchy, for example, the material means and human services used in the religious structure will be seen as essential to the survival of the society. However, in a society formed around military control, religious activity would be deemed as a surplus. As Harvey insists, “Each mode of production and each mode of social organization has implicit within it a particular definition of surplus.” In this sense, then, surplus must be defined as “that quantity of product over and above what is necessary to guarantee the survival of society *as individuals know it*” (219, emphasis original). Harvey furthers this definition of surplus by explaining that Marx saw two sides to surplus. First, surplus is the excess material product “set aside to promote improvements in human welfare. Surplus in this sense is necessary for progress of any sort.

Without surplus, human kind would not change from its initial condition. Second, surplus is an abstracted form of the first: “it appears as a quantity of material resources that is appropriated for the benefits of one segment of society at the expense of another” (220). Surplus is exhibited in material accumulation by one group and near subsistence living by another. By focussing on the second version of surplus, hegemonic powers can persuade the society, i.e., the human means of production, that the current social structure is essential to the survival of the society. In the capitalist urban system, surplus is circulated in a way that reproduces the social conditions necessary for reproduction of the capitalist system itself. Harvey posits, “Surplus value is that part of the total value of production which is left over after constant capital (which includes the means of production, raw materials and instruments of labour) and variable capital (labour power) have been accounted for” (224). The city is, as a huge resource system is, in Heideggerian terms, a technology for “gathering together” and setting upon humans to “reveal the real . . . as standing-reserve” (20). The capitalist urban system, in Harvey’s analysis is a tool that brings people together to set them on standing reserve along with the material means for production. This gathering together and setting upon results in a surplus in the economic system.

Surplus value in the urban system falls into the hands of the hegemonic powers through rent collection, interest charges, or profit (Harvey, 224). However, urbanism is not a result of surplus extraction alone. Urbanism is a type of social arrangement set in specific place that is central to the generation of surplus value. For example, in reciprocity economies—economies based on the egalitarian trade of goods and services—urbanization is not central to the society. As economies grow, Harvey argues, they become more location based and turn into redistributive economies where surplus value is distributed based on social rank through taxation, religious ceremonies, or brute force. Ultimately, the shift from reciprocity to redistribution allows for the emergence of a market exchange economy, which leads to a certain social group

accumulating surplus value at the expense of another social group's labour. In Marx's terms, this is "primitive accumulation," which Harvey defines as "the exploitation of a certain section of the population—either through the appropriation of accumulated use values existing as fixed assets, or through the appropriation of labour power—in order to gain a surplus product to invest in enlarged production" (227). The city, under capitalist production, functions as a system for bringing labour power and material goods together to allow for primitive accumulation by the capitalist class at the expense of the working class.

Summarizing Rosa Luxemburg, Harvey explains that the city is the place for a society to use primitive accumulation to create new means of production and to dispose of surplus product in the form of "[m]onumental architecture" and "lavish and conspicuous consumption" (228). For a society to transition from reciprocity to redistribution and create the conditions for market exchange, Harvey explains, first "the population (or at least some portion of it) has to be divorced from part of its output or from access to the means of production," and second, the aggregate productivity in society has to be sufficient to support the non-productive portion of the population" (230). In other words, there must be an alienated labour force in the city to generate a surplus that allows for primitive accumulation. The portion of the population that performs the labour must not only be significant enough in number but must be located in close enough proximity to the means of production to generate the surplus. In this sense, capitalist urbanism maximizes efficiency in the production of surplus value. The constant need for surplus dictates that cities be built to facilitate the most efficient mode of extracting surplus value. As Harvey suggests, "If surplus value is regarded as a particular manifestation of surplus labour under capitalist (market exchange) conditions, then it follows that urbanism in capitalist societies can be analysed in terms of the creation, appropriation and circulation of surplus value" (231). Harvey emphasizes that although urbanism may originate with the transition from reciprocity to

redistribution, it necessarily “arises with the emergence of a market exchange mode of economic integration with its concomitants—social stratification and differential access to the means of production” (239). In other words, Capitalist urbanism is a form of social organization under which economic demands dictate the city’s built form and thus its inhabitants’ access to resources. The city’s architecture, zoning laws, and social geography are all a reflection of the economic foundations of that city and are put in place by the class in control of surplus value.

The city’s economy is built in relation to its surrounding areas as well as to the city’s internal relations and results in two types of city: parasitic or generative. A parasitic city comes out of a social and economic form that is bent on consuming surplus in a way that is economically wasteful. Parasitic cities are characteristic of societies controlled by an urban elite who glut their appetite for conspicuous consumption at the expense of a disenfranchised working class (Harvey, 234). A generative city, on the other hand, “contributes to the economic growth of the region in which it is situated” by reinvesting surplus value into the region’s economy. Harvey notes that in this line of thought, both Adam Smith and Jane Jacobs are correct in thinking of the city as a “centre of technological innovation and the catalyst of general economic growth,” so long as the city reinvests its surplus in the countryside and the urban area equally (233). In Harvey’s words again:

The city functions as a generative centre around which an effective space is created out of which growing quantities of surplus product are extracted. Overall economic growth presupposes both a willingness and an ability for those in the urban centre to put surplus value back into circulation in such a way that the city functions as a “growth pole” for the surrounding economy. (249-50)

In other words, the city is an economic hub through which surplus flows. If a city is a generative city, then the surplus will be reinvested in the surrounding economy and the economy of the

countryside will expand accordingly. In a generative city, the region takes the form of what Harvey, summarizing Lefebvre, calls “effective space.” Harvey explains that in redistributive economies of the past “[e]ffective space was created out of ecological differentiation by arranging for the flow of goods and services from areas of supply to areas of demand—flows which allowed for the accumulation of surpluses in urban areas” (309). Regions form a symbiotic relationship in which urban areas rely on the vitality of the surrounding region and reinvest their surplus to maintain the relationship. But in a market exchange economy, where production is standardized and is no longer tied to location, the urban area no longer needs its surrounding rural areas and the relationship is broken. Capitalist market exchange economies often create parasitic cities that have little or no relation to their surrounding region. In the market exchange economy, the city becomes a complex resource system made by and for urban inhabitants’ needs, and spatial form becomes increasingly important as capital investments become an integral part of the process of living. In the market exchange system, created space supplants effective space as the dominant mode of cultural production in the urban area. In capitalist urbanism, Harvey argues, “Created space is fashioned through the deployment of fixed capital investments. It is industrial capitalism that is creating space for us” (311). Urban form is shaped by the economy and reproduces the conditions in which that particular economic system thrives. Harvey argues that as industrial capitalism became the dominant mode of economic expansion, urbanism became the dominant mode of human habitation on earth because it allowed for the efficient flow of capital. Of course, no city is thoroughly generative or parasitic. Each urban system will exhibit characteristics of both city types and some aspects of a city will be parasitic and dismissive of the region around it, while other aspects will foster healthy growth.

