# **EFFECT**

ACTIVISTS, UNCERTAINTY & IMAGES OF THE FUTURE

Kelly Kornet OCAD University, 2015

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### **ACTIVISTS, UNCERTAINTY & IMAGES OF THE FUTURE**

Kelly Kornet

Submitted to OCAD University in partial fulfillment for the degree of Master of Design in Strategic Foresight & Innovation

Toronto, Ontario, Canada, March 2015

€ Kelly Kornet 2015

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# ABSTRACT

Causing an Effect is a futures exhibition and research project that draws from individual foresight, design research, and design fiction to build understanding for activists working in future-minded ways. Seeking to emphasize the work of Canadian and American activists, this project highlights and celebrates these bold citizens in their ability to unearth complex environmental problems that threaten the health and wellbeing of their community. The research aims to generate images of the future, give voice and build empathy for activists, and create a space for strategic conversation around the future of North American industrial communities.

Three case studies were developed to understand activists working in Sarnia, Ontario, Canada; Aamjiwnaang First Nation, Ontario, Canada; and Love Canal (Niagara Falls), New York. The project explores how three ordinary people living in industrial communities transform into changemakers, overcoming uncertainty to make positive social and environmental change. The research methodology began with a formal literature review followed by primary research based on the Ethnographic Futures Research (EFR) method. The insights and output were then processed and illustrated with the experiential futures method Reverse Archaeology.

KEYWORDS: ethnographic futures research, changemakers, possible futures, activism, individual foresight

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# DEDICATION

To Ada Lockridge, Sandy Kinart and Jay Babcock.

I deeply admire your determination and courage in your fight for justice and a better tomorrow. Thank you for all that you do. May your hard work and powerful stories inspire others in the years to come.

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# **1. INTRODUCTION**

I grew up in Bright's Grove - a pleasant, beachside community on the shores of Lake Huron and on the outskirts of Sarnia. Ontario. Home videos of joyful visits to the beach confirm memories of the happy childhood my parents provided for my older sister and me. When I was ten years old, we moved a short distance towards the city so my family could be closer to my grandfather. Our new place - a slightly out-dated bungalow was perched on a wide lot. In the backyard, our property gently sloped towards a large pond that was shared with our neighbours and partially accessible by a public trail. For the next seven years, this pond would become a great source of curiosity, exploration and joy. In the summer, I would canoe across the pond, wade into the water, and attempt to catch sunfish with a cheap butterfly net. In the winter, I would toboggan down the hillside or skate across the frozen surface. Just like the beach, the pond would become a personal sanctuary.

Chemical Valley, an industrial complex of oil refineries and chemical producers was only a short drive from my house. I knew there was a socioeconomic divide in my community, but I could not imagine it was tied to health and wellbeing. Having been there just a handful of times, I did not realize how many people lived nearby. I was not experiencing the same Sarnia. Throughout this research project, I came to learn that people do not like change, yet some desperately need it and find the strength to do make it happen. This research project draws from the realms of individual foresight and ecopsychology to make sense of why people turn to tactical action in their communities.

#### THE PROBLEM: ENVIRONMENTAL TOXICITY

This application of foresight and design research concerns the immediate and long-term impacts of the chemical industry on human health. All of our lives are touched by the chemical industry in one way or another. Aside from the gasoline in our vehicles, we must realize that plastic substances exist as a byproduct of industrial oil and gas refinement. Between the plastic on our running shoes and the asphalt roads we travel, our movement alone is fuelled (at least in part) by petrochemical production. So where does it all come from? In 2013, the chemical industry in Canada produced USD \$49.3 billion in chemical exports compared to the USD \$811.6 billion generated by the United States chemical industry (American Chemistry Council, 2014). Large on their own, these numbers are dwarfed in comparison to USD \$5.2 trillion, the global figure for chemical exports (American Chemistry Council, 2014). And the numbers are growing. More plastic was manufactured between 2000 and 2010, than the entire twentieth century (Knoblauch, 2009).

Back to the earlier question, where does it all come from? Where are these chemicals produced? Who is impacted by these industries? As our scientific understanding of chemicals increases, we continue to understand more and more about the toxicity of these materials – many of which are nestled unnoticed within our homes (see Main, The Top 12 Worst Chemicals in Your Home, 2013). For that reason, some people are "detoxifying" their homes and workplaces by disposing of hygiene and cleaning products that contain toxic chemicals (Chemical Nation Productions Inc., 2013). While the presence of chemicals in everyday commodities remains an elephant in the room for many, there are certain groups that cannot readily avoid the toxic reality of the chemical industry. Many chemical production facilities are not located in uninhabited areas. Communities of people are often located adjacent to these operations.



Known as fence-line communities, citizens are subject to an unfair distribution of environmental health risks as a result of their proximity to industry (Bullard, 2005, p. 34). Unfortunately, compromised air and water quality are often just the tip of the iceberg for these residents. Robert Bullard, American environmental justice activist writes:

When [not if] chemical accidents occur at the plants, government and industry officials often instruct the fence-line community residents to "shelter in place" – that is, to lock their doors, close their windows, and stay inside. In reality, locked doors and closed windows do not block the chemical assault, nor do they remove the cause of residents' anxiety or their fear of the unknown health problems related to the chemical assault, which may not show up for decades. (Bullard, 2005, p. 5)

So how is it that these locations are deemed appropriate for industrial development? Bullard believes that political science is the key factor (Bullard, 2005, p. 85). As a "path of least resistance" communities composed of people who are seen as powerless have been historically taken advantage of (Bullard, 2005, p. 85). Polluting industries are often unfairly distributed, creating "vulnerable communities and environmental sacrifice zones" where low-income individuals (often of colour) reside (Bullard, 2005, p. 85). Despite knowledge about environmental problems, it is far easier for us to be complicit in the current system than face the lifestyle changes necessary to "avert ecological catastrophe," (Crompton and Kasser, 2009, p. 15). In Ecology Without Nature: Rethinking Environmental Aesthetics, Timothy Morton writes:

Nobody likes it because when you mention the environment, you bring it into the foreground. In other words, it stops being the environment. It stops being That Thing Over There that surrounds and sustains us. When you think about where your waste goes, your world starts to shrink. (Morton, 2007, p. 1)

The idea behind our world shrinking is relatively common in the space of ecological sustainability. As we know it today, it is unreasonable to imagine a world without the petrochemical industry. What some believe is not unreasonable is the vision that many activists and citizens of fence-line communities hold – that these industries could do less harm to their environment and their health.

#### THE PROBLEM-SOLVERS: CITIZEN ACTIVISTS

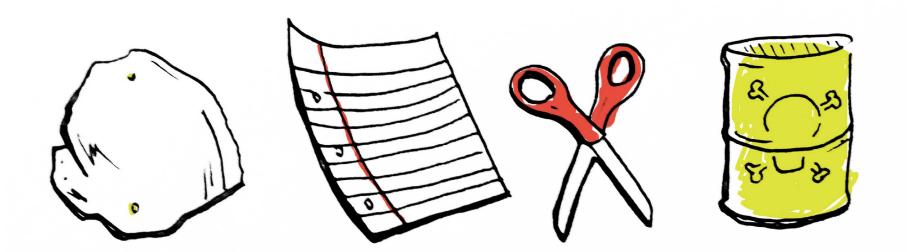
The purpose of this study is to explore how individuals living in conditions of environmental toxicity develop the ability to imagine possible futures and take positive action in their communities. This study aims to uncover patterns and similarities in approaches between citizen activists working against the forces of chemical toxicity in their respective communities. Further, the study begins to address how activists relate to their local environments and what they envision for the future of their communities.

The intention of this research is to explore how individuals living in uncertainty find a sense of personal agency and begin to lead active lives towards a preferred future for themselves, their communities, and the natural environment. Seeking to emphasize the work of Canadian and American activists, the author highlights and celebrates these distinctive and fierce citizens in their ability to unearth complex environmental problems that threaten the health and wellbeing of a community and its citizens. From discouraging illegal dumping in the nearly desolate neighbourhood of Love Canal, Niagara Falls, New York to tracking the unseen chemical releases from an industrial complex on the shores of Lake Huron in Sarnia, Ontario, these citizen activists have taken it upon themselves to speak up and fight for justice in their communities. Sarnia, Ontario and Niagara Falls, New York have been significantly impacted by past and current exposure to chemical pollutants due to industry negligence and regulatory complacency. The activists from these communities were selected for their known contributions towards bettering their communities and striving for positive change.

A variety of qualitative research methods were used to gather insight towards understanding how the activists in the project sample have emerged to take action and how their capacity to take a long-term view developed. Further, the lens of ecopsychology was applied to the primary research to explore how experiences of environmental health concerns could be affecting the participants on a personal, emotional level.

# **2. RESEARCH QUESTION**

How might individuals transform into changemakers and take action in their communities?

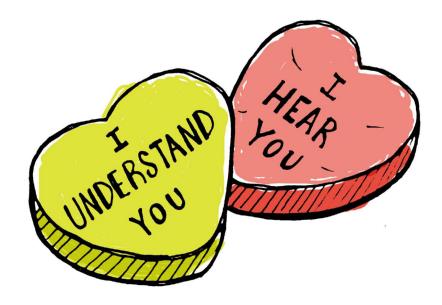


#### **THE GOALS**

#### 1. Discover possible future scenarios

One of the goals of this research is to capture and share images of the future from citizen activists. While worst-case scenarios are helpful for creating an understanding for why citizen activists are working towards change, this thesis hopes to create a space for optimistic future scenarios to emerge and be deliberated. As demonstrated in her Ph.D. thesis, Karen Hurley believes positive visions "provide hope for change" and stimulate action (Hurley, 2009, p. 41). In the book Active Hope, the authors suggest:

> When we envision a hoped for future we strengthen our belief that it is possible. By inhabiting this vision with all our senses, imagining what colours and shapes we see, the expressions on people's faces, the sounds we hear, the smells, taste, and feel of this future, we bring ourselves there in a way that activates our creative, visionary, and intuitive faculties. (Macy & Johnstone, Active Hope, 2012, p. 172)



#### 2. Give voice to citizen activists

The intention of the primary research was to highlight the work of environmental activists and share their stories with a wider community, in order to inspire others and create empathy and understanding for their personal struggles and experiences.

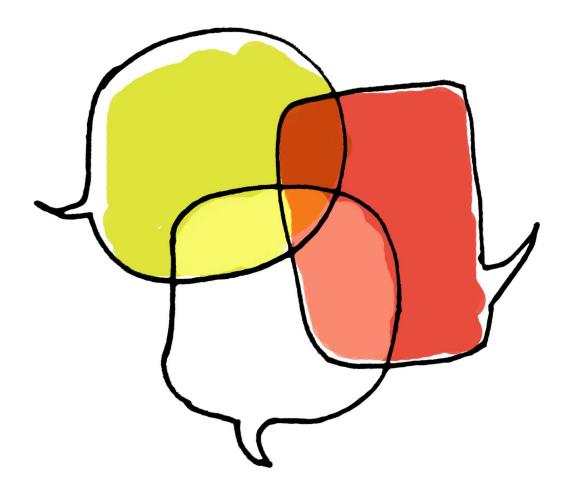


#### 3. Initiate a Strategic Conversation

The third goal of this study is to create a space to actively imagine and discuss the future of these communities and of the planet. Inspired by Chris Ertel and Lisa Kay Soloman's latest book, Moments of Impact, I hope to present the project findings in a way that fosters a strategic conversation, in order to "lift participants above the fray of daily concerns and narrow selfinterest" and "[reconnect] them to their greater, collective purpose," (Ertel and Soloman, 4).

#### **2.2. THE HYPOTHESIS**

The working hypothesis assumes that individuals who engage in forward-thinking actions to protect their community and themselves have found the ability to transcend some of the psychological impacts of uncertainty by changing their orientation and looking to the future with hope. As a result, the author believes that these select individuals are unknowingly embodying the practice of foresight in their work.



