

Time	First	Last Name	Title	Supervisor	Committee Member or Co-supervisor	Internal External	External	External	Location
9:30	Wade	Brown	Digital Craft - In Search of a Method of Personal Expression Within the Digital	Anne Bordeleau	David Correa	Adrian Blackwell	Behnaz Assadi	Michael Piper	Loft
9:30	Emily	Guo	No Man's Land	Lola Sheppard	Jane Hutton	Maya Przybylski	Annette Fierro	Matthew Brown	Atrium Centre Space
11:00	Kirsten	Sheppard Neuhofer	Envisioning sufficient communities through integrated energy systems; increased food security in Newfoundland communities	Jane Hutton	Val Rynnimeri	Rick Andrighetti	Annette Fierro	Matthew Brown	Loft Gallery
11:00	Joel	Piecowye	Connecting Suburbia: Using Information and Communication Technologies to Readjust the Suburban House	Maya Przybylski	Lola Sheppard	Ali Fard	Behnaz Assadi	Michael Piper	Loft
12:30	Lunch								
1:30	Louis-Pierre	Belec	Reoccupying Ruins in the Azores: Shifting spaces, materials, and culture on the islands of Terceira and Graciosa	Lola Sheppard	Anne Bordeleau	Rick Haldenby	Behnaz Assadi	Matthew Brown	Loft Gallery
1:30	Negar	Behzad Jazi	Expanding space: Redefining Persian cultural hubs in Toronto through interactive architecture	Maya Przybylski	David Correa	Ali Fard	Annette Fierro	Michael Piper	Loft
3:00	Sarah	Donaldson	Sun Bathing in the Salt Pond: Re-making the Image of Tropical Tourism in Antigua and Barbuda	Jane Hutton	Maya Przybylski	Rick Andrighetti	Annette Fierro	Matthew Brown	Second Floor Lounge Area
3:00	Golnaz	Djamshidi	Alternate Public Spaces for Tehran: Reimagining the City's Leftover Fragments	Lola Sheppard	Ali Fard	Adrian Blackwell	Behnaz Assadi	Michael Piper	Loft
4:30	David	Holborn	Approaching Vertical: A Guide Through Land-Use in Ontario's Niagara Escarpment	Rick Andrighetti	Jane Hutton	Adrian Blackwell	Behnaz Assadi	Matthew Brown	Atrium on E-Class Wall
4:30	Anne	Sewell	Mud and Cell Phones: Non-formal Learning Networks in Rural Kenya	Lola Sheppard	Ali Fard	Maya Przybylski	Annette Fierro	Michael Piper	First Floor Student Lounge

Digital Craft | In Search of a Method of Personal Expression Within the Digital

Abstract

Our relationship with the digital has fundamentally changed within the past decade. A mesh of outside interests have been efficiently folding themselves into our lives. These are manifest either as a legion of hosted “free” web services touting the promise of a new-found collective intimacy, or a set of tightly coupled IOT(Internet of Things) applications that are slowly being pulled away from our fully capable hardware—all causing us to rely heavily on a virtual infrastructure that demands to host our work and place us at arm’s length of tools that we no longer own or control.

This new bargain includes a view into our work and habits so that we can be better understood, tokenized, categorized, mapped, and finally monetized. While many today may be OK with this relationship, I’ll be frank, it unsettles me.

This thesis is a response. It explores a more intimate connection with technology within the backdrop of digital design and its many processes. It is also a search for my voice, my methods of digital expression, and asks such questions as: With my existing perception of the digital, how can my experience be applied to formal design? Are there similarities to my experiences within the Data Processing realm? Differences? What can I bring to this effort?

In *The Craftsman*, Richard Sennett writes: “Making is Thinking.” I propose to investigate the mechanisms of digital *Making*, and hence digital *Thinking* through three investigations, inspired by the works of Neri Oxman, Achim Menges, deskriptiv, Michael Hansmeyer, as well as the methods of D’Arcy Thompson, Shinichi Maruyama, Pina Bausch, and Frei Otto.