With these city characteristics in mind, one should be able to identify how a city uses its space to encourage a broad spectrum of economic development or to gather surplus value among

a small group of urban elite. Land is a unique commodity because it has a fixed location and Harvey notes six characteristics of land and improvements that contribute to the value of a parcel of land. First, a land parcel has an absolute location that no other parcel of land can occupy. The owner of a parcel of land has a monopoly over that particular commodity. Second, land and improvements are essential to an individual's everyday life. It might be noted that this feature is a particularly sedentary view of land where parcels are clearly segregated for unique purposes, but even in a nomadic lifestyle, occupying space is essential to daily routine. Third, land is exchanged on the market rather infrequently. Fourth, because of its permanent location and its improvements' predictable life expectancy, land provides a repository for fixed capital investments. Fifth, since land requires a large capital investment and market exchange happens at an instant in time but use happens over a long period, financial institutions become involved in the capitalist property market. Finally, land has various uses that are not mutually exclusive. An owner may use a home for shelter, business, or symbolic value, for example. (157-9). These characteristics apply to land regardless of whether it is in the city or in a rural area. Land in the market exchange system is a commodity with complex characteristics that contribute to its use and exchange values.

In the city, the interplay between land and its externalities (e.g., proximity to a source of pollution, to impure resources such as hospitals, or accessibility to transportation) appears to determine a land parcel's use, which then contributes to the land's market value. However, Harvey posits, "Competitive bidding is undoubtedly significant, but it assumes that land use determines value when in practice the reverse determination is more prevalent in most contemporary capitalist cities" (189). That market exchange value determines use is not unique to the contemporary capitalist city though. For example, many Western Canadian cities germinated during the peak of the fur trade. The locations of the forts that founded these cities

were chosen for their access to waterways and land transportation. The land was valued for its use as a node in the fur trade network, but this value was contingent on the economy of the fur trade itself. When the fur trade subsided, forts that were not connected to other value networks were abandoned. The same can be said of coal mining towns. While sub-bituminous coal extracted by pick axes and dynamite was valuable for heating homes, cooking, or powering steam engines, coal-mining towns sprouted up in areas otherwise useless for human habitation. However, when homeowners began to install central heating and gas or electric stoves, or when electric power generation required coal extraction on a massive scale, sub-bituminous coal sourced from small, independent mines no longer had a market value and urban developments near former mines floundered or were abandoned. In these early cities, land entered the market exchange system with a value determined by its proximity to raw materials. The difference between an early city and a contemporary city is that there is a more powerful confluence of forces that determine a land parcel's value in the modern metropolis.

In his description of Manchester's spatial structure in *The Condition of the English working Class in 1844*, Engels provides a picture of a capitalist urban system that has been constructed to concretize a network that gives land parcels value. Engels explains that Manchester is set up with concentric circles emanating from the economic hub of the city. Manchester's heart, he explains, is a commercial neighbourhood that is entirely abandoned at night. This neighbourhood is divided by numerous main roads that are lined by shops and some apartments. However, these streets too are nearly abandoned at night. Wrapping around this economic hub Engels finds the working people's quarters. Just outside the working quarters is an area with streets laid out in an orderly fashion where the middle bourgeoisie live. Finally, the upper bourgeoisie live in suburban villas, "in free, wholesome country air, in fine comfortable homes. . . . And the finest part of this arrangement is this, that the members of the money aristocracy can take the shortest road

through the middle of all the labouring districts without ever seeing that they are in the midst of the grimy misery that lurks to the right and left” (qtd in Harvey, 132) Engels sees that in this arrangement, the working class are forced to live in close proximity to their places of work, and the wealthy, who have the means to afford transportation, can live at a great distance from the urban centre. Even the shops which line the main thoroughfares and buffer the bourgeoisie’s view of the slums are forced to open shop in these locations because of the traffic. Engels concludes, “I have never seen so systematic a shutting out of the working class from the thoroughfares, so tender a concealment of everything which might affront the eye and the nerves of the bourgeoisie” (qtd. in Harvey, 132-4). Although some concentric circles would be shifted inward or outward, or perhaps turned into districts that piece together in a consistent form, this picture of Manchester provides us with an image of the modern capitalist city’s constituent districts.

Reflecting on city districts, Jane Jacobs argues that segregating neighbourhoods based on use is damaging to the city’s vitality. In *The Death and Life of Great American Cities*, she makes the same observation as Engels about Manhattan Island. Jacobs observed that in her time 400,000 people were employed in the financial district on Manhattan Island, but the area could hardly support any sort of mixed use. Hardware stores, grocery stores, and movie theatres had all moved out of the Financial District leaving the streets empty after business hours. Jacobs explains:

To see what is wrong, it is only necessary to drop in at any ordinary shop and observe the contrast between the mob scene at lunch and the dullness at other times. It is only necessary to observe the deathlike stillness that settles on the district after five-thirty and all day on Saturday and Sunday. (155)

Jacobs notes that there are occasional stores in the Financial District, but their peak business hours are between noon and 1 p.m. on weekdays. Outside of lunch hour, these businesses are hardly scraping by. In another recent example Richard Harris' book, *Creeping Conformity* explains how Canada built its suburban cities. Although suburbs are today seen as bedroom communities for the affluent, in the late nineteenth century it was common for industrial suburbs to pop up on the urban fringe. Harris notes that industrial suburbs were especially popular near Toronto "in West Toronto Junction (1880s-), New Toronto (1890s-), and York Township (1900s-) and to a lesser extent Leaside (1910s-)" (23). Although their density might be different from the workers' residences in Manchester, they serve the same purpose of keeping a workforce close to the means of production, or at least close to transportation. Industrial suburbs are distinct from suburbs like Moore Park or Rosedale, which were akin to Manchester's suburban villas with "wholesome country air" (qtd. in Harvey, 133), but as Toronto expanded and suburbs were annexed, residents' views of their once pastoral neighbourhoods changed. In 1925, an elderly resident of Rosedale, which was annexed in 1905 (Careless, 125), told the *Star Weekly*:

Though Rosedale is still a place of wild beauty and I have heard of the wild rabbits coming up out of the ravines to nest in the gardens of Glenhurst, it is not the place of wild creatures and open stretches of country that it used to be. We used to have all the wild birds and their songs and the boys used to trap muskrats in the weeds along the Don. Occasionally too they would catch a mink. The wild flowers that used to be there in such profusion are gone too. It has seemed such a pity that they should have been dug up and carried away to gardens where they could hardly have been expected to live. (qtd. in Scrivener, 20)

The image of Manchester that Engels provides can be applied to these city districts. Where Engels sees concentric circles emanating from the economic hub, we see lower Manhattan

cordoned off by its dominant use and Toronto suburbs in the late nineteenth and early twentieth century segregating class based on their place of work.

On one hand, the poor will either live close to their place of work or endure long commutes on foot and public transit, and on the other hand, the wealthy have the means to live where they feel comfortable while still being able to afford long but not tiresome commutes. In early Toronto this pattern had a direct effect on the location of industrial suburbs compared to upper-class suburbs. Harris notes that in the early twentieth century “senior executives might drive or be chauffeured to work, while accountants and teachers took the streetcar. Labourers, and even mechanics, were just as likely to walk as to take transit, even if doing so added a two-hour round trip to their working day” (159). When a developer could negotiate a streetcar line to a new suburb, the development was shaped by the location of the line, which is the case in many western Canadian cities. However, in Toronto in 1891 the Toronto Railway Company (TRC) was given a thirty-year monopoly on streetcar service in the city. Harris explains that by 1900, the city had expanded beyond its 1891 limits but the TRC refused to expand its track. Although the city built some feeder lines in the 1910s, Harris says, many workers who lived in unserved suburb “had to walk a kilometre or two to reach the end of the line (66). Harris continues, “Indirectly, these suburbs were shaped by the streetcar. Since they were not generally attractive to the middle classes, they were settled largely by workers, many of whom were recent immigrants from Britain willing to put up with inconveniences in order to acquire a house” (66). In stark contrast to Toronto’s industrial suburbs, Moore Park was constructed along ravine lands and had poor access to the city. Moore Park is cut off from the city by the Park Drive Ravine, which juts out from the Don Valley along the to the southwest, and the Mount Pleasant cemetery to the north. In 1907, six years before its annexation by Toronto, one investor wrote:

The air of the country is here, kept constantly pure by the oxygen from the forest, so invigorating, so beneficial to the City man, who, unless he is aware of it, would never think that busy King Street was but three miles away, and that the nearby Young Street cars could whisk him downtown in a few minutes. . . Homes in this locality shall be much sought after by the elite of Toronto. (qtd. in Baker, 9)

In spite of this author's insistence that Moore Park had easy access to the city centre, the Mount Pleasant Road land bridge did not cross Rosedale Ravine to the South until 1949 (Scrivener, 17), leaving St. Claire Avenue as the only access to the city. People living in Moore Park had to be wealthy enough to afford the time and effort to get around or through the ravines in their commute into the city. Workers' suburbs were shaped by their access to transportation and to places of work and middle to upper class suburbs were developed for their peaceful, country-like surroundings.

In the case of Toronto's suburbs, districts were shaped by the city's main industry, by access to transportation, and by the residents' access to capital. However, at times, cities are intentionally shaped to concretize class-based and use-based districts in their built form. Langdon Winner notes that Robert Moses, New York's master builder from the 1920s to 1970s, restricted access to his "widely acclaimed public park," Jones Beach, and limited the use of parkways to "'upper' and 'comfortable middle' classes" by ensuring that the overpasses on Long Island had less than twelve feet clearance, the height of a city bus (22-3). Access was restricted so that only people who could afford cars were able to use Moses's city. Moses's totalitarian rule over New York's infrastructure set class segregation and neighbourhood uses in stone. In *City of Quartz*, Mike Davis makes similar observations about Los Angeles's planning and design where he argues that Bunker Hill, Los Angeles's downtown, has been designed "to raze all association with [its] past and to prevent any articulation with the non-Anglo urbanity of its future" (229). Davis

continues, “To emphasize the ‘security’ of the new Downtown, virtually all the traditional pedestrian links to the old center, including the famous Angels’ Flight funicular railroad, were removed” (230). Moses’s New York and Davis’s analysis of Los Angeles are just two examples of the ways that cities are built to limit social mobility and encourage districts with a single use by a single class.

Just as no city is entirely generative or parasitic, no city is built in its entirety with malicious, class segregation in mind. Cities are convergences of needs and desires both ethical and political. Besides understanding how the city works, we need to understand how we have continued to let the city structure our everyday life. Marx sees the city as an economic hub that, in the hands of socialists, could redistribute surplus for the betterment of humanity. In the *Manifesto of the Communist Party* Marx and Engels wrote, “The bourgeoisie has subjected the country to the rule of the towns. It has created enormous cities, has greatly increased the urban population as compared with the rural, and has thus rescued a considerably part of the population from the idiocy of rural life” (qtd. in Harvey, 261). As a centre for generating and circulating surplus, the city is superior to the countryside, in Marx and Engel’s view. Its agglomeration of resources allows the city to churn out surplus value at a rate that is impossible in the countryside and thus allow for more rapid progress towards a better human condition. As we see in Harvey, the city is essential in changing a reciprocity economy to a redistributive economy and eventually for the development of a market exchange economy. For Harvey, the question to ask is not whether the city is a good technology, but who is controlling the city. Neil Smith argues, “The specific class structure of capitalism . . . makes capital accumulation the necessary condition for the reproduction of material life. For the first time, ‘accumulation for accumulation’s sake’ is a socially imposed necessity.” (70). The city in the hands of a capitalist society is a tool for “accumulation for accumulation’s sake.” It is the concretization of class

segregation where social mobility is restrict through zoning laws, taxation, access to transportation, or any number of the city's multitude resources, systems, or structures.