### **3. METHODS**

Several methods were used to gather qualitative insights towards how individuals develop the capacity to think and act in future-minded ways. The research methodology began with a formal literature review followed by primary research based on the Ethnographic Futures Research (EFR) method. The insights and output were then processed and illustrated with the experiential futures method Reverse Archaeology.

#### **3.1. LITERATURE REVIEW**

The first step in exploring the intersection of ecopsychology (the study of the relationship between human beings and the natural world), individual foresight and activism involved an extensive literature review of each of these domains. Further exploration involved a deeper analysis of how each of these elements interacted in pairs (i.e. ecopsychology and activism).

#### **3.2. PRIMARY RESEARCH WITH CITIZEN ACTIVISTS**

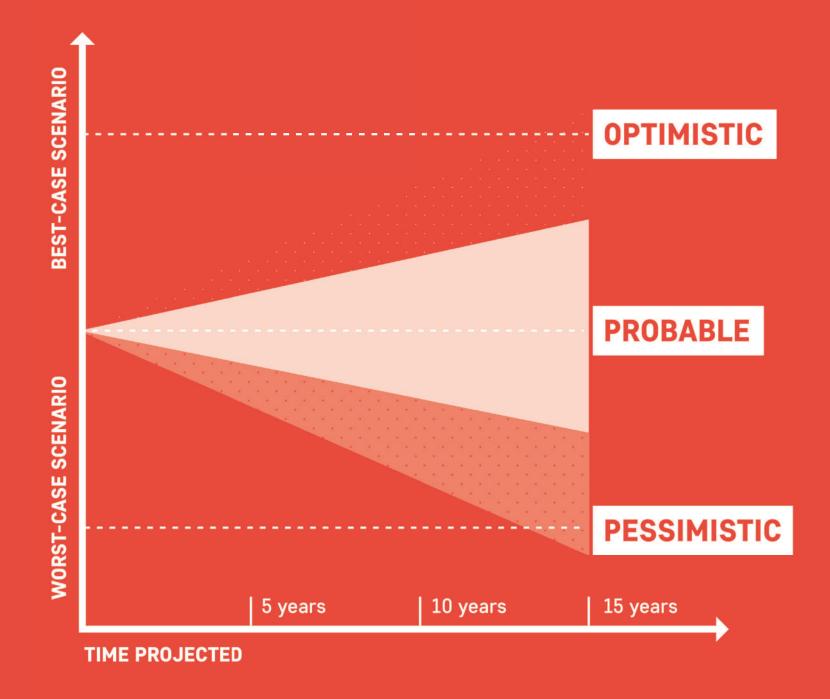
Informal, qualitative interviews were conducted with a small sample of environmental activists who are currently advocating for the health and safety of their local community. This comparative case study focused on activists living in Sarnia, Ontario, Aamjiwnaang First Nation, Ontario or Niagara Falls, New York. Within the interviews, the Ethnographic Futures Research (EFR) method (Textor, 1995) was employed to elicit imagined future scenarios from participants. Participants were asked a series of questions relating to his or her experience in becoming an activist, in addition to a set of prompts from the EFR method. Developed in 1976 by anticipatory anthropologist Robert B. Textor, the Ethnographic Futures Research (EFR) method provides a framework for prompting high-quality forwardlooking views from research participants. (Textor, 1995, p. 464). Through the process of abstraction, the EFR method enables participants to demonstrate their values and beliefs in a safe space. Semi-structured by nature, the process calls on participants to evoke imagined scenarios for an optimistic, pessimistic, and most probable future (Textor, 1995, p. 465).

Experiential Futures is a term that refers to contemporary foresight practices which involve a range of media in order to "enable a different and deeper engagement in thought and discussion about one or more futures," (Candy, 2010, p.3). By exploring the scenarios generated by the research participants with an experiential approach, the ideas could be shared with others in a more engaging way.

#### **3.3. SYNTHESIS**

The findings from the interviews were reviewed and processed in various stages. The insights from how each activist emerged were synthesized into personal stories. These findings were cross-examined in order to reveal patterns of experiences and values. Additionally, the interview outputs were processed under the lens of ecopsychology to explore how experiences of environmental health concerns could be affecting the participants on a personal, emotional level. Lastly, the ideas generated from the participants' scenarios were interpreted and summarized into a collective set of three scenarios – optimistic, pessimistic, and probable.

# Ethnographic Futures Research Method, paired with an adaptation of the Futures Cone by Joseph Voros<sup>1</sup>



1. Voros, Joseph. "The Futures Cone" in A Primer on Futures Studies, Foresight and the Use of Scenarios. Swinburne University of Technology, 2001.

#### **3.4. OUTCOME - EXHIBITION**

The insights, stories, and scenarios were creatively curated into a gallery setting to provide a contextual experience for others to understand how these individuals have emerged. Additionally, the exhibition highlights the themes and values embodied by these individuals. Beyond the stories and experiences of the research participants, the Reverse Archaeology Method, designed by Stuart Candy (2013), was utilized to bridge the internal agents of change with the world that is yet to surround them. Reverse Archaeology involves the creation of artifacts from the future, enabling spectators to infer the world from which they derive (Candy, 2013). Supplied with artistic license, the researcher translated the ideas and images of the future from the interview outputs and created found artifacts from the future to help immerse and engage spectators with fragments of possible futures.

Artifacts from the future is a design fiction/experiential futures technique (Null, 2006). Designed to start conversations, artifacts from the future are stand-alone objects that illustrate and support a possible future scenario. These objects operate as "totems through which a larger story can be told, or imagined or expressed," (Bleecker, 2009, p. 7).

Change at any level can be complex, but how does it effect us personally? From primary and secondary research to experiential futures, the approach serves to tap into a deeper consideration for how people feel when large forces are shifting.

In the following pages, the literature review will be broken down according to subject area and held together with the common thread of holistic long term thinking.



# 4. METHODOLOGY

#### **4.1. OF FEAR AND FUTURE GENERATIONS**

Look and listen for the welfare of the whole people and have always in view not only the present but also the coming generations, even those whose faces are yet beneath the surface of the ground - the unborn of the future Nation. -The Constitution of the Iroquois Nations, The Great Binding Law, GAYANASHAGOWA (Sweeney, 2012)

#### Long-term Thinking

The need for long-term thinking has long been linked to the philosophy and values of First Nations people and more recently adapted by contemporary sustainability and conservation movements. On the surface, the Seventh Generation Law (quoted above) holds that we must be aware of the impacts our current decisions have on future generations (Kornet, 2012). After confronting the Chernobyl disaster in Ukraine through fine art photography, Robert Polidori posed the question, "Does any generation have the right to risk the safety of so many future generations?" (Polidori, 2013, p. 111). In so many decisions within our current paradigm, the needs of people - be it future or current generations - are often disregarded.

Futures thinking is the ability to creatively imagine possible futures (Bell, 1996). Beyond this creative endeavour, awareness for the future can lead to an improvement in present-day decision-making (Copenhagen Institute for Futures Studies).

One of the vital aims of futures studies is to nurture our ability to care for future inhabitants of our world (Morrow, p. 11). Peter Hayward grounds the importance of caring for future generations writing, "to live in ways that are clearly harmful for future generations is to diminish one's moral stature and sense of personal integrity," (Hayward, 2006, p. 93). Further, by encouraging stewardship, we take on a perspective that is "decidedly ethical and compassionate to all life forms," (Hayward, 2006, p. 93). American psychologist Ralph Metzner suggests that the global population is suffering from a "collective amnesia" - we have lost the once cherished capacity to "empathize and identify with nonhuman life", to maintain our "relationship to the infinite complexities of the natural world", (Metzner, 1995, p. 61). This disconnect can be detrimental to both our personal wellbeing and our ability to foster the health of the system that we depend on.

It is important to note the relevance of both the health of our planet and the health of our population. David Suzuki and Ian Hanington write, "We are inextricably linked to the world in which we live. In some ways, the environment can be seen as an extension of ourselves," (Suzuki & Hanington, 2012, p. 202). The air we breathe, water we drink, and soil that nourishes the food we consume is only possible because of the unique set of conditions and systems that make up our Earth (Suzuki & Hanington, 2012, p. 202).

But what happens when these systems are threatened? How might people be impacted from a suffering environment? Many of us are aware of the so-overwhelming-that-it-becomes-unreal concept of climate change, or the tragic visual transformation of rainforests due to deforestation. What of the less obvious threats? Claude Baillargeon writes, "From water contamination to ground seepage and from airborne pollutants to radioactivity, there are countless environmental dangers lurking beyond the threshold of visibility," (Baillargeon, 2005, p. 31). When we look towards the challenges of environmental problems, it is important to note the unfair global distribution of environmental risk and the prevalence of social and environmental injustices. Our unsustainable standard of living in developed nations comes at a cost to both people and natural resources across the world (Suzuki & Hanington, 2012, p. 3). Most tragic to ending the conditions of environmental harm, is the perpetuation of social injustices that get passed down generation by generation (Hag & Paul, 2012, p. 98).

Haudenosaunee Chief Leon Shenandoah asserts that our responsibility as human beings is to "protect the welfare of our Mother Earth from whom all life comes," (Macy & Johnstone, Active Hope, 2012, p. 52). Fortunately, the reach of wisdom from First Nations philosophy and beyond is multiplying. In order to prosper, Canadian photographer and artist Edward Burtynsky advises:

We must adopt principles in which the short term is trumped by the long; in which caution prevails over ingenuity; in which the absurd myth of endless growth is replaced by respect for natural limits; in which progress is steered by precautionary wisdom. (2007, pp. 3-4). At this stage, we might feel that our individual actions are feeble in the face of large-scale environmental problems. Conversely, some hold the hope that change for the future can and will be possible. Thomas Kostigen warns, "Disaster will occur only if we ignore the earth's problems and stand by and do nothing and leave the problems up to others to fix," (Kostigen, 2008, p. 2).

#### Fear for the Future

Given today's complex problems, it is unsurprising that many of us look to the future with limited confidence (Macy & Johnstone, Active Hope, 2012, p. 1). As a result, our experience of "fear for the future" can manifest in multiple ways. We may experience distress over what the future may hold if we continue business as usual (Macy & Johnstone, Active Hope, 2012, p. 65). On the other hand, we might be afraid to acknowledge the current state of the world and all of our challenges (Macy & Johnstone, Active Hope, 2012, p. 65). Richard Slaughter suggests, "most young people grow up fearing the future and therefore early on learn the comforts of denial, evasion, [and] avoidance," (Slaughter, 2004, p. 159). It is no surprise that this experience leads us to feel powerless in our ability to both construct the future and constructively envision future possibilities.

As a result of learned behaviour, many of us do not hold a positive vision for the future (Eisenstein, 2013). Fred Polak (1973) famously demonstrated how a society's images of the future impact and shape the future as it unfolds into the present. With an abundance of negative images of the future being produced, it's no surprise that society is facing greater anxiety about future conditions. Moreover, it's no surprise that many people are experiencing "the weight of a hopeless future," (Hurley, 2009, p. 8). Many of us default to the belief that the

future is out of our control. When the present is already asking too much of us, it can seem unreasonable for us to think about tomorrow (Hayward, 2006, p. 94). In a recent survey of over 2,000 people by the UK's Mental Health Foundation, 56 percent of respondents described feeling powerless over global problems (Mental Health Foundation, 2007).

Beyond the visions themselves, there are challenges in ownership and influence over how visions are created and by whom. In the book, Presence, Peter Senge, Otto Scharmer, Joseph Jaworski and Betty Sue Flowers speculate:

> Many visions are doomed from the outset because those who articulate them, whether consciously or not, are coming from a place of powerlessness. If we believe that someone else has created our present reality, what is the basis for believing that we can create a different reality in the future? (Senge et al, 2005, p. 132)

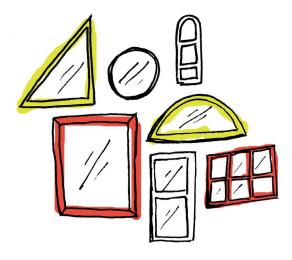
In the space of contemporary environmental and social problems, the acting capacity of individuals is hindered by the perceived sense of hopelessness and disempowerment over our ability to make a positive difference (Hurley, 2009, pp. 29-30). In order to enable individuals to develop the capacity to face the future with creativity, the conditions of fear and anxiety over future conditions must be overcome and a sense of personal agency and empowerment must be cultivated within the individual.