Ultimately, the intention is to find my voice in the larger architectural dialog with a point of view, methodology, and toolset that is relevant in today’s architectural practice.

ABSTRACT

Military landscapes are often seen as ecologically desolate territories with harsh and barren conditions. Yet, there is growing evidence that these volatile lands are finding a second life as animal refuges, born out of necessity under the growing effects of the Anthropocene and sixth wave of mass extinction. It is the very nature of the military landscape - weaponized and protected - that deters regular human activity and allows this new, damaged Nature to appear. These new cyborg landscapes, where technology meets ecology, tell a story of a post-human future where new ecological relationships are formed between the military pollutants and the animals that inhabit the land. *NO MAN'S LAND* presents an analysis at 2 scales: the global and the local. At the global scale, an atlas provides a catalogue of sites and site conditions to offer evidence of this phenomenon. Focus then turns to the United States in recognition of their \$611 billion military-industrial complex and their landscapes that places them at the forefront of the local investigation. At this scale, 2 test sites are presented to further illustrate these new complex relationships more intimately: *Johnston Atoll*, unincorporated territory (closed/abandoned); and the *Rocky Mountain Arsenal National Wildlife Refuge*, Denver (closed/reused). Investigative mapping and speculation puts into sharper focus the tension between human, animal, and technology. The thesis argues to reintroduce these territories back into the American public as the "involuntary park" - a kind of post-humanist National Park™. Through a set of design guidelines, an overall approach to re-engage these landscapes is recommended that focuses on public engagement under the guise of "voluntourism". By leveraging human actions, a series of interventions can be implemented that further facilitate animal occupation. The thesis aims to interrogate the conflicting nature of these landscapes and question their future in an increasingly anthropocentric world.

Envisioning Sufficient Communities through Integrated Energy Systems: Increased Food Security in Newfoundland and Decreased Dependencies through Import-Replacement

Kirsten Sheppard-Neuhofer

While perceived as equal to other provinces, Newfoundland is Canada's version of a third world province with the illusion of equality. To use Jane Jacob's term, Newfoundland has a *backwards economy*, an economy which does not produce or diversify adequately and instead depends on a vast quantity of imports.¹ The province itself acts as an outport, and needs to detach from the exploitation by larger global metropolitan areas. This dependency on external consumers has been a pattern that has led to ongoing economic dependencies, seen in a number of exploitations such as ceding coastlines and fishing rights to foreign countries, the removal of a customs barrier that protected local farms in 1949, the overfishing of the offshore fishery by European trawlers resulting in a moratorium that disrupted the islands livelihood, and the dependence on food imports. Communities struggle to maintain a quality of life against external economic pressures and exploitation of community resources. As a result, the Island is plagued by youth out-migration and depopulation, and lack of local control over their natural resources. Newfoundland is dependent on the global market for maintaining their quality of life, leaving the province vulnerable.

Two struggles are emphasized: the extreme vulnerability and dependence on global imports that result in a lack of basic human needs, and the dangerous exploitation of the Island's energy resources. There is particular vulnerability to the global market with respect to food resources and produce, as ninety percent of the island's fruits and vegetables are imported², and the imported produce lacks the quality that Canadians have come to expect. This thesis suggests that the intersection of food security and reducing the exploitation of island resources through a municipality-owned utility creates a framework for more resilient development that is grounded in local conditions.

This thesis is founded on a speculative future scenario, where Beothuk Energy's proposed wind farm in St Georges Bay, Newfoundland is used as the sole energy resource for a year-round regional greenhouse complex that supports the Port-au-Port peninsula through import-replacement, education, and community involvement. The complex aims to increase community self-sufficiency in the region by supplying produce locally, reducing the need for imported produce by establishing a more effective and less vulnerable relationship with the landscape and systems. The design exploration is aligned with proposing an alternate vision to the province's desolate future in order to spark a conversation among those involved, encourage a daily life that is sufficient and desirable, and facilitate an awareness of the benefit of using local energy for import replacement. The Port-au-Port peninsula is used as a case study in order to provide Island communities with an example of how their own unique resilience can arise.