The capitalist city's drive for constant production bifurcates the city form the rural areas surrounding it, and dissociates it from the wilderness areas. The tools of capitalist production usurp wild landscapes and appropriate them for resource extraction on one hand and tourist attractions on the other. However, N. Smith, quoting Marx, points out that capitalism is not unique in its production of nature:

Animals and plants, which we are accustomed to consider as products of nature, are in their present form, not only products of, say last year's labour, but the result of a gradual transformation, continued through may generations, under man's superintendence, and by means of his labour. . . . In the great majority of cases, instruments of labour show even to the most superficial observer, traces of the labour of past ages. (77)

In other words, nature is always produced nature. Capitalist urbanism concentrates the power of production in the hands of an urban elite and manages the social production of nature. The socialist revolution that Neil Smith would like to see is a revolution of the production of nature, a revolution that he believes is inevitable. Quoting Marx, Smith argues:

[C]apitalism creates "barriers in its own nature," the final one of which is the working class, which it differentiates from the rest of humanity as the wage slaves of capital. This "barrier in its own nature" will, "at a certain stage of its development, allow [capitalism] to be recognized as being itself the greatest barrier to [its own development], and hence will drive toward its own suspension. (85)

The capitalist revolution, with its ever-increasing demand for surplus and scarcity, will ultimately result in a new revolution, asserts N. Smith, and this inevitable revolt will provide the opportunity to gain a truly human control over the production of nature (91). To N. Smith, the city, in its

gathering together of human labour power and setting upon humankind to labour, is the epicentre for an impending socialist revolution.

Heidegger, on the other hand, would disagree, perhaps vehemently. Less trusting of the urban revolution, Heidegger saw the city as a symbol of technology's power to turn everyday life into a vapid, one-dimensional existence. In fact, Heidegger had such distaste for the modern city that would get almost physically ill when he approached an urban area (210). In spite of the apparent contradictions between Heidegger's and Marx's views of the city, their thoughts can be homogenized into an analytical tool for the contemporary city. In *Social Justice and the City* Harvey argues that at its very foundation, the city's spatial politics usurps workers' potential for economic advancement by hindering their spatial freedom and thus their economic freedom. However, in his essay "Right to the City," Harvey argues that the city is an economic system to which citizens have a right. The right to the city is "a right to change ourselves by changing the city. It is, moreover, a common rather than an individual right since this transformation inevitably depends upon the exercise of a collective power to reshape the process of urbanization" (315). Although Harvey would generally agree with N. Smith, he does not conclude that socialism will save the city, and thus save the natural world. Harvey recognizes the city for what it is, a complex tool that extends human capabilities, and suggests that this tool needs to be critiqued, improved upon, and redesigned but a multitude of voices, not just by the urban elite. Revising Marx's claim that labour has created humankind, Robert Park says the city is:

man's most successful attempt to remake the world he lives in more after his heart's desire. But, if the city is the world which man created, it is the world in which he is henceforth condemned to live. Thus, indirectly, and without any clear sense of the nature of his task, in making the city man has remade himself. (qtd. in Harvey, 315)

Or, in Zimmerman's terms, "Having become the subject for whom the entire world is its object, technological humanity becomes an element in the gigantic feedback circuit in which information about the object alters humanity" (200). The city functions as the resource system, a cybernetic feedback circuit, through which humankind engages the world as its object and becomes the subject of technological Enframing. The city shows us how "technological humanity has become the most important raw material in a process which no longer makes ontological distinctions between different kinds of entities" (Zimmermann 215-6). In this light, we should not only be asking who is building the city and to what end, but also how the city is built and what kind of world does it open up, what kind of humanity does it remake. If the city is a technology and the essence of technology is *aletheuian*, a revealing that opens a world, then how does the city allow entities to presence themselves? What kind of world does the art of city building create?

These questions are among the many questions that city planners, urban designers, and architects attempt to answer. No city is purely motivated by the capitalist system or a socialist system; no city is purely generative or parasitic. If we view the city as a technology, then we can see that regardless of the political or economic powers in control of the city, it will always act to Enframe human kind. Although Marx, Harvey, and Smith, would like to provide concrete answers to solving urban problems, Heidegger would suggest that these problems are inherent in the essence of technology. Since the technological is what creates human existence, the threat of Enframing is built into our every interaction with the world. The task at hand then is not to find an all-encompassing socio-economic solution, but to attend to the world we create in our cities. To foster attentive city design we need to view it as a "temporal art" which we can separate into its constituent parts, as Kevin Lynch argues (1). As a whole, this art creates an image of the city, an image with diverse meanings and associations. In his book *Image of the City*, Lynch sets out to catalogue the parts that create the image of a city in order to find ways to make better cities; cities

which can be imbued with meaning and vitality by their citizens. In Heidegger's terms, the most important way that we can attend to the world and value entities in their singularity is through art. City building, then, is an art, a *technē*, for revealing a world. *Technē* in Heidegger, explains Zimmermann, is art "defined as the capacity for disclosing something, for bringing it forth, for letting it be seen" (229). Zimmerman continues, "The great work of art, especially poetry, is the *technē* which enables people to be at home with things, to understand in advance what things are, so that within this articulated and intelligible matrix of entities people can produce things, bring them forth, let them be" (230). If we can suss the elements of city design, we can improve on the art of city building and create great city spaces through which people can see the world as a network of entities rather than an object of labour. It might be argued that considering Heidegger's distaste for the city, this is a stretch. However, Zimmerman also notes that Heidegger knew we needed to be attentive to our understanding of space:

Heidegger insisted . . . that in addition to neutral scientific space which can be seized for some purpose, there are at least two other kind of space: first, the space of everyday activity; second, the space of the work of art. Indeed, he contended that neutral, profane space is itself derivative from the "place" . . . opened up by the work of art. . . . Instead of "occupying" a pre-given space, then, the work of art "embodies" . . . a place and opens up the arena in which entities can encounter each other. (236)

Lynch's work is essential to a critique of city building. Through an analysis of city form and the diverse meaning associated with this form, we can begin to understand the space a city embodies. Attending to city building as an art that opens a world allows us to see the city as more than a tool for gathering together resources and setting upon human kind to produce surplus. The city can become a world-building art that appropriately reveals and conceals what would otherwise be placed on standing reserve and teaches its inhabitants to let be the natural world.