Stewart Brand, American writer and futurist believes, "the great problem with the future is that we die there," (Brand, 1999, p. 150). As a result, many of us struggle to "take the future personally," (Brand, 1999, p. 150). In recent years, several thought-leaders in the field have promoted the application of strategic foresight towards individuals (see Hayward; Hodgson; Wheelwright; Slaughter; and Jackson). Foresight can help people develop the skills to understand our changing world, the intellectual tools to take a long view, and the methods to strategically assess our options (Cornish, 2004). According to Richard Slaughter, futures studies "is grounded in a process of transpersonal realization, both individual and collective," (Slaughter, 2004, p. 39). As such, holistic foresight approaches accounting for both individual and collective perspectives have begun to emerge (Floyd, Burns, & Ramos, 2008) (Conway, n.d.).

Embodied Foresight is described as an approach to futures and foresight practice where integral principles become part of dayto-day living and work in order to encourage a "genuine desire to facilitate the health of the whole," (Floyd, Burns, & Ramos, 2008). Underlying the theory of Embodied Foresight is the ability to tolerate ambiguity and the discomfort that comes with uncertainty (Floyd, Burns, & Ramos, 2008).

The future is uncertain. Yet many individuals have found the strength to tolerate this justifiable uncertainty and fight for a better tomorrow in lieu of insufficient facts about today. This research argues that citizen activists are acting with some degree of embodied foresight - transcending uncertainty and making change in their communities. As Joanna Macy and Chris Johnstone say, "what we do with this uncertainty is a matter of choice," (2012, p. 250).



#### **4.2 FORESIGHT & INDIVIDUALS**

No matter how circumscribed certain situations are, an individual has a window, however small, within which they can alter their future. An individual can anticipate a bad personal future and then take action to prevent that likelihood or at least improve it. (Hayward, 2006, p. 6) Scholar and futurist Peter Hayward has extensively explored the development and practice of foresight in individuals (2006). Intrinsic to the human psyche, the ability to anticipate and plan for possible futures enables individuals to navigate towards desired futures and mitigate adverse conditions (Hayward, 2006, p. 3).

Peter Hayward believes that an individual's use of foresight can bring advantages to others in their community (Hayward, 2006, p. 4). As both an individual and social capability, foresight can be employed to help perceive and address today's problems while helping us to anticipate tomorrow's challenges (Hayward, 2006, p. 3).

Foresight enables individuals to take a future-oriented approach to problem solving (Hayward, 2006, p. 3). One of the key features of an enhanced capacity for foresight in individuals is the ability to uncover ignored or repressed societal challenges or problems that are happening in the present. (Hayward, 2006, p. 158) Activism is particularly relevant within the space of problem finding. In situations where a small group of citizens are standing up for social or environmental injustices against or despite the positions of the greater community, I believe many activists are tapping into societal challenges that others might be ignoring.

The position of this research is to highlight an alternate application of foresight in the development of emerging changemakers. Centering on the experience of individuals living and fighting against adverse environmental conditions, this paper supports the development of social foresight as proposed first by Richard Slaughter (Futures Beyond Dystopia: Creating Social Foresight, 2004) and supported by Peter Hayward (2006). Supporting the development of social foresight, this paper seeks to empower others to:

> ...Think of the future in ways that create spaces for the currently powerless to be heard, to propose images that counterbalance the default images of conventional interests and to show the courage to acknowledge individual complicitness in our current dilemma and to accept the responsibility to do something about it. (Hayward, 2006, p. 89)

Our capacity to think and act in future-oriented ways is often inhibited by our failure to creatively envision a better future than the present, often at the risk of sounding naive (Hurley, 2009, pp. 14-17). Despite the odds, some individuals still choose to act in ways that support a better tomorrow - to act ethically, and devote his or her actions towards a better society - for current and future generations. Following that "the future emerges from the level and capability of the consciousness creating it," (Hayward, 2006, p. 90), our best bet in creating a positive future lies in fostering the consciousness of those behind its emergence. In order to enable individuals to act in futureminded ways, we must first empower them to develop a clear image of the future, a vision to work towards (Boulding, 1973, p. v). We have the opportunity to consider and shape the future we want for ourselves (Hayward, 2006, p. 4). Yet, our dreams and visions must be imagined before we can move towards a preferred future.



#### 4.3 ACTIVISM

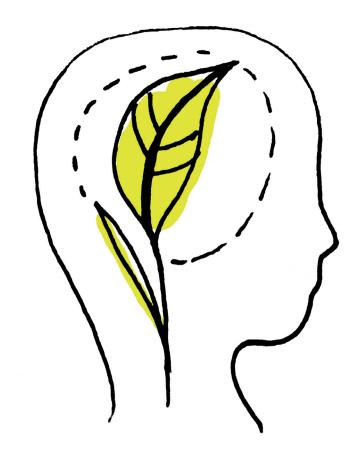
Activism is defined as "a doctrine or practice that emphasizes direct vigorous action especially in support of or opposition to one side of a controversial issue," (Merriam-Webster, 2014). For the purpose of this research, I will adopt the perspective of Joanna Macy and Chris Johnstone in the inclusive definition of an activist as "anyone who is active for a purpose bigger than personal gain," (Macy & Johnstone, Active Hope, 2012, p. 217). Before speaking to the visions and possibilities that activists can offer, I should note the dominant typecast of activists as deluded, unusual characters. A recent study by researchers at the University of Toronto and the University of Waterloo determined that many in the general public choose to distance themselves from 'typical' activists due to their tendency to "aggressively [promote] change" and advocate for "unconventional practices," (Bashir, Lockwood, Chasteen, Nadolyn, & Noyes, 2013). The study also revealed that activists are generally associated with "hostile militancy and unconventionality or eccentricity," (Bashir et al, 2013).

Central to activism, yet with less airtime, is the role of anticipatory planning and strategy in the work of making change (Shaw, 2001, p. 2). Randy Shaw, an attorney and activist writes, "By acting proactively and with tactical and strategic wisdom, social change activists can bring a degree of social and economic justice to the next century that has for too long been deferred," (Shaw, 2001, p. 279).

In recent years, many of the efforts and goals of activists across causes and arenas have become unconsciously synchronized (Eisenstein, 2013) (Macy & Young Brown, Coming Back to Life, 1998, p. 48). Many activists strive for justice in their local communities, while the overall goal of their work lies in the impact of positive change on a global scale (Shaw, 2001, p. 3). The heart of the activist strives for a just future beyond their familiar boundaries. While looking to the future with hope, it is important to seek a better world, with an understanding that it will never be perfect (Solnit, 2006, p. 82). Beyond the goals, contemporary activists have come to a realization that fulfillment lies in the practice and fight for justice, as opposed to the final outcome (Solnit, 2006, p. 86).

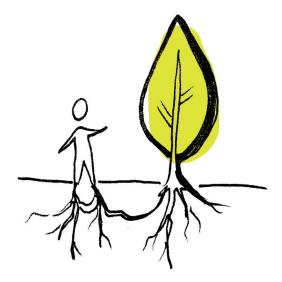
#### 4.4. ECOPSYCHOLOGY

Exploring both the external and internal workings of the individual, the field of ecopsychology offers a unique lens to understand how individuals relate to and experience the natural environment. It is possible that environmental activists could be acting not only for themselves and their families but also on behalf of the planet to reduce the risk of environmental harms in their communities.



#### What is Ecopsychology?

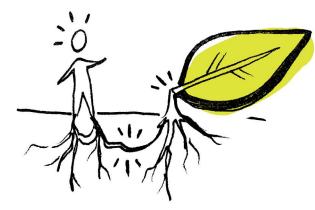
First coined by Theodore Roszak, ecopsychology "[assumes] that at its deepest level the [human] psyche remains sympathetically bonded to the Earth that mothered us into existence," (Roszak, 1995, p. 5). Expanding the practice of psychotherapy to the development of community and relationship to land and place, ecopsychology invites us to foster our interconnectedness with the natural world (Macy & Young Brown, Coming Back to Life, 1998, p. 49). Ecopsychologists believe, "we cannot restore our own health, our sense of well-being, unless we restore the health of the planet." (Brown, 1995, p. xvi). Two core principles of ecopsychology, interbeing and pain for the world, are described below.



#### Interbeing

The notion of interbeing suggests that we as individuals are integrally connected to the greater world (Macy & Young Brown, Coming Back to Life, 1998, p. 27). As human beings, we are not separate from the interdependent web of life (Conn, 1995, p. 157). Naturally, we are just as connected to the natural world as the food that nourishes us. In the realm of philosophy, Gilles Deleuze and Félix Guattari illustrate the concept of connection and multiplicity through the metaphor of the botanical rhizome (Deleuze & Guattari, 1987). Countering the tendency to favour linear unity of knowledge, Deleuze and Guattari reason that "any point of a rhizome can be connected to anything other, and must be," (Deleuze & Guattari, 1987, p. 7). Just as a concept or idea is interconnected among spheres of knowledge, we as individuals exist as interconnected nodes with beauty and complexity in our relationships.

De-growth activist Charles Eisenstein believes that, while on the surface it may appear negligible, our individual actions impact the world in ways beyond our understanding (Eisenstein, 2013). As a "defining feature of the new worldview" our awareness of our connectedness offers a great opportunity to bridge our inner and outer experiences of being human (Senge et al, 2005, p. 188). From our systemic interexistence, we are made both immensely vulnerable and powerful (Eisenstein, 2013) (Macy & Young Brown, Coming Back to Life, 1998, p. 52).



#### Pain for the World

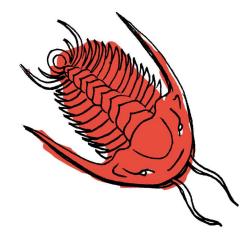
Owing to our interconnectedness, ecopsychologists believe we can consciously or unknowingly experience the trauma and suffering of the ecosphere (Macy & Young Brown, Coming Back to Life, 1998, p. 27). The experience varies from person to person, but can manifest as physical, psychological, economic, or political pain on behalf of the loss or corruption of habitats, resources, and species in the natural world (Conn, 1995, p. 161). Sarah Conn writes of the disconnect most of us experience in the West:

Because we experience the self as separate from the Earth, we feel either overwhelmed

by or removed from what we learn about environmental deterioration; we become helpless or indifferent in the face of it, and unable to respond except with numbness and denial. (Conn, 1995, p. 161)

Conn goes on to demonstrate the problem with suppressing our pain for the world and the chronic implications of depriving ourselves of the opportunity to grieve (Conn, 1995, p. 171) and "suffer with" the world (Macy & Young Brown, Coming Back to Life, 1998, p. 27). Ecopsychologists adopt the atypical stance that suffering "on behalf of society itself...is real and valid and healthy," (Macy & Young Brown, Coming Back to Life, 1998, p. 31).

If one can accept the idea that such suffering exists and is valid, he or she might be thinking how this suffering could be healthy. Joanna Macy and Molly Young Brown write, "[pain for the world] is an absolutely necessary component of our collective healing. As in all organisms, pain has a purpose: it is a warning signal designed to trigger remedial action," (Macy & Young Brown, Coming Back to Life, 1998, p. 27).



#### **Responding to the Warning Signal**

Both mindful of our sense of interbeing and open to our pain for the world, our response is a matter of choice. As global citizens, we can choose to react or to ignore the information. In our daily life, we can chose to engage in behaviours that are either "lifedestroying" or "life-enhancing", (Senge et al, 2005, p. 166).