¹ J. Jacobs, *Cities and the Wealth of Nations: Principles of Economic Life* (New York: Rondon House, 1984), 43.

² A. James Quinlan, *Building agricultural capacity in Newfoundland and Labrador* (St Johns, NL, Canada: The Leslie Harris Centre of Regional Policy and Development, Memorial University, 2012), 4.

Connecting Suburbia:

Using interconnected technologies to restructure the suburban house

Joel Piecowye

Abstract:

The North American suburban house is continually changing, a byproduct of cultural and technological change. Within the past hundred years, the house has experienced countless changes in design iterations as new technologies and cultural desires persisted. In 2017, the suburban house has been largely constructed from principles absorbed from the 'baby boomer' generation, in which larger houses accommodate distinct generational behaviour, privacy, and security. Recent studies show that a new generation consisting of 'Gen Y' and the 'Millennials' are currently transforming the housing market, and becoming the dominant group of property owners. These generations were raised in a global society; they are constantly connected with new technologies and social media. This has not only begun to impact designs of the house and its internal facets, but also location, transportation, and how connected communities should become. This ever-changing reality of the house will cause preexisting suburban neighbourhoods to be less desirable compared to inner-city neighbourhoods and suburban developments marketed for these new generations.

Given these realities, this thesis explores how to create a series of tactical interventions to repurpose the suburban house for a connected generation. Information and communication technologies are used create home-based economies and services, shifting single-use program and zoning into a more complex and self-sufficient system. These interventions are situated in underused spaces, designed to add needed program and activity to homogeneous cul-de-sac houses that will allow for a more connected physical and digital community. These iterations serve as an initial experiment, thereby showing the possibilities of how these houses can be adapted while encouraging conversation on how we can improve the habitation of existing communities constructed on archaic principles.

Reoccupying Ruins in the Azores

Louis-Pierre Beléc

Shifting spaces, materials, and culture on the islands of Terceira and Graciosa

Half a century of emigration from the Azores to North America has seen the abandonment and decay of many traditional houses throughout this Portuguese archipelago. Today, as members of the Azorean diaspora seek to return to their homeland, these ruined houses present a potent opportunity for renovation and reoccupation. Those who return, however, bring with them new domestic expectations and contemporary, urban needs at odds with the abandoned built fabric. Through an extensive photographic and qualitative survey of the over 1,600 abandoned buildings of the islands Terceira and Graciosa, and in-depth analysis of current conditions, historical precedents, and case-study design experiments, this thesis proposes a series of architectural principles and strategies for adapting these vernacular ruins to support the returning diaspora, while simultaneously restoring their spatial, material, and historical connection to traditional cultural practices for future generations. This design research exemplifies a way of reconceiving building - and rebuilding – in the limited, cyclical context of island urbanism.

Abstract

There are different Persian communities in Toronto and clearly there are certain public spaces for this group of people to use. One of these spaces is less obvious but more interesting that serving as a cultural hub and that is the “Strip Mall”. There is evidence proving that sometimes these kind of cultural-commercial spaces are acting like gathering space for political protest or cultural gatherings of Persian people. This was the first hint of the thesis and the basic thesis question has formed: “can we start thinking of the strip mall as a public space gathering?” following the positive answer to this question, there would be some challenges that need to be faced with. Referring to the nature of the Strip malls, these spaces are sometimes acting as a public space and sometimes acting as a parking space. Obviously, for expanding the public space in these kinds of hubs, the space needs to be shared between cars and people. So, exploring a dynamic (interactive) architecture which can be expanded based on different conditions of the site (strip mall) is what this thesis is looking for.