6. The Department of Civic Images

City form, although it is set in concrete and steel, is plastic. Buildings age and are replaced, business owners retire and new shops take their spot, and residents change locations. Although urban form changes relatively slowly compared to modern technology's hyper-speed advancements, the city changes nonetheless and its purposes, uses and meanings change along with it. Lynch suggests, "We have the opportunity of forming our new city world into an imageable landscape: visible, coherent, and clear" (91). An imageable landscape is one that easily allows citizens to remember and interpret the city's meaning; it is not only "visibility" but "legibility" as well (9). City form is changed through architecture, zoning laws, transport planning, and any other aspect of urban design. Lynch quotes Suzan Langer's definition of architecture to suggest that the scope of city building is much greater than simply arranging streets and shopping malls. According to Langer, architecture is "the total environment made visible" (13). In light of Heidegger's thoughts on art, proper city building is perhaps, "the total environment let be." In constructing cities, we must at once build and let be the world we inhabit. Lynch argues, "Above all, if the environment is visibly organized and sharply identified, then the citizen can inform it with his own meanings and connections. Then it will become a true *place*, remarkable and unmistakable" (92). Urban planners, politicians, and those in control of city building must build a place that allows citizens to inform it with their own meaning. If cities are designed in a way that dictates meaning, we will end up with nothing better than Moses's car-centred New York.

However, in light of our discussion of nature, technology, and the city, Lynch appears dangerously anthropocentric:

As an artificial world, the city should be so in the best sense: made by art, shaped for human purposes. It is our ancient habit to adjust to our environment, to discriminate and organize perceptually whatever is present to our senses. Survival and dominance based themselves on this sensuous adaptability, yet now we may go on to a new phase of this interaction. On home grounds, we may begin to adapt the environment itself to the perceptual pattern and symbolic process of the human being. (95)

If we blindly continue building cities for human ends alone, we threaten to envelop our very being into the objectlessness of standing reserve. The symbol system we create may be nothing more than an unthinking Enframing. However, a city's imageability works both ways. Lynch's work can be used, then, to give us the building blocks of a new city. Better cities must allow entities—human and nonhuman—to exist in their singularity. To appropriate Lynch's and Zimmerman's wording: as an artificial world, the city should be art in the best sense: a "*techné* which enables people to be at home with things" (Zimmerman, 230). For a city to let its human and nonhuman inhabitants be, it must open a world in which these people, animals, plants and things can be at home with each other. Of course, to build a world in which we let entities be does not mean we build it and walk away. It is our response-ability to build a world that recognizes and responds to the entities that share the world with us. To let be is not some esoteric ethical inaction, but it is a call to action, responsible action. As the city becomes more complex and intensifies its demand for raw materials and human labour, we need new tools for understanding the it, listening to its inhabitants, and assessing its success. We need new tools for resisting the forces of capital and for speaking out against class segregation and inhumane Enframing. To counter the city's voracious appetite for progress, regardless of the political economic system that governs it, the city's citizens need a voice beyond their vote, or their choice of where to spend money.

The Department of Civic Images was built as an attempt to create a tool that gives voice to groups of people who may otherwise be of marginal influence to the design process. *Civic Images* is an online, interactive visualization tool for creating images and stories about an urban area. It is designed to put the power of urban image creation and dissemination in the hands of citizens who care about their city. *Civic Images*, which was built with Lynch's *Image of the City* and Allan B. Jacob's *Great Streets* in mind, has two types of image tools that allow users to create different kinds of images. *Civic Images* was designed for citizen-led urbanism, however the limitations and capabilities of the tools can be seen as a metaphor for the tensions in corporate versus citizen urbanisms. On one hand, the collage tool sets up a very structured environment for the user and creates professional looking images, but it takes great effort and creativity to produce a unique image with this tool. On the other hand, the drawing tool essentially gives the user a digital pencil with no specific rules or guidelines and it takes great effort and control to produce a professional looking image with this tool. In city building, if we adopt strict design principles for our streets and neighbourhoods, we will end up with a city that represses any form of creative use outside the strictures of the built environment. If we choose, however, to adopt loose regulations and design, we may end up with a city that is impossible to navigate, or even dangerous to inhabit. The dictates of urban design must work within this tension, at once allowing for freedom while providing foundations a good city.

The collage tool presents users with a background image and a bank of elements that they can add to the image and resized to create the correct perspective. In its initial iteration, this tool was meant to be *Civic Images's* main functionality. The collage tool was built to allow users to create two-dimensional images with unique design elements and a sense of perspective. Its elements were meant to mimic the three-dimensional mock-ups that developers present to residents during a public consultation. The "Columbia Lake Village" tool is an example of an

early iteration of this tool. The collage tool was an attempt to match the images in a developer's mock-ups with professional-looking images created by citizens who do not normally have access to 3D modelling software. However, it soon became apparent that if the underlying images in the collage tool—the background and elements that users can add—were not designed to the same standard as a developer's mock-up, the resulting image would appear hackneyed and irrelevant. In some cases, the collage tool limits user interaction to such an extent that it only allows for variations on the same image. Even if every element in an image—the buildings, streets, sidewalks, trees, benches, etc.—were available to be arranged and modified on a blank canvas, the resulting images would end up with the same underlying form. For example, the “Colombia Lake Village Tool” and the “King and Wellington Tool” only allow users to create a miniature variation of A. B. Jacobs’ “great streets”—something eerily familiar to a Parisian boulevard by Haussmann. Attempting to create anything other than a boulevard will result in either frustration, or a street replaced entirely by a forest—an improvement, perhaps, on Haussmann's totalitarian urbanism. These iterations of the collage tool suggest that rigid, formulaic design principles have difficulty breaking away from the problems in their underlying structure. Although, A. B. Jacobs' great streets, Haussmann's boulevards, and the incessant sameness of so many New Urbanist neighbourhoods are meant to provide a design solution to a social or environmental problem, they do not have the tenacity to encompass solutions as well as internal contradictions. A rigid solution to one or two problems is counter-revolutionary as it rarely allows for engaging the problems dialectically.