#### **Powerlessness**

As a call to action, pain for the world is not always met with constructive responses. The suppression of our feelings often leads to the belief that our efforts as individuals are futile (Macy & Young Brown, Coming Back to Life, 1998, p. 37). Our sense of powerlessness – our perceived inability to make change - becomes a self-fulfilling prophecy in which we limit our exposure to painful information and thus limit our sphere of influence (Macy & Young Brown, Coming Back to Life, 1998, p. 32). Macy and Young Brown write that our denial mitigates our power to respond; we are quick to label ourselves "victims" and abandon any attempts to change our situation (Macy & Young Brown, Coming Back to Life, 1998, p. 37). As such, "we become as powerless as we fear to be," (Macy & Young Brown, Coming Back to Life, 1998, p. 32).

#### **Positive disintegration**

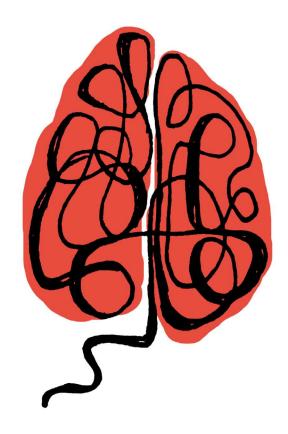
On the other side of the coin, living systems have the ability to take challenges head on, adapting forms and behaviours in order to survive (Macy & Young Brown, Coming Back to Life, 1998, pp. 44-45). For instance, through the Cambrian and Ordovician Periods, the trilobite attuned itself to various changes in the environment. From the growth of spines and exoskeletons to meet turbulent conditions to the loss of eyes to adapt to deep-

water habitats, nature enabled the trilobite to acclimatize to 300 million years of change (Gon III, 2008). In complex social systems, foregoing eyesight is not likely to aid us in the future. Instead, we as a society are at a point where our values and goals need to adapt in order to ensure our existence in future conditions (Macy & Young Brown, Coming Back to Life, 1998, pp. 44-45) (Haq & Paul, 2012, p. 96).

When we allow ourselves to experience and honour our pain for the world it demonstrates our intentions; that we care (Macy & Johnstone, Active Hope, 2012, p. 71). As soon as we register how our planet is suffering, we empower ourselves with the ability to change our behaviour and values. Like the trilobite through the Palaeozoic era, our characteristics aren't fixed points. We are constantly in a state of becoming (Macy & Johnstone, Active Hope, 2012, p. 93).

#### 4.5 INDIVIDUAL FORESIGHT & HOPE

In exploring the human capacity to make change, Peter Hayward's work and research on individual foresight provides a unique forward-looking lens. Analogous to how individuals experience a pain for the world, individuals can experience a variety of responses when looking to the future, particularly when met with painful or challenging information.



# Individual Responses to Anxiety & The Failure of Rational Certainty

Hayward defines rational certainty as "the premise that what is represented `in here' is the reality of what is 'out there," (Hayward, 2006, p. 63). Consider the loss of rational certainty to be the experience of receiving information that is at odds with your beliefs or perceptions. When an individual experiences a failure of rational certainty he or she can respond with a variety of "low-quality" or "high-quality" responses.

#### 1. Low Quality Responses

Hayward claims that low-quality reactions transpire when individuals act exclusively on the basis of emotion and instinct (Hayward, 2006, p. 64). Low-quality responses appear to minimize the individual's sense of responsibility over current events, thereby rendering them powerless over future events.

#### a) Cognitive Dissonance

When individuals are faced with the image of a future scenario that is not in harmony with what they believe, cognitive dissonance can occur (Hayward, 2006, p. 60). Coined by Leon Festinger in the 1950s, cognitive dissonance refers to "psychological conflict resulting from simultaneously held incongruous beliefs and attitudes," (Merriam-Webster Incorporated, 2014). Tension accompanies the feeling of discordance and as a result, individuals tend to respond with negative emotions such as caution, concern, anxiety or fear (Hayward, 2006, p. 60). Hayward highlights the experience of this phenomenon as an individual "[becoming] aware of a discrepancy between what was thought as real and the dawning awareness of reality," (Hayward, 2006, p. 63).

#### b) Shoot the Messenger

In order to render the cognitive dissonance invisible, the individual must "simplify the circumstances" (Hayward, 2006, p. 63). This response involves responding to the cause of anxiety with fear, subsequently rejecting the conflicting information and choosing to either contest it or ignore it altogether (Hayward, 2006, p. 64)

Both denying the future and feeling constricted by the conditions of the present can be referred to as an act of "defuturing." Conceived by Fred Polak in 1973, defuturing indicates "a retreat from the constructive thinking about the future in order to dig oneself into the trenches of the present," (Polak, 1973, p. 195). Driven by emotion or instinct, these responses further emulate a sense of powerlessness over the course of future events in the absence of rational certainty (Hayward, 2006, p. 64). To any individual experiencing despair, "any effort to change the world seems hopelessly naïve," (Eisenstein, 2013).

These low-quality responses to anxiety and the failure of rational certainty can be compared to an individual's negative responses towards experiencing a pain for the world.

#### 2. High Quality Responses

Conversely, an individual can also employ high-quality responses to anxiety if he or she has the capacity to move beyond the emotional response (Hayward, 2006, p. 64). With the development of creative thinking skills and the adoption of a future-oriented approach, an individual can remain open and tolerate the strain and anxiety imposed by ambiguity (Hayward, 2006, p. 64).

#### a) Changing One's Orientation

According to Landau, cited in Hayward, a high quality response to anxiety "can lead to a change in orientation: rather than a continued search for solutions in the outside world, it can lead to looking from the outside inwards to discover ability inside the individual," (Hayward, 2006, p. 64). By acknowledging the potential within the self, individuals can gain a sense of agency, overcoming the feeling of powerlessness over present-day conditions.

#### b) Creating Knowledge Surrogates

Given the loss of rational certainty, another high-quality response is to create knowledge surrogates, or "presumptive truths" in order to proceed with decision-making and social processes in the absence of certainty (Hayward, 2006, p. 64).

Hayward believes that while the use of knowledge surrogates cannot resolve ambiguity, this tactic can effectively mitigate the "paralysis" that would occur on the sole basis of fear (Hayward, 2006, p. 65). Most significantly, the creation of a presumptive truth can empower individuals to take anticipatory actions leading towards a desired future (Hayward, 2006, p. 65). Despite the legitimacy of the presumptive truth, anticipatory action succeeds in reducing overall anxiety and bringing a society closer to their desired vision (Hayward, 2006, p. 65).

#### c) Engaging in Dialogue

A third high-quality response to anxiety is to engage in dialogue (Hayward, 2006, p. 65). By confronting the source of anxiety with the choice to explore and illuminate the information, the individual can maintain the contradictions of both the emerging reality and his or her perceived reality (Hayward, 2006, p. 65). As a result, addressing uncertainties through dialogue can diminish fear and enable other high-quality responses to occur (Hayward, 2006, p. 65). Dialogue serves as an effective bridge from experiencing anxiety to finding motivation to act productively.

#### d) Hope

The only response to anxiety and uncertainty that enables humans to truly transcend fear is hope (Hayward, 2006, p. 66). Hayward expresses that by looking to the future with hope, one can "overcome fear, and thus transcend the loss of rational certainty," (Hayward, 2006, p. 66). In order to enable hope to emerge, the interior dimension of both the individual and collective life must be realized and empowered (Hayward, 2006, p. 67). Joanna Macy and Molly Young Brown acknowledge the undeniable challenge of having hope in uncertain times. In times of uncertainty, it can be tempting to narrow our spheres of influence to address short-term goals of survival for ourselves alone (Macy & Young Brown, Coming Back to Life, 1998, p. 6). In the formative book Hope in the Dark, Rebecca Solnit speaks to the opportunity and challenge of taking a hopeful stance:

> Hope is a door, or rather a vision of a door, a belief in a way forward that is not open to all people at all times. Yet sometimes it seems that the desperate are more hopeful than the official spokespeople for radical politics – that, say, undocumented immigrants persevere in locating doors while the anointed spokespeople go for the rhetoric of beating one's head against the wall. Despair demands less of us, it's more predictable and, in a sad way, it's safer. (Solnit, 2006, p. 14)

#### Hope & Alternative Futures

Despite known challenges, Hayward believes that hope, paired with imagination, can lead to the development of positive images of the future and thus the creation of alternative futures (Hayward, 2006, p. 67). In the realm of environmental deterioration, many activists have spoken of the need for grounded, or active hope in order to make positive change (Jaggard, 2014) (Macy & Johnstone, Active Hope, 2012). Stressing the possibilities and potential of futures work, Hayward states that we must "understand that all 'presents' cause some humans to suffer and the goal is to create futures where the extent and degree of suffering is reduced" (Hayward, 2006, p. 67). Given the inherent suffering occurring in environmentally toxic regions, the ability to simultaneously transcend the present suffering of one's experience and engage in creating possible futures is a significant feat to say the least.

> Each mountain flattened, each river contaminated, each breath of fresh air polluted, is a vital piece of our world lost. Yet as I watch the planet being destroyed river valley by river valley, ecosystem by ecosystem, I have hope. I believe we can save it in the same way: one river at a time, one town at a time. We start with ourselves, tending first to our own communities and, eventually, to the valleys and mountains beyond. (Kennedy Jr., 2005, p. 9)

When we engage in hope, we devote ourselves to the future. When we compare the suffering of the present with positive visions for the future, we build a bridge to carry ourselves towards a better world (Morrow, p. 4). Hayward believes that by contrasting our desired visions with the present, we establish a "behavioural commitment to act", (Hayward, 2006, p. 110). Through visioning, we must be reminded of the challenges and pain of the present, keeping ourselves grounded while exploring what we desire (Hurley, 2009, p. 40).

#### **Active Hope**

A curiously human phenomenon, many scholars from various fields have extensively covered the concept of hope. Researcher and psychologist C.R. Snyder has summarized Hope Theory into a three-piece equation of agency (willpower), pathways (waypower) and goals (Snyder, 1995) (Morrow, p. 3). Just as an individual has the capacity for foresight, he or she also has the capacity to hope.

Joanna Macy and Chris Johnstone have articulated an important distinction in the meaning behind the word hope in their book *Active Hope*. Hopefulness refers to either our perceived odds of experiencing a desired outcome or our aspirations and what we hope for (Macy & Johnstone, Active Hope, 2012, p. 3). While the idea of hope is important, the authors are more interested in how we move forward with hope (Macy & Johnstone, Active Hope, 2012, p. 3). When we wait for others to bring about our desired future, we are engaged in "passive hope," yet when we are personally pursuing a positive future, we are exhibiting "active hope," (Macy & Johnstone, Active Hope, 2012, p. 3)

Through active hope, we open ourselves to discover our purpose and strengths (Macy & Johnstone, Active Hope, 2012, p. 4). In reflection of hope, Rebecca Solnit writes:

> To hope is to gamble. It's to bet on the future, on your desires, on the possibility that an open heart and uncertainty are better than gloom and safety. To hope is dangerous, and yet it is the opposite to fear, for to live is to risk. (Solnit, 2006, p. 4)

If we are to commit ourselves to a better future, we must understand the dangers of not taking action. In order for a better tomorrow to be possible, we must have hope and we must act in favour of it.

#### **Embodying Foresight & Interbeing**

When an individual engages with the uncertainty of the future and plays an active role in the creation of positive futures, he or she is embodying foresight. By nature of their work, activists must "plunge into the unknown" that is the future (Solnit, 2006, p. 58). Accordingly, activists must have the courage to thrive in ambiguity if they are to succeed.

In order to make positive change, we must follow Mahatma Gandhi's famous (and over cited) declaration, "Be the change you wish to see in the world," expressing our ideals and values in our daily life and actions. To reinforce this concept, the term "politics of prefiguration" suggests, "if you embody what you aspire to, you have already succeeded," (Solnit, 2006, p. 87). In the twelve-month process of my major research project, my relationship towards Sarnia, activists and foresight have fluctuated and evolved.