This thesis aims to study and employ three different parts including strip malls spatial qualities, deployable techniques for creating a dynamic space and Persian culture to create some kinds of prototypes that have the capacity to expand the space whenever there is limitation of it. So, as a result, among several models produced by deployable techniques, two prototypes have been developed as the most appropriate models for expanding the public space in a Persian context and they are called “Market Shell” and “Gathering shell”. During closing hours, when there is a cultural or social occasion, these shells are supposed to activate the strip mall through the functional space that they provide. However, during business hours, these shells are supposed to be off (DE active) since the stores and the parking area of the strip mall are active.

Sarah Donaldson

TITLE

Sunbathing in the Salt Pond

Re-making the image of Tropical Tourism in Antigua & Barbuda.

ABSTRACT

A tropical paradise – lush green palm trees and white sandy beaches – is what comes to mind when a tourist envisions the perfect Caribbean destination. Yet, ironically this idealized nature is highly transformed by tourism itself. Tourism is one of the most destructive activities in coastal zones: mined white sand is deposited to replenish eroding beaches or create new ones; wetlands are dredged and filled for beachfront resort development; and resort vegetation is heavily watered in countries that face water scarcity. This thesis exposes how these frictions are hidden from the idealized images of tropical tourism and questions the role these images play in intensifying three main contradictions of Global Tourism. *Authenticity versus Standardization*, investigates how the ideal beach image has been manipulated and duplicated by the tourism industry. *Local versus Global*, examines the impacts of Caribbean economies being economically tied to global markets. *Consumption versus Conservation*, addresses the landscape creation techniques used to achieve these desired images and the negative consequences left on the landscape it intervenes.

Antigua and Barbuda, a small twin-island nation in the North-East region of the Caribbean Sea, is one of the most extreme cases of a national economy relying on tourism in the world; 80% of their Gross Domestic Product is generated by Global Tourism and its related activities¹. The operation of the current tourism industry in Antigua and Barbuda has been extremely successful in economic terms but has sacrificed a lot of natural ecosystems in its pursuit.

This thesis proposes new narratives of tourism which re-make three dominant postcard images of global tourism in Antigua. *Sleeping on the Reef* attempts to alter the role of the quintessential beachfront developments at Dickenson's Bay. From disruptive intruder to active participant, the development itself provides the structural framework for an artificial reef. This generates new habitats, expands micro-economies, and re-establishes protective ecosystems. *Hiking the Landfill* endeavours to combine two generated wastes of Cruise Ship Tourism - dredged fill and solid waste - to reconstruct The Flashes salt marsh landscape which was buried by these excesses. *Sunbathing in the Salt Pond* challenges the artificial and privatized landscape created by the Jolly Harbour development by re-positioning tourism as a node, rather than a container, within a much larger network of public and ecological programming. The deconstruction of the resort integrates it within its place; the Jolly Harbour Golf Course Fairway is eroded away, eliminating the need for fertilizers and excess water consumption; and an expanded coastline allows for greater public access.

¹ Jeff Baldwin, "Tourism Development, Wetland Degradation and Beach Erosion in Antigua, West Indies," *Tourism Geographies* 2, no. 2 (2000): 194.

"Alternate Public Spaces for Tehran:

Reimagining the city's leftover fragments"

Public spaces are publicly owned places for people to interact freely with their city and its citizens, a place that promotes social interactions and creates the tolerance of diverse interests and behaviors. All people, regardless of gender, race, ethnicity, age or socio-economic level, should be able to access and feel free in these spaces. But in Tehran, many of public spaces are not usable for public.

Tehran, the capital of Iran, is a developing mega-city with more than 8.8 million residents sprawling over an area of more than 730 sq/km. Density of population in Tehran is 13,000 per square kilometer and it is among the highest urban densities in the world. Tehran has experienced a sustained process of densification since before the revolution in 1979, which has seen massive and rapid migration of populations from rural areas around Iran to the capital city. Due to the geographical boundedness of the city by mountains from East, North and West and the desert from the south, Tehran has nowhere else to grow but to densify. Influenced by this proliferating densification, after the revolution and the subsequent Iran-Iraq war, public and private resources have mainly been concentrated on constructing more residential, commercial and institutional *buildings*, in addition to appropriate infrastructure. Within this process, the importance of open public spaces have been diminished and the city has seen very few new spaces allocated for public development.