Civic Images's drawing tool was born out of the frustration brought on by the collage tool's limitations. The drawing tool can be set up with an image as a background (e.g., the “Iron Horse Drawing Tool” and the “Downtown Kitchener Map”) or with a blank background (e.g., the “Map Tool”). The drawing tool breaks free from the constraints of the collage tool but produces

images that are not as polished since they are hand drawn. Future iterations of this tool could improve on the drawing tool by producing cleaner lines, but ultimately the image's quality is in the hands of the user. The most significant drawback with the drawing tool is that many users may not be comfortable with showing other people their hand-drawn work, especially if it is compared to a technical drawing by a professional. Some of this can be remedied by creating "stamps" for common design elements, like the trees or map elements in these tools. Also, in the case of the "Iron Horse Drawing Tool," if a user paints over the streets they can click the "Redraw Streets" button to give their grass or paths a clean edge against the roadways. Nonetheless, the clarity of the images produced is limited to the user's ability to control their mouse while drawing.

The drawing tool provides an opportunity that the collage tool cannot. In Lynch's study, he asked participants to draw a quick sketch of the area they lived in. This drawing was used by Lynch to determine the anchoring elements in the participants' city image (155). The drawing tool was designed with this part of Lynch's method in mind and was intended to provide a digital environment that can be used to gather information about a city. If, for example, a city would like to know how its residents see their urban environment and how they would like to see it changed, the drawing tool could be used to map citizens' city image. With the "Downtown Kitchener Map," for example, users can draw on top of the map to indicate businesses, paths, or amenities they would like to see in their neighbourhood. On the other hand, the "Blank Map Tool" asks users to draw a map of a trip they make every day. Like Lynch's study, these images could be used to determine the city image as seen by the citizens. These uses of the drawing tool are, however, limited. They do little to enable citizens to engage with their city planning. Taken together, the collage and drawing tools provide some interesting possibilities, but without an interested audience, their usefulness remains unseen.

The recent construction at 144 Park Street in Waterloo and the sister project at 155 Park Street provided an opportunity to customize the tools for a concerned, if small, audience. The developer has proposed that the two towers share a three-story pedestal that will take up most of the block between Caroline and Park Streets. This proposal suggests that the north-most end of the Iron Horse trail be moved so that rather than cutting diagonally across the block, as the original train tracks did, it runs perpendicular to the streets between the three-story Sun Life parkade and the yet-to-be constructed pedestal (fig. 5). The Tri-Cities Transportation Action Group (TriTAG) has spoken out against this proposal as it is deleterious to the city's heritage in the Iron Horse Trail as well as to the trail's many users. The proposed amendment pushes the trail aside in favour of the developer's wishes for a large pedestal with a private, rooftop park above the public trail's old location. On May 3, 2012, Mike Durker posted to the TriTAG blog about the new development noting that the action group had very little time to voice their opinion to the city and asked users to comment on the post with recommendations for how the developer and the city could better incorporate the trail into the new design ("Designing to Improve the Iron Horse Trail").

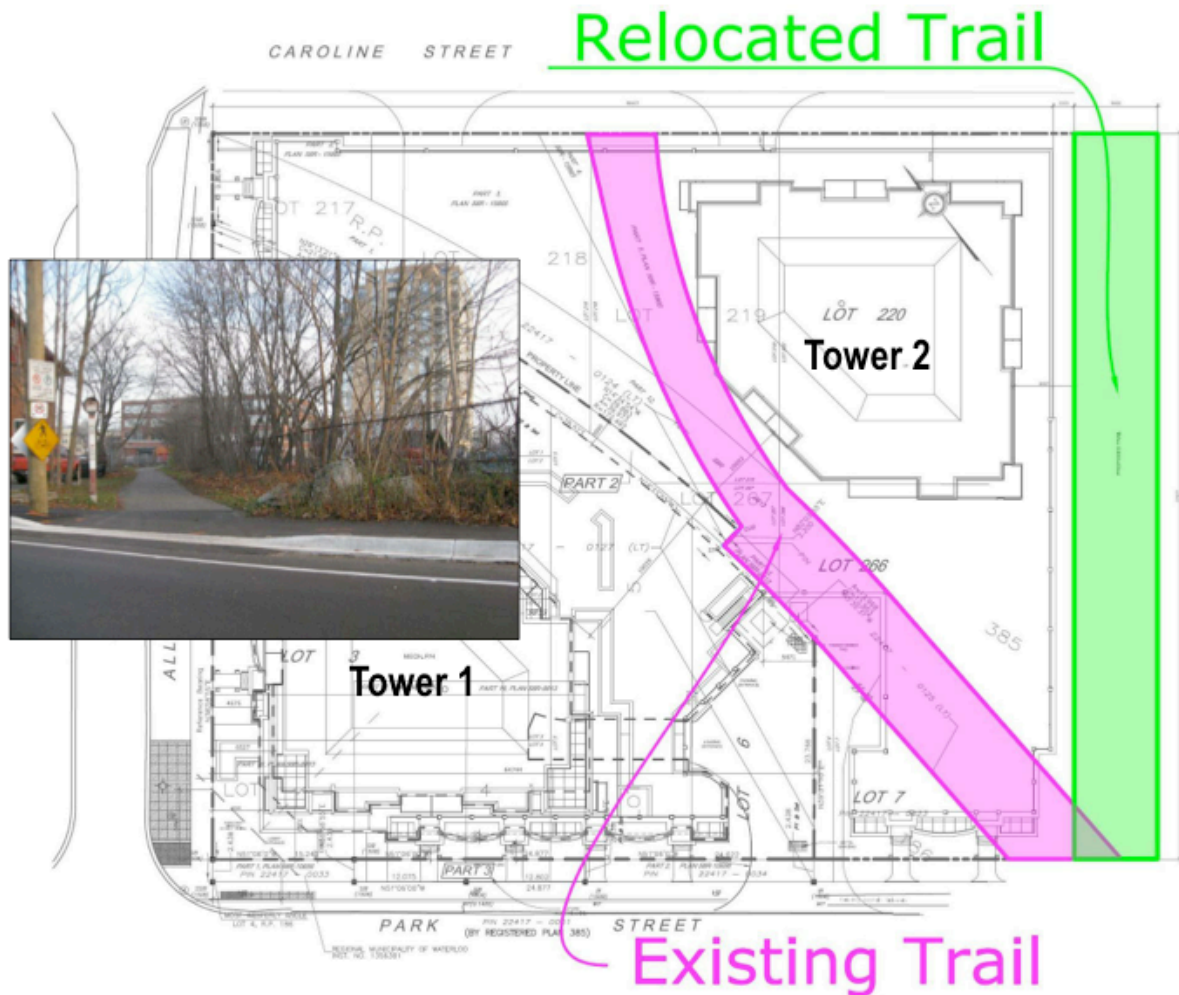
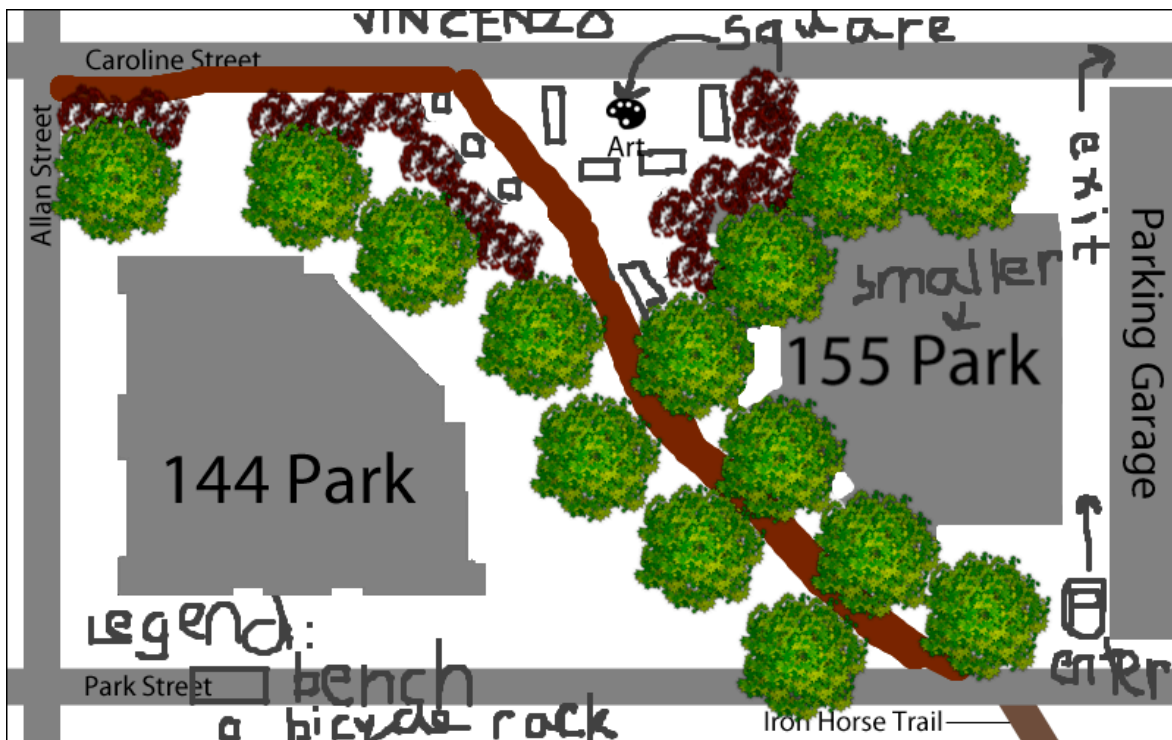