#### **Experiencing Cognitive Dissonance**

There is no better way to describe the feeling I experienced after my first meeting with Ada and Sandy than cognitive dissonance. From one conversation, everything I had told myself to believe about my community had been called into question. I knew that the chemical industry had a negative impact on human health, but up until this point I felt safe. As a healthy, young woman growing up in Sarnia's North end, I was fine. But I wasn't. "It's not just the South end you know, we've got it bad in the North end too." Sandy lives just blocks away from my parents. In that moment, nothing had happened to me yet everything had changed. Rational certainty failed me.

# 



# INTEGRATED MODEL FOR PERSONAL CHANGE AND ACTION\*



1 5 2 4 3

Adaptation of the Theory U Framework<sup>2</sup> The process of transformational change requires deep consciousness in order to experience a significant transition (Scharmer & Kaufer, 2013). As you move down the left side of the U, the level of consciousness required increases (Scharmer & Kaufer, 2013).

\* Based on Otto Scharmer's *Theory U*, Joanna Macy and Chris Johnstone's Active Hope and Sarah Conn's *Model for Interventions.* 

Notes

1. Conn, S. A. (1995). *When the Earth Hurts, Who Responds*. In T. Roszac, M. E. Gomes, & A. D. Kanner, Ecopsychology: Restoring the Earth, Healing the Mind (pp. 156-171). Berkeley, CA: Sierra Club Books.

2. Scharmer, O., & Kaufen, K. (2013, April 29). *Leading* from the Emerging Future - from Ego-System to Eco-System Economies. Retrieved 01 20, 2015, from Presencing: https://www.presencing.com/sites/ default/files/page-files/Ego\_to\_Eco\_Intro.pdf

3. Macy, J., & Johnstone, C. (2012). *Active Hope*. Novato, CA: New World Library.

# **5. TOWARDS CHANGE**

Across various bodies of knowledge, the process of change management has been effectively mapped and researched. There is a fascinating degree of overlap in the structure of change in which individuals move from the experience of awareness towards the ability to act. The frameworks from Otto Scharmer's Theory U, Joanna Macy and Chris Johnstone's Active Hope, and Sarah Conn's Model for Interventions have taken different approaches and arrived at similar conclusions. These frameworks have been adapted and integrated below.

# I. Awareness and Reality

The first step towards positive change starts with an awareness of current conditions and injustices. To achieve Active Hope, Macy and Johnstone suggest individuals must first "take a clear view of reality," (Macy & Johnstone, Active Hope, 2012, p. 3). Conn's model requires individuals to ask and answer questions in order to foster a heightened awareness (Conn, 1995, pp. 166-170). Supporting the work of both Scharmer and Macy & Johnstone, Conn proposes that through this practice "we can become aware of ourselves and of the world," (Conn, 1995, pp. 166-170). While daunting on the surface, our awareness to injustice and harm can actually "wake us up, to move us from apathy to action." (Hurley, 2009, p. 33).

Unsurprisingly, this stage of the process is usually both scary and painful (Macy & Johnstone, Active Hope, 2012, p. 25). When individuals come to terms with the clear state of the world, he or she may experience negative responses to the new information, comparable to the responses Hayward highlights in the above segment on anxiety and the failure of rational certainty. The early stages of Otto Scharmer's scaffolding speak to the process of connecting with the world and opening oneself to knowing from within (Scharmer, 2013).

### II. Sensitivity and Feeling

Once an individual has become receptive to the current state of the world and the emerging reality, he or she must engage deeply and openly with our emotions in order to move forward productively. Conn's model expresses this stage as emotional responsiveness, the "ability to feel and engage rather than to become numb and dulled," (Conn, 1995, p. 167). While we may be tempted to suppress our emotions Conn believes that behaviour is actually counterproductive; leading us to "dump emotions" on others and to squander our emotional energy (Conn, 1995, p. 167). When taken as fuel for the fire, emotions can allow us to connect to something larger than ourselves (Conn, 1995, p. 167). In the Theory U framework, individuals must move onto a process of sensing - to deeply, and collectively observe and listen with an open heart and mind (Scharmer, 2013, p. 6). Scharmer believes that by opening ourselves up through the experience of sensing, we can become more aware of opportunities as they emerge (Scharmer, 2013, p. 6).

### III. Acceptance and Understanding

As we engage with new information from both external and internal sources, we begin to piece together the big picture and our role within it (Conn, 1995, pp. 166-170). To fully build the capacity for understanding, we must be able to zoom in and out from the internal and external perspectives – to juggle both our experience as individuals and our understanding of the great scale and complexity of the Earth (Conn, 1995, pp. 166-170).

Before an earthquake strikes, tectonic plates deep below the surface are subject to a tremendous amount of pressure. Opening ourselves up to true experiences of mindfulness, we first must experience the pain that comes with knowing and feeling. When we reach the other side of our emotions, we become liberated by the release of tension. Eisenstein believes "real hope" transpires on this other side (Eisenstein, 2013). Further, "true optimism comes from having traversed the territory of despair and taken its measure," (Eisenstein, 2013). Even in the context of organizational change management, people experience a variety of emotions in what is known as the "valley of despair" in the transition process (Payne, 2001).

Yet through this phase, we allow ourselves to be open to possibilities, to "discovering the power to shape our reality and our responsibility to an emerging future," (Senge et al, 2005, p. 132). Beyond the divergence of our thinking, the understanding phase leads us to the experience of "letting go" of anything that is unnecessary (Scharmer, 2013, p. 7). In the centre of the Theory U framework, Scharmer highlights the experience of presencing - a process that lies at the intersection of presence and sensing (Scharmer, 2013, p. 1). In the area of personal development, this stage opens individuals to both leave behind unnecessary aspects of themselves while opening ourselves to positive transformation towards "our highest possible future self," (Scharmer, 2013, p. 7).

### **IV. Vision and Intention**

In Joanna Macy and Chris Johnstone's work Active Hope, the creation of a vision and the identification of our values are critical in order to move towards positive change (Macy & Johnstone, Active Hope, 2012, p. 3). Within the Theory U framework, the initiating stage scratches the surface of this step whereby change agents must create an intention and maintain a purpose for their work (Scharmer, 2013, p. 6). In the book Presence, the authors reinforce this requirement with the stage "crystallizing intent" or discovering our purpose (Senge et al, 2005, pp. 154-155). According to the authors, "When our work is informed by a larger intention, it's infused with who we are and our purpose in being alive," (Senge et al, 2005, p. 140).

When our intentions become clear, our focus is sharpened (Senge et al, 2005, p. 135). As a result, our vision can become more encompassing and inclusive towards the needs of others (Senge et al, 2005, p. 135). Beyond this, our perception changes from a space of "I want to do this" to "I can't not do this," (Senge et al, 2005, p. 135).

In the book Presence, the authors write that the process involves "bringing into reality enduring changes that are both external and internal," (Senge et al, 2005, p. 166). On the internal level, individuals experience two levels of change (Senge et al, p. 168). Senge et al. believe that through this process of change "we come to embody a new capacity for action" and we become perceptive to the obscure features of the world around us (2005, p. 168). Not only must we gain clarity of our present reality, we are also tasked with seeing our power to influence our future. In Presence, the authors write, "Only when people begin to see from within the forces that shape their reality and

to see their part in how those forces might evolve does vision become powerful," (Senge et al, 2005, p. 132). This power is expressed through transformation and restoration when we chose to respond to our reality with positive change (Macy & Johnstone, Active Hope, 2012, p. 109)

# V. Action and Change

Through realization, action is possible. In Conn's model, action is defined as "the willingness to work actively for the health of the Earth by engaging in behaviour that addresses ecological problems," (Conn, 1995, p. 170). Beyond the ecopsychology lens, action for transformational change is set in Theory U through the practice of co-evolving (Scharmer, 2013, p. 7). Co-evolving asks of us to "embody the new ecosystems that facilitate seeing and acting from the whole," (Scharmer, 2013, p. 8). To move towards change, we must acknowledge our understanding and choose to respond in a way that creates the impact we hope to see (Scharmer, 2013, p. 8). As an activist emerges, he or she may become receptive to visions that challenge the consensus view. Charles Eisenstein writes:

It takes more courage to believe what we know is true than to disbelieve what we know is false. For the visionary, that knowledge is in the beginning a lonely knowledge, surrounded by a welter of doubt both within and without. To trust a moment of clarity and carry it forward, to translate it into belief and act from it amid all the voices that say it is crazy or impossible, is no trivial matter. (Eisenstein, 2013) As my understanding and consciousness deepened during the exploration of this topic, I experienced a variety of emotional responses in-line with the integrated model.

At the early stages of the project, I found myself intrigued by the idea of bringing innovation and strategic foresight to Sarnia. Yet as soon as I began researching, I was blown away by the dire statistics around local air and water quality. Unsettling, but abstract enough to keep me going, I started reading about Sandy and Ada online and knew I had to meet them to get their point of view. I was just entering the Awareness & Reality stage and my agenda was to seek possible stakeholders to engage in a visioning workshop.

But that never happened. I met with Sandy and Ada and, despite feeling inspired by their dedication and knowledge, I felt totally helpless and overwhelmed by the scale and complexity of the social and environmental problems Sarnia was facing. Just as I was moving towards the second step of Sensitivity and Feeling, I reached my limit. I found it difficult to make any progress and I could not find a way to resolve my research intention. Sarnia's economy had benefited largely from industry in the past but at what cost? In some ways, I realized foresight had failed Sarnia - it is far too late to think about the future of small, industrial communities at a time where everyone is moving to dense urban cities. I changed my topic. Twice, actually. The project was too personal and I wasn't ready to accept the current reality. I felt powerless. I spent weeks trying to justify a new research area. Even after following the new direction through to an approved proposal, it was impossible to relieve the guilt of bailing on such a meaningful project. Just as I was feeling defeated, I stumbled upon Peter Hayward's work in Individual Foresight. Reading his PhD cover to cover, I realized my opportunity to bring a new perspective to activism with futures research.

After returning to this project focus and nearing completion, I feel I have reached the third stage: Acceptance and Understanding. I've let go of my personal fears and anxiety and have shifted my perspective from "saving" Sarnia to reexamining it. Perhaps in the future I will continue to move through the framework towards the later stages.

# 6. BECOMING AGENTS OF CHANGE

Through both a challenging and rewarding process, activists come to gain the strength to stand up for the causes they truly and openly believe in. While it may appear to be a linear process, the experience of change in individuals is often more or less turbulent and recurrent (Eisenstein, 2013). Despite the challenges, our increased capacity to act on behalf of others, our compassion leads us to greater courage and determination (Macy & Johnstone, Active Hope, 2012, p. 32) Through action, an individual is able to both improve the lives of others and experience personal growth. Activist and writer Charles Eisenstein believes a life of activism leads to a journey of selfrealization (Eisenstein, 2013).

# **The Change**

Within the context of communities impacted by environmental toxicity, citizens might encounter countless signals of harm and uncertainty on a daily basis. Both in spite of and instigated by these conditions, some will become activists, taking on highquality responses and playing an active role in shaping the future of their communities. In her work on Transformational Hope, Rowena Morrow writes, "through unleashing the creativity and innovation inherent in all humans; we can start to change the world in which we live," (Morrow, p. 14). While our individual behaviours may appear marginal at times, Joanna Macy and Chris Johnstone believe these actions "hold the seeds for the future," (Macy & Young Brown, Coming Back to Life, 1998, p. 19). When we foster our capacity for foresight, we unveil our sense of agency over future conditions. Mother Teresa once said "You cannot do great things. You can only do small things with great love." In support of starting with small, manageable actions, Senge et al. suggest, "what matters is engagement in the service of a larger purpose rather than lofty aspirations that paralyze action," (Senge et al, 2005, p. 138). Respectfully, this project will attempt to explore how individuals embody a transformation in orientation and become agents of change for their environments.