On one hand, the recent political shifts in Tehran have caused public life to partly migrate into the private realm, as activities that are still desirable by citizens have been declared against the law by the Islamic government, activities such as socializing, performances or interaction between opposite genders in general. This has resulted in the negligence of the diverse range of public activities and their spatial requirements within the current public spaces of Tehran.

On the other hand, the neoliberal commodification of public spaces and the development plans of Tehran in the past decades have only resulted in the allocation of super large public spaces (mainly natural resources and parks) distributed unevenly around the city, far from the citizens' daily life, and the diversity of daily activities of an equally diverse population with specific spatial needs and desires.

Therefore, it is crucial to design a new breed of public spaces in Tehran, whose distribution will match the contours of the spaces of daily life. These interventions will have to be smaller and more local to be able to respond with agility to the spatial needs of the whole range of public activities. Finding an open space left in this densified city, as a platform for these new public spaces, is not easy. One of the few leftover fragments of the city are the infrastructural networks and the residual spaces they create in their periphery. Among these infrastructural spaces, the publicly owned spaces scattered around Tehran under urban bridges present immediate potential. This thesis project ultimately reimagines these leftover spaces as potential sites of intervention, and rearticulates them as networked, multiscalar, performative and contextualized typologies for alternative public spaces in Tehran.

**Approaching
Vertical:**
*A
Guide
Through
Land-Use
in
Ontario's
Niagara
Escarpment*

Abstract

Ontario's Niagara Escarpment is a landscape 450 million years in the making. Over this immense time line, great natural forces of the earth have aggregated, eroded, and carved this landscape, a 725-kilometer scarp face stretching from Niagara Falls to Manitoulin Island, informing much of the land mass in Southern Ontario. Despite the minuscule fraction of geologic time that humans have occupied this region, the scale of our land-use is abundantly evident throughout its depth, from the marks and scars of industrial extractions to the layering of infrastructural erections used to inhabit the land. In a reciprocal fashion, the significance of this landform underlies the urban, social, economic and cultural development of human occupation in the region. The geologic landscape of the Niagara Escarpment forms the backbone of Southern Ontario.

Humans are a geological force, from the elemental matter of our physical being to our extended use of the planet's material resource, our species is rooted in the deep history of the Earth. Likewise, as proposed with the introduction of the Anthropocene epoch, the extended effects of human action are embedded in the immanent future of this world as a stratigraphic layer in its geologic makeup. The landscape is defined by this three-dimensional stratigraphy, at once a homogeneous entity (place) and heterogeneous assemblage (site). It is formed in a depth of layers that exist as distinct gradients of asymmetrical intensities, manifested in the varying transformations evident in the present landform. Despite these complexities, the understanding of the land is often relegated to its surface, a keen focus on the horizontality of landscape; represented, interpreted and experienced through two-dimensional projections onto a flat plane.

The new realities brought forward by the Anthropocene require altered sensibilities towards our understanding of landscape and our agency within it. The development of our contemporary society is caught in a state of acceleration, an exponential curve ever steepening, and we are rapidly approaching a world which exists at a right angle to history. In this accelerated time scale, geology can no longer be considered an exploration of past conditions of the earth, it is becoming more and more evident that the geologic is a present condition which we are actively shaping.

The landscape of the Niagara Escarpment is the ideal site through which to explore these emerging sensibilities as it naturally exposes its underlying form on a vertical surface, revealing a stratigraphy of geologic processes that encompasses the transformations of both human and non-human agents. Borrowing conventions from the field of geology to study and understand the world from the side, in section and elevation, and through a broad range of temporal scales, this thesis seeks to present an alternate approach to the earth's landscape to include the expanding depths and heights of the "surface" we occupy.