Fig. 5. MHBC Planning, Urban Design, and Landscape Architecture; “One Fifty Five Uptown Waterloo”; City of Waterloo; 16 June 2012; Web; 26 April 2012.

Although the timing was not ideal for TriTAG’s cause, *The Department of Civic Images* was customized for the Iron Horse Trail in mid June. The trail provided a new challenge for *Civic Images* as it was difficult to capture the problem and its potential solutions from a street-level perspective, so the collage tool was initially ruled out. Using a simplified map and basic elements as stamps, the “Iron Horse Drawing Tool” allows users to visualize a number of alternatives to the developer’s plan. However, as discussed above, the drawing tool is not designed to produce clean, professional-looking images. To counter this limitation, the collage tool was overhauled to give users some flexibility in where elements are placed, while producing a clean image. The

same simplified map was used in a background for the collage tool and the path, bush, and tree elements were converted to objects that could be moved around and resized on the canvas. Both the “Iron Horse Collage Tool” and the “Iron Horse Drawing Tool” were published to the site for users to create images of the Iron Horse Trail at Park Street. Results from both tools can be seen in the “Civic Image Gallery.” The flexibility of the drawing tool can best be seen in “Iron Garden Square” submitted by C.L. (fig. 6) and “Iron Horse Restored to Original Alignment” submitted by Mike Boos. The clean but limited nature of the collage tool is best exhibited in



Tenille Bonoguore’s post “Shared Park and Market Space” (fig. 7).

Fig. 6. C.L. “Iron Garden Square”; *The Department of Civic Images*; 24 June 2012; Web; 2 Aug. 2012.