### The Images of the Future

Behind this thesis is the hypothesis that activists are often subject to their constructed visions of future possibilities in their communities. Through imagined possible futures, activists may be actively pushing for change in ways that lead us towards a possible preferred future scenario or away from a perceived negative future scenario. In futures studies, a preferred future offers prosperity to both the originator in the present and generations in the future (Hayward, 2006, p. 93) It is important to foster clear images in individuals in order to help foster positive responses to change (Morrow, p. 6). Rowena Morrow writes, "The fear and anxiety held about the future by individuals is mitigated through development of futures images, whether they come true or not, and they allow clear decisions to be taken in the present which otherwise may seem fraught with difficulties (Morrow, p. 6). Beyond the images themselves, such ideas are often imbued with meaning and values - traits that guide us towards possible futures that we deem valuable (Morrow, p. 6).

Seeking to enlighten others to the perspectives of activists, this thesis is charged with creating awareness for the values inherent to activists.





# **7. THE CONTEXT**

In an effort to draw analysis from activists across borders, individuals were selected on the basis of their known involvement in positive changemaking in the following communities.

# SARNIA, ONTARIO

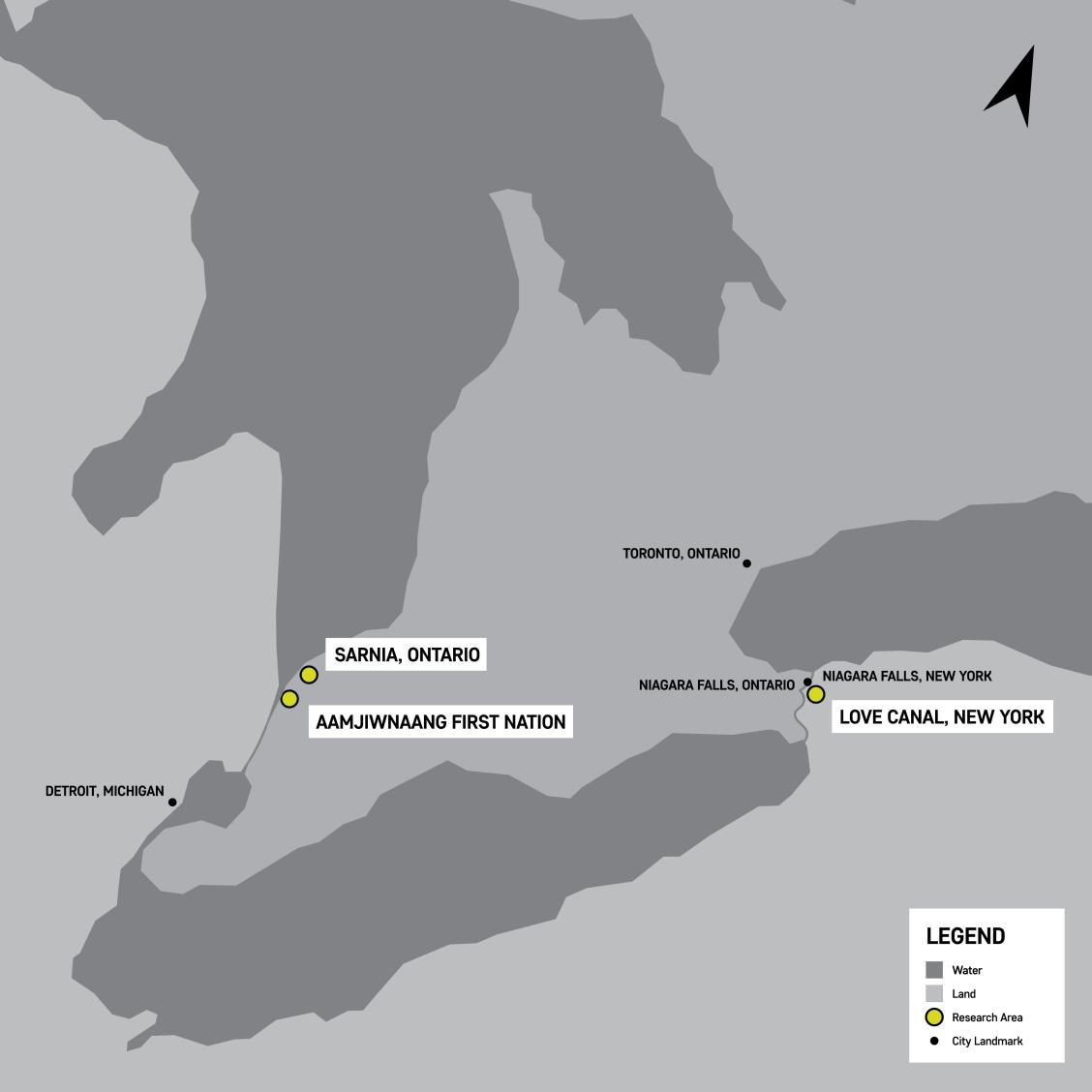
Nestled on Lake Huron on the border of Michigan and Ontario, the small city of Sarnia has a population of just over 72,000 people (Statistics Canada, 2011). A community built by the booming oil industry of the 19th century, Sarnia's industrial cluster known as Chemical Valley hosts roughly forty percent of Canada's chemical industry with sixty-two facilities within twenty-five kilometers of the city (MacDonald & Rang, 2007). According to the National Pollutant Release Inventory (NPRI), the city of Sarnia pollutes nearly as much as the entire province of New Brunswick and is home to the country's worst air quality (MacDonald & Rang, 2007).

### **AAMJIWNAANG FIRST NATION, ONTARIO**

Aamjiwnaang is a First Nations community within the city limits of Sarnia, Ontario. The community includes 2,000 band members, with 850 people living on Aamjiwnaang territory (Johnston, 2014). Since the 1940s, Sarnia's industrial region has grown to surround the Aanishinaabek people (Johnston, 2014). Today, three of the community's four borders are occupied by industry (Aamjiwnaang Environment, 2010). Living so close to the chemical plants, residents of Aamjiwnaang First Nation are subject to an unfair amount of pollution and have experienced a range of adverse health effects (Aamjiwnaang Environment, 2010). Studies have shown a deviation in the local birth rates, changing from 51% boys to 49% girls in the early nineties to an irregular rate of two girls for every one boy by 2003 (MacKenzie, Lockridge & Keith, 2005).

### LOVE CANAL, NIAGARA FALLS, NEW YORK

In the 1950s, just as suburban sprawl was taking place in the city of Niagara Falls, New York, the local public school board purchased property formally owned by Hooker Chemical Company for \$1 (Zuesse, 1981). Aware that the company had buried over 20,000 tons of toxic chemical waste beneath the lot, the board signed off on the deal and immediately began developing a neighbourhood built with 100 homes and a school (Zuesse, 1981). From household chemical leaks to birth defects, health impacts from chemical exposure began to surface in the seventies (Goldman et al., 1985). As a result, residents began protesting the injustice and were later evacuated from their homes (Gibbs, 2008).



# 8. THE ACTIVISTS

Three activists were selected on the basis of their known efforts in the environmental and social realms. In an attempt to foster diversity within the study, the researcher consciously selected these individuals with varied age, gender, religion, culture and socioeconomic status.

# Ada Lockridge

Ada Lockridge is fighting for the right to a healthy environment, currently involved with EcoJustice in the Chemical Valley Charter challenge case against the Ministry of the Environment.

# **Sandy Kinart**

Sandy Kinart is an advocate for the rights of workers and their families. Chairperson of the Victims of Chemical Valley (VOCV) in Sarnia, Ontario, Sandy has spent years campaigning to convince the Canadian and Quebec governments to ban asbestos exports to Third World countries.

# **Jay Babcock**

Jay Babcock is co-founder of Love Hurts, a volunteer cause organized around stopping people from illegally dumping garbage in Love Canal, Niagara Falls, New York.



# 9. THE FUTURES

Within the discipline of futures research, it is important to contemplate many possible and/or probable futures and the implications related to their conceivable occurrence (Textor, 1980). Since the future hasn't happened yet, "there are no future facts" (Brumbaugh, 1966, page 649). As a result, this project intends only to produce possible images of the future – based on the assumptions, values and understandings of Sandy, Ada, and Jay – and not to make any dedicated predictions or points of view about what the future will look like.

Using Robert B. Textor's Ethnographic Futures Research framework Ada, Sandy, and Jay were invited to describe three scenarios – an optimistic, pessimistic and probable scenario for the year 2030.

# **Optimistic Scenario**

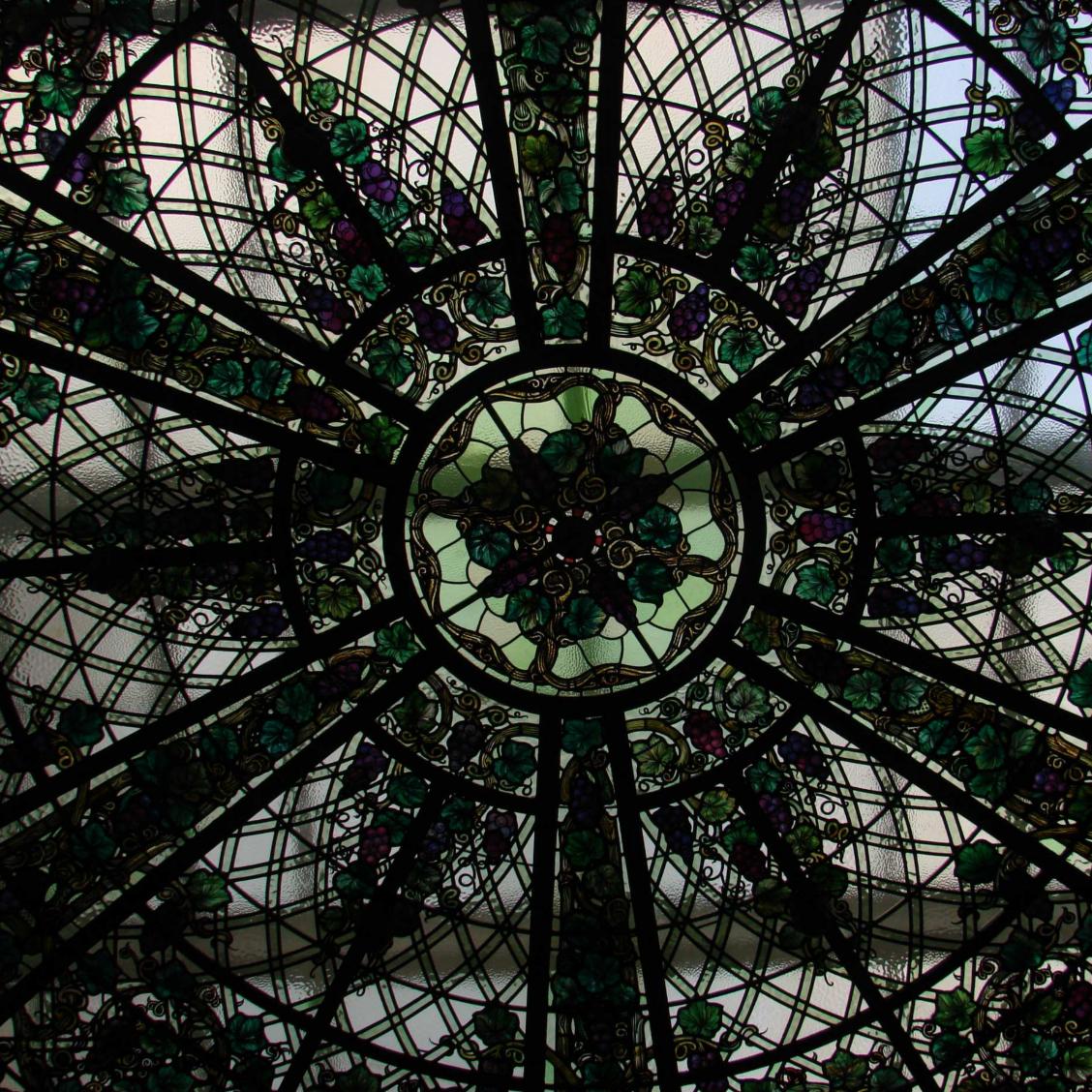
On a hypothetical scale of 0 to 10, where 10 is most desirable and 1 is least desirable, the interviewee is invited to discuss where the number 9 falls on the scale - a highly desirable future scenario that is "not quite the very best" but close (Textor, 1980, page 35).