Part One of the thesis, *A Journey Through Land-Use*, forms a collection of stories on the use of the land, relating the complex local histories of this specific landscape to a larger context of landscape interpretation. Part Two, *A Stratigraphic Guide to the Niagara Escarpment*, brings these revelations into immediacy, formalized in a guide that presents an altered interpretation of the Escarpment landscape through its elevation and section, focusing on the physical and ephemeral depths of the landform as it intertwines with networks of cultural and industrial land-uses.

The goal of this localized study is to reveal the broader condition of connections and intersections between the natural world and the humans that build on it and with it, interpreting the geologic not as a thing in itself, but a tracing of these associations through a vast range of temporal and physical scales. Through this interpretation, representation, experience, and use of the land, the landscape is expressed as a complex assemblage of human and non-human factors rather than an ontologically distinct entity. What we create, where we create it, and the material from which it is created is a holistic, geologic being. As we approach new verticals within this world, these sensibilities should guide our agency in the continual transformation of this deep surface.

Mud and Cell Phones: Non-formal Learning Networks in Rural Kenya

Anne Sewell

Despite global efforts to achieve universal education, millions of people still lack access to learning, with a high concentration in sub-Saharan African countries. Like many rural communities around the world, Kenya's rural population experiences challenges in accessing resources and opportunities equal to those living in urban centers. With 74% of its population living in rural areas,¹ research into providing accessible education and access to information and communication technologies (ICTs) is a priority for both the Kenyan government and the communities where these challenges exist.

In response to these challenges, recent critical developments in communication and sustainable energy have enabled remote communities to gain greater access to distant services. In cases where banks and electrical power are not available, off-grid portable solar panels and cell phone banking through the locally developed M-Pesa technology have been remarkably successful. If cell phones can stand in for banks, can other technologies increase access to education for people in remote locations? Could a learning network using ICT paired with essential services such as water and sanitation, support an existing education system which is otherwise not reaching all people?

Researchers such as Ivan Illich, Paulo Freire and Philip Coombs believe universal education is not possible through formal education in the present style of school institutions. Their theories propose strong arguments which support individual learning and non-formal learning outside of the classroom. Coombs especially argues that non-formal learning is key to rural development where primary schooling is not available due to geographic or socio-economic barriers.

The Kenyan government, as outlined in their Vision 2030 and National ICT Master Plan, believes ICT plays a critical role within many sectors, including education, health and employment. With goals to provide ICT infrastructure in all schools and health centres,² and provisions to build innovation hubs throughout each of the 47 counties, architecture plays a significant role in how these spaces of ICT and non-formal learning are designed and allocated throughout rural communities.

This thesis criticizes current models of rural connectivity which fail to acknowledge the strengths and diverse cultures of the communities in which they are inserted. Instead, it recognizes the importance and value of local knowledge, culture, and traditional forms of knowledge exchange and argues for a design process which is in fact rooted in the unique

¹ "Rural population (% of total population)." *The World Bank Data*. Accessed November 4, 2017. <https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS>.

² Ministry of Information and Communication Technology. *Kenya National ICT Masterplan 2014-2017*. Kenya National ICT Masterplan 2014-2017, n.d.

culture and knowledge of each location. This thesis contains a range of work influenced by two visits to Kenya, the first in 2014 for two weeks, and the second in 2017 for one month within the case study site.

Designed from the perspective of a foreigner, this thesis emphasizes the importance of an inclusive design process—a process which acknowledges the contributions of many individuals, existing community groups and local experts. The proposal is largely influenced by conversations that took place within the community, and takes the form of a network of scalable nodes rooted in cultural tradition, non-formal learning, ICT and essential resources. The placement of these nodes is informed by existing gathering spaces and contains different combinations of architectural program that use ICT as a tool for non-formal learning. *Mud and Cell Phones: Non-formal Learning Networks in Rural Kenya* proposes a dynamic network, not fixed in any given moment of time, able to expand or contract to suit the changing needs of each community it serves.