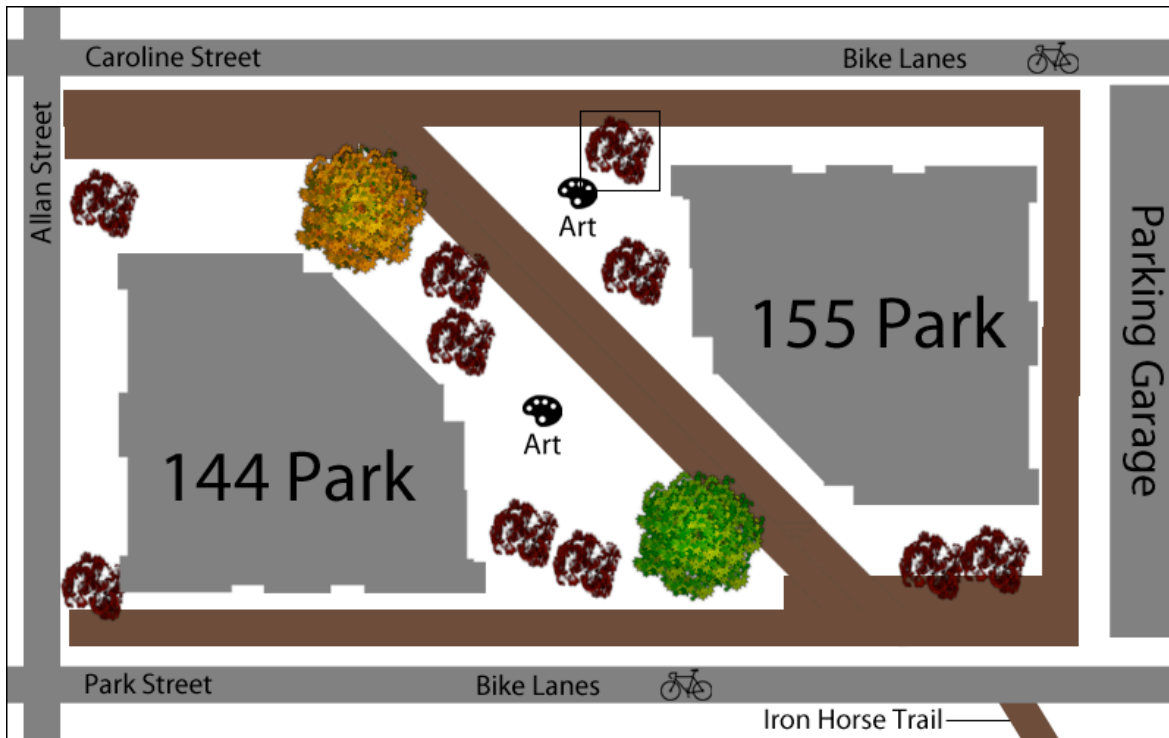


Fig. 7. Tenille Bonoguore; “Shared Park and Market Space”; *The Department of Civic Images*; 21 June 2012; Web; 2 Aug. 2012.

The Iron Horse tools and the images created with these tools reveal that, in the eyes of advocates for the trail, there is one solution to the problem: restore the trail to its original alignment. In his May 3, 2012, post Durker provides a map indicating the rail line’s original alignment, which is very close to the existing trail, and in a later post on June 18, 2012, Durker notes:

From the comments to our previous post, a couple of practical suggestions for the site included developing instead a triangular shaped building that fronts the trail with balconies or having the existing corridor go through the building complex. It is possible to develop the site in a way that works around and with the Iron Horse Trail, instead of moving it out of sight. (“Preserving the Integrity of the Iron Horse Trail,” web)

TriTAG’s advocacy for the trail’s original alignment represents a valiant effort to save the trail, but the size of this site and the fact that 144 Park is already under construction, limits the

potential solutions to this problem. Customizing *Civic Images*' tools for TriTAG provided an example of a space that has a limited number of designs regardless of how flexible the image tools are. The drawing tool's flexibility did not allow for more diverse designs than the collage tool in this case. The discussion around the Park Street developments is limited by the existing infrastructure and the small amount of land in question. Perhaps an amicable solution could be found by looking at the city's path system as a whole rather than simply one piece of the Iron Horse Trail. *Civic Images*' tools could be used to facilitate a discussion of this nature, but it is not TriTAG's main concern with the 155 Park project.

Ultimately, the limitations of both tools could be remedied by combining the two programs or by modifying the collage tool to allow for vector image manipulation. Currently, the underlying code for the two programs will not work together as the collage tool is built with objects that are layered over a background image (both of which are reprinted every frame) and the drawing tool is built with one image layer that the web browser redraws as the user interacts with the canvas. In spite of this limitation, the language that *Civic Images* is written in does not limit further improvement. If the collage tool were modified to include vector image manipulation, users could generate lines and Bézier curves instead of pre-determined shapes. The image quality would also be improved, as vector images do not pixelate when they are scaled to a larger size. Finally, as mentioned above, the image tools would produce images that are more impressive if the underlying artwork had a coherent design aesthetic.

After users have generated an image, the website asks them to submit the image to the "Civic Image Gallery" along with comments about the problems they attempted to solve in their design. This section of *Civic Images* could be further developed into a tool for helping citizens craft a narrative about their city. Lynch suggests that if a city is visibly distinct, if it is imageable, citizens will inform it with their own meaning (92). When prompting users to create a narrative

about the urban space they have created with the image tools, *Civic Images* can guide them in informing the city with their own meaning. Barbar Eckstein argues that narrative is an important part of the planning process. Quoting Hayden White, she notes that narrative is a “form of human comprehension that is productive of meaning by its imposition of a certain formal coherence on a virtual chaos of events” (23). Eckstein argues that story not only brings order to chaos, but can also bring chaos to order. City planners, she argues, must learn to interpret stories to pick out their truths (30). Robert A. Beauregard furthers Eckstein’s thesis by arguing that spaces need to be create where stories can be told that generate a public discourse and foster transparency. Eckstein’s and Beauregard’s position here is very different from that of New Urbanists. Eckstein and Beauregard agree that transparent discourses need to come from the city’s citizens rather than being dictated by a social elite. *Civic Images* in this light is a tool that enables citizens to intervene in the design process and inform both the image of the city and the meaning of city spaces. In their analysis of visual design Gunther Kress and Theo van Leeuwen propose, “pictorial structures do not simply reproduce the structures of ‘reality’. On the contrary, they *produce* images of reality which are bound up with the interests of the social institutions within which the pictures are produced circulated and read” (45). In this sense, the images and stories that *Civic Images* generates could be used as a disruptive tool that turns the seeming order of status quo design into a chaos of public engagement; a chaos that might result in a more democratic design process and more inclusive designs.

Civic Images can be seen as an intervention that creates an online space for a discourse about public spaces. Beauregard suggests:

While public spaces might lend themselves to political speeches, harangues, and avant-garde ravings, the basic democratic work is only done when people interact with each

other in ways that allow specific experiences to be set against other specific experiences and to be considered, validated, and challenged. (68)

Beauregard is suggesting that a truly democratic city is one that fosters discursive democracy. He suggests that discursive democracy first requires “a wide array of public spaces” in which people can tell stories with a sense of purpose (67-8). As other citizens engage in storytelling, he argues, the stories’ premises, values, and facts can be “probed amidst and interplay of opinion and evidence” (69). Discursive democracy arises from interplay between built spaces and the citizens that inhabit them. He argues, “In the public spaces of the city, stories create publics and by creating publics build democracy” (70). The city was born out of economic necessity. Urban areas grew in tandem the economy and as economies changed from reciprocity to redistribution and eventually to market exchange, urban areas reflected that change in their organization, function, and size. If we are to change our patterns of consumption and production in order to prevent the decay of our ozone, we need to create democracy-building public, spaces where citizens can tell their stories and impart their knowledge of their environment. Through dialogical citizen urbanism we can build resilient urban systems that incorporate and respond to the ethical, social, and environmental tensions that arise from humanity’s world building actions.

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