# **Pessimistic Scenario**

Conversely, on the same 0-10 scale, the interviewee is invited to describe a scenario that falls at the number 1 - a highly undesirable future that is "not quite the worst," (Textor, 1980, page 36).

# **Probable Scenario**

Following the cognitive stretch to the extremes of positive and negative scenarios, the interviewee is then asked to park their perceptions based on desirability and is asked to instead describe the most probable scenario for the year 2030 (Textor, 1980, p. 37).





# SANDY KINART

# Sandy Kinart

*Community Activist for the Victims of Chemical Valley Asbestos and Occupational Diseases, Sarnia* 

"We've always heard that Sarnia was a hotspot. When you listen to the fathers and the men who work in industry they would say, "this stuff's going to kill us."

Sandy recalls hearing these warnings from industry workers in her hometown. Yet like many residents, Sandy refused to believe the impacts of industry claiming, "I was as bambi-eyed as the rest of them." With bright lights glowing and beautiful gardens surrounding the plants, Sandy was once compelled by the "fairyland" that was Chemical Valley. Yet today, that narrative has been shattered.

As an inventory professional for the area's community health department, Sandy became mindful of changes in patient needs. Sandy recalls that in the late nineties, "We had essentially gone from Band-Aids and hugs to heavy wound care, cancer care, all those types of things." Around the same time, Sandy remembers residents from Walpole Island First Nation, located about 50 kilometres downstream from Sarnia, disclosing the growth of tumours and other abnormalities in the fish and ducks. Responsible for collecting local obituaries for the office, Sandy immediately noticed a change in community health, "all of a sudden in my work, I could see the insurgence of those diseases." Aware that many workers had been exposed to chemicals and industrial products in the plants, Sandy started to wonder how these hazardous materials were impacting people. She began trying to find answers on her own, creating an "underground" movement in her office to help victims navigate end of life care. Sandy felt like Alice in Wonderland standing before a locked door with a large set of keys. "You're trying the doors and nothing's opening."

"Then disease knocked on our door. My husband came home and he said he couldn't breathe." Sandy's husband Blayne Kinart worked as a millwright at the Welland Chemical plant in Sarnia. Sandy continues, "It was a very hot, humid day and he had just climbed a hundred foot tower...He never let on how serious he was feeling." The six-year strike had just finished and Blayne was determined not to take time off work to visit his doctor. Just weeks later, in 2002 Blayne was diagnosed with mesothelioma, an aggressive form of lung cancer that develops from exposure to asbestos – a deadly material widely used by industry until 1979 when the Canadian Government began promoting a controlled use approach to asbestos manufacturing due to the known health risks (CanSAV, 2012). Blayne was given four months to live.

Having witnessed others in her community struggle with end of life care, Sandy was prepared to fight tooth and nail to get her husband the care he needed while also paving a path for others. Sandy struggled to ensure her husbands comfort in his end of life journey, demanding that the Workplace Safety and Insurance Board (WSIB), an agency that offers compensation to workers, would offer coverage for a hospital bed. Sandy maintains Blayne had been sleeping upright in a chair with large tubes protruding from his back while the WSIB was refusing to cover the \$35 weekly charge to upgrade to a floating bed – a small gesture that would have improved his quality of life. Sandy muses, "That day, I bought a pair of red high-heels - in my head, because I had no money - and I thought I am going to do this, he will have that bed." Sandy was able to bring Blayne the care he was entitled to; he received a proper hospital bed within that week. She continues, "and I would fight for anybody to have that bed."

With Sandy alongside him, Blayne suffered with mesothelioma for two years before ultimately succumbing to a painful death in 2004. Today, Sandy fights on behalf of workers and their families, determined to bring justice to those who have lost their lives due to workplace diseases. "We can't change what's happened here because we're living the legacy of our past. We have to live that. That's going to take a long time. But we can demand change."

# Sandy's 2030 Scenarios

# **OPTIMISTIC SCENARIO**

Sandy initiates her best-case scenario with a clear and powerful request, "I would like to see asbestos banned worldwide, not used in any products at all." In 2030, a significant shift in values has occurred where employee safety and wellbeing takes precedence over company profits for shareholders. Naturally, the Workplace Safety and Insurance Board (WSIB) will be succeeding in providing justice to workers.

The legacy of dangerous practices is still leading to cases of occupational disease, but these patients are in better hands, thanks to a "healthcare system that will facilitate easily and smoothly around the patient."

Workers, families, and Canadians in general are benefiting from policies and practices that encourage more equality. With an increased minimum wage across provinces, the gap between high-income and low-income earners is decreasing. Trusted, accountable people are governing the country; striving to understand citizens and spend time and money on solving problems to move the nation forward.

Both healthcare and education have become free. Canadians are experiencing the freedom to share their culture and there is greater acceptance between native and non-native communities. Western society is starting to question the desire for material acquisition, but overall behaviours haven't begun to change. In an attempt to disrupt this pattern, young children are being taught the skills for a sustainable future (mending clothing, gardening, etc.)

# **WORST-CASE SCENARIO**

For Sandy, the worst-case scenario for 2030 involved very limited progress. As she imagines it, healthcare will have changed slightly for the better and government is not operating much differently than today. The Workplace Safety and Insurance Board (WSIB) is ruling in favour of industry interests and workers are still fighting for justice from 20+ year-old claims.

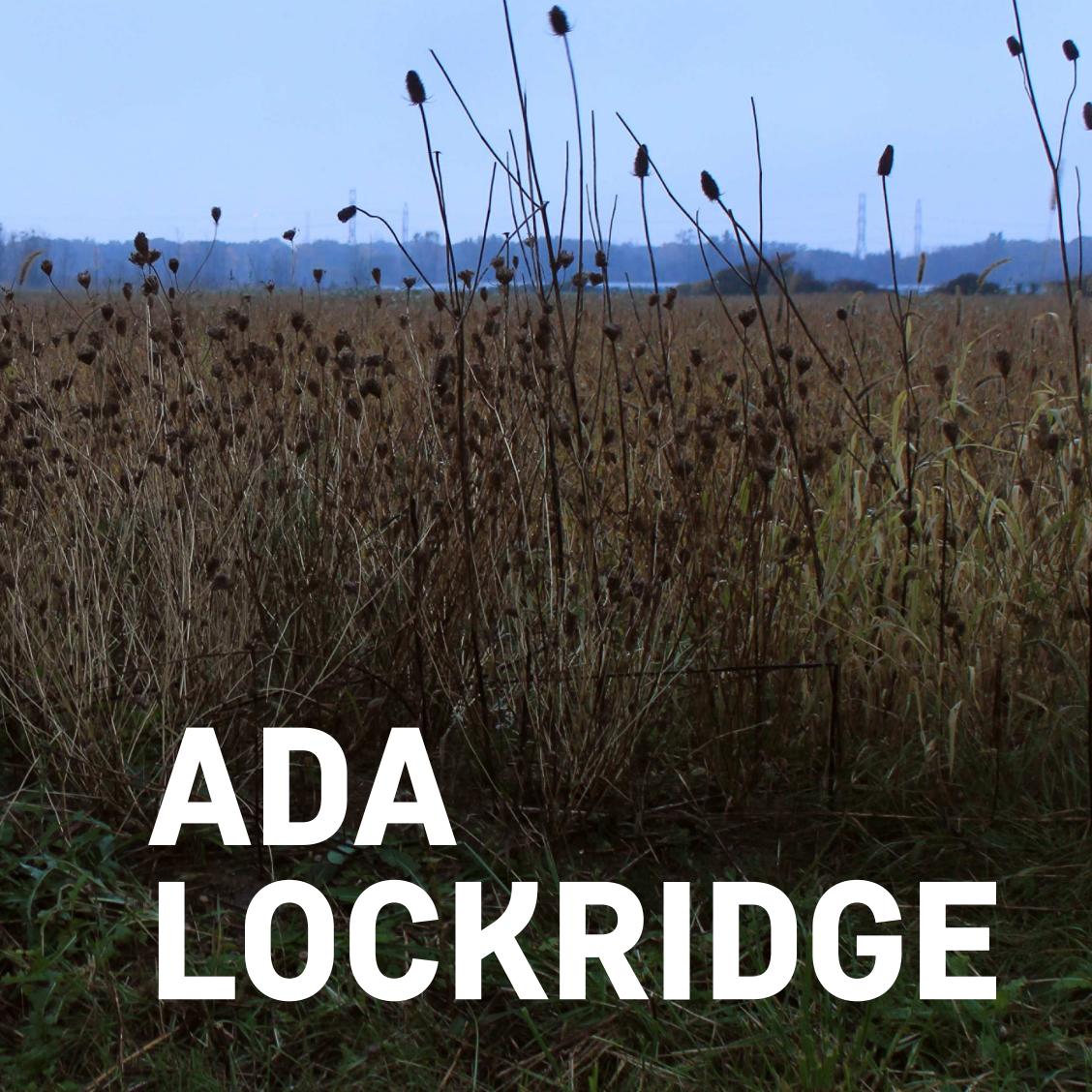
The economy is continuing to get worse and as a result, we as a nation are "in huge trouble." The government is moving away from the interests of citizens, offering significant tax breaks to industry in an effort to stabilize the economy. As a result, the gap between low-income and high-income earners continues to grow. There is no longer a middle class in Canada.

Beyond the 15 years of this scenario, Sandy imagines the rights and culture of Canadians will have almost completely eroded, slowly assimilating into an unrecognizable state. The environment will no longer be monitored and lakes and rivers no longer protected. Eventually, there will be a surge in pollution levels and access to clean water will have vanished.

# **PROBABLE SCENARIO**

For the year 2030, Sandy believes the most probable scenario will be much like the present. "I don't think we're going to see a lot of change, in government especially." The economy is in an unhealthier state with more and more production occurring offshore, driving a disparity in income and affordability. Despite the troubling economic conditions, society is still striving for material wealth. As a result, the environment has continued to deteriorate, heading in a downward spiral. "We don't have any real food and we're getting other diseases in animals and people now. That to me is very worrisome." As Sandy imagines it, the complex conditions of today will putt along until eventually the degree of problems becomes completely overwhelming.





# Ada Lockridge

Community and Environmental Activist, Aamjiwnaang First Nation

"When those flares are going, "Woaa, woa" and your body and the house and the windows are vibrating. And then they say, "oh no, it's in your head." No Fucking Way it's in my head." Ada describes her experience of a chemical release from a nearby chemical plant. As a resident of Aamjiwnaang First Nation Reserve in Sarnia, incidents like these are not uncommon. Having guided many journalists, filmmakers, researchers, and advocates around the area for a "Toxic Tour", Ada has realized that the familiar experience of living in "Chemical Valley" is not typical for others. While she believes the releases have gotten worse in the last decade or so, thinking back Ada says, "I've lived here all my life but it was like I must have had blinders on or something."

In 2003, Suncor, an energy company with existing facilities in Sarnia announced via newspaper that one of Canada's largest ethanol plants would be built adjacent to the Aamjiwnaang community. In response, Ada and other concerned citizens from the area organized (later becoming an ad hoc committee) and began collecting petitions, blocking roads, and protesting. Already surrounded by dozens of refineries and plants, Ada felt inclined to show industry "enough is enough. Leave us alone. We have enough [plants] here."

Through the committed work of advocates like Ada, the plant was eventually built further downstream. In recognition for her role in the group's success, Ada was presented an eagle feather from the Plain family, a sacred symbol reserved for highly honoured individuals in Native American culture. On receiving the feather, Ada recalls a surreal moment when the feather twitched from her hand and fell from her grasp. While initially shaken, Ada took the experience as a sign stating, "my job's not done."

Ada's commitment and determination was just beginning. While working to protest the proposed ethanol plant, Ada and her committee attended a presentation about the National Pollutant Release Inventory (NPRI) at the Occupational Health Clinic for Ontario Workers (OHCOW). The committee asked OHCOW for advice on stopping the ethanol plant and were guided to look into previous health studies at Aamjiwnaang. With a copy of Aamjiwnaang's 1996 Health Study, OHCOW reached out to Michael Gilbertson, a biologist from the International Joint Commission, to review the report. Gilbertson asked the group if they noticed anything strange with the gender ratio in the area. Ada reviewed the community census data between 1984-2004 and found an unusual trend; the ratio had changed from 51% boys to 49% girls to an irregular rate of two girls for every boy.

To build the quality of evidence in the area, OHCOW then helped the committee to initiate the Aamjiwnaang Health Survey and Body Mapping Study 2004-2005, a self-reported health study on the reserve. Determined to make a case against industrial pollution, Ada took it upon herself to conduct the study, travelling door to door to survey residents of Aamjiwnaang about their health. Today, Ada's concern for the health of her community has led to a fulltime commitment to activism and involvement in a large court case backed by Ecojustice, a charitable organization defending the environmental rights of Canadians. "I worry about the future of everybody, not only the people, the plants the animals and all the creatures...are we going to be alright?" Featured in countless magazine and newspaper articles, films, and theses, Ada strives to bring awareness to environmental impacts of industry and justice to the residents of all of Lambton County and beyond. Armed with stacks of photos, reports, and documents, Ada works tirelessly to collect scientific evidence towards the accumulative effects of chemical releases locally.

Ada claims she will not stop fighting until the chemical releases stop. Having seen many members of the reserve lose their lives to cancer, Ada says, "You know it's just a matter of time before it hits me. I will not sit still and just let this happen."

# Ada's 2030 Scenarios

# **OPTIMISTIC SCENARIO**

In an ideal future, Ada believes that the Aamjiwnaang community will have air, noise and vibration monitors in place. Installed first at the community centre and eventually across Aamjiwnaang First Nation reserve, these air monitors will help the population to track chemical releases, working towards an overall improvement in local air quality.

By 2030, the Canadian government has acknowledged the vulnerability of Sarnia and Aamjiwnaang to the cumulative impacts of the Chemical Valley industrial cluster. To help gain a better understanding of the community's health, the Ministry of the Environment and Climate Change has established a larger local presence, with staff located onsite to closely monitor and improve both air and water quality. The ministry has taken the first steps by introducing a stronger penalty system to hold offending companies responsible for the impact of their operations. Additionally, companies are now required by the government to use the best technology available to capture and recycle their emissions.

In Ada's ideal scenario, natives and non-natives alike are working together and speaking up for their right to a healthy environment. To help foster an open relationship, industry and government are striving to communicate effectively with the local community.

As a result of both citizen demand and technological advances, the emissions of the chemical plants have been greatly reduced. Despite existing occurrences of chemical releases, the Sarnia-Lambton region is expecting to see a decrease in the incidences of cancer for future generations.

# **PESSIMISTIC SCENARIO**

Canadians were completely shaken when news first emerged of a massive explosion in Sarnia, Ontario. With attitudes towards maintenance and inspections becoming more lax over the years, it was only a matter of time before one of the plants nestled in Canada's "Chemical Valley" set off a chain reaction of disturbing explosive events. Ada reflects, "That was how I always thought of it, if something happened in the plants we would just blow up and we would just be a hole from Windsor to London."

In the worst-case scenario, the environment has been horribly transformed. No wildlife, nothing growing, and no fish exist in the creeks and river alongside the area. Those that survived or dodged the explosion were only temporarily safe. Eventually, chemically-induced cancer would take the lives of the remaining population.

# **PROBABLE SCENARIO**

As Ada imagines the most probable scenario, people are still living close to the reserve but they are both more educated and involved. The community has taken time to speak out about the environmental challenges facing Aamjiwnaang and Sarnia.

With the facts becoming more prominent in the news and public mind, companies are making an effort to improve communication with the Aamjiwnaang community. For every new industrial project, the community is being readily consulted with. With a greater awareness for the cumulative effects of chemical releases, more work is being done to reduce the frequency and intensity of these events. Little by little, the local residents are noticing an improvement in the natural environment.



# JAY BABCOCK

# Jay Babcock

### Environmental Activist and Founder, Love Hurts

"I lived in Niagara Falls, that was kind of weird," recounts Jay on reading about the city's Love Canal neighbourhood in a grade school science textbook. As a child, Jay couldn't decipher his connection to the place called "Love Canal" in Niagara Falls, New York. Jay's grandfather was a foreman on the factory floor of Hooker Chemical (now Occidental Chemical Corporation) in Niagara Falls. Like many workers at the time, his grandfather was kept completely unaware that his workplace was responsible for dumping much of the toxic waste buried beneath the Love Canal neighbourhood.

Jay attributes his fascination with Love Canal to fond memories of bringing his stepchildren to the area in the late nineties. Since most of the community's residents were evacuated twenty years prior, the region had become quiet and still. Equipped with flashlights, Jay and his stepchildren would go on outings to spot deer.

In 2011, Jay returned to Love Canal only to find "immeasurable amounts of garbage." From bags of trash to broken glass, paint cans to couches. Even mounds of construction material were left behind in empty and abandoned lots. Recalling his frustration Jay says, "I don't understand how people can be so careless." Jay's response was to take matters into his own hands and "make a difference on a very small scale" by watching over the area for illegal dumping, documenting garbage and reporting suspects to the police. On one occasion Jay repurposed a discarded couch, positioning it across 100th Street in Love Canal as an improvised barricade. Beyond trying to keep people from dumping, Jay's intention was to "send a message to Niagara Falls, 'Do Something!'" It appears Jay's efforts are working. The city has constructed concrete cylinders to block the bordering streets along the Love Canal landfill. Despite feeling the city could be doing more to manage illegal dumping in the area Jay suggests, "it's a small step in the right direction."

When asked about his ideal community, Jay demonstrated that a lot of change would need to take place to get there. "You know how much snow we just got in Buffalo?" Jay and I had been speaking about the two metres of snow that recently blanketed the area. "About that much. You know how much work it's taken to get rid of it? A lot. It wouldn't happen overnight." Jay believes that the community would need to come together to make change possible. "You can't just build one floor and say, okay, we're going to leave it like that. Once, if it starts to get better, you just keep adding a new floor until it's fixed."

Given how taxing sustained action can be, the temptation to "throw in the towel" can be common. When asked about giving up, Jay replied, "It wouldn't be long. If I gave up, it'd be for a short time and I would pretend like I lost interest, I'd be mad about it for a while but I'd go right back to it. I'm determined to do stuff."

# Jay's 2030 Scenarios

# **OPTIMISTIC SCENARIO**

In the best-case scenario, Jay imagines government operating as a "well-oiled machine" with the odd breakdown that could be easily repaired. People are behaving differently, motivated to change things for the better and strong-willed in their efforts. At the end of the day, society is fulfilled with a great sense of accomplishment, receiving positive attention for their actions and contributions.

While still in debt, the American Government is functioning well and the economy is changing to better serve citizens. By now, most people, regardless of education levels are sufficiently employed and fewer citizens are relying on government services and welfare to stay afloat.

Jay believes that human actions would be necessary in order to resolve our environmental problems. By 2030, environmental impacts have been significantly slowed by people coming together to make a difference.

In Jay's ideal scenario, he describes World Peace as an essential feature across the globe. Borders are no longer necessary and countries are no longer fighting. Jay concludes, "We were all put here for a purpose. We were the ones who created the borders, we can take them down. We fought to create borders but why? We're the same people."

# **PESSIMISTIC SCENARIO**

Across the globe, government and international organizations have collapsed. Every nation is scrambling, fighting to gain power. Jay imagines this scenario of conflict playing out worldwide, relentless and impossible to stop. As a result of the conflict, people aren't going to school or work.

In the worst-case scenario, Jay believes that everyday life will be a struggle. Reasoned by the rapid advancement of technology, Jay imagines that weaponry could do much more damage than we've experienced in past events. Jay reflects on this possibility, "It could probably be one of the scariest things in the world that would happen."

In 2030, society is broken. Communities have been destroyed and the environment is a low priority. Noticeably upset, Jay acknowledges the scenario as one he would "much rather not think about."

# **PROBABLE SCENARIO**

Given the probable scenario for 2030, Jay believes the future will be much like the present. "What I think is going to happen is it's probably going to stay right about where it is. Based on history. I don't see any great changes happening anytime soon."

Asked about his feelings towards this scenario, Jay reflects on his current attitude, lamenting on the monotony of everyday life "There's really no time to think about anything or feel anything. Just another day. There's no real sense of accomplishment because nothing changes." Highlighting his current dissatisfaction, Jay feels that the present is "broken" and in 15 years time, it will still be broken.

# **10. ANALYSIS**

The interviews began with a question on how the participant discovered environmental health challenges and pollution in their community. Across all three participants, there was a perception that conditions of the past were better than today. Ada recalls, "I don't remember the smells I'm getting today," and Sandy reflects on her experience as a child – seeing Chemical Valley as a "fairyland" of lights and beautiful gardens. In Niagara Falls, Jay remembers Love Canal as "quiet" and "peaceful."

Inherently, all three interviewees perceived current conditions as problematic. Jay muses about today "a lot of stuff is bad news" and comments on his daily experience "there's no real sense of accomplishment cause nothing changes." For Sandy, she believes our environment is headed in a "downward spiral." Ada jokes about having a negative attitude while also alluding to the "never-ending" amount of pollution in her community.

Further, Sandy, Ada and Jay speak about the need to fix problems. Jay believes there are "immeasurable problems" in the United States that "need to be fixed." With regard to the environment, Jay believes people need to be the ones to *solve* the challenges while Sandy believes people *are* the problem. At the end of the day, Sandy recognizes "you can't fix everything."

### Awareness and Reality

From the interviews, I can gather that Sandy, Ada, and Jay have experienced a powerful moment or situation leading to an awakening and awareness of current conditions. For Jay, it was when he returned to Love Canal only to find "garbage everywhere" and people "treating [the neighbourhood] like landfill." In Sandy's case, she started to see occupational disease occur more frequently in her community, and would later have the experience hit home with the untimely death of her husband. As for Ada, the impact of her industrial neighbours only truly sunk in when a decision was made to build a new ethanol plant in Aamjiwnaang, without the consent of her community. Ada has even written a poem titled "I Didn't Know", reflecting on all the information she was unaware of in the recent past.

For these individuals and many others, a traumatic experience often causes people to "wake up and discover what actually matters to us and to find that courage to pursue it... the awakening is not in the event itself; it is in ourselves," (Senge, Scharmer, Jaworski, & Flowers, 2005, p. 143)

### Sensitivity and Feeling

Parallel to the transitional journey, these individuals demonstrated a range of emotions and feelings in the interview process. From humour to fear, hope and indifference, these participants presented as both sensitive and strong. The work of activism is often an arduous and intensive journey. Words such as "tired", "emotionally exhausting" and "discouraged" came up in the interviews.

Further, fear and uncertainty were strong themes across the interviews. Jay openly states that the future feels "uncertain" while Sandy admits the possibility of change in Canadian culture "frightens" her. Ada's fear surfaces as a concern for the future of other people and life on earth.

### Acceptance and Understanding

From the interviews, it appears that Sandy, Ada, and Jay have accepted the current conditions as fact and have moved towards seeing the big picture and finding their place in it. All three hold a common passion to make a positive difference for others and a strong sense of determination. Ada explicitly says, "my job's not done" and Jay believes "we were all put here for a purpose." As for Sandy, she appears to have a different perspective, working within the system to influence change through others, "I know that I can't change a system, but I know that I can talk to enough people that finally, one day, someone will say 'Oh, I had a really good idea.'"

Throughout the interview, Sandy and Ada both demonstrated the ability to find patterns and map relationships with both scientific data and qualitative experiences. All three demonstrated the ability to think about the big picture, looking at change in larger scales. For example, Jay immediately spoke about the future of his country (the United States) with concern for global conflict.

# **Vision and Intention**

Infused behind the intentions of these individuals, the concepts of justice, empathy, and care came across strongly.

Empathy and care were indicated through expressions of concern for other people and, in some cases, other life. Sandy spoke of the need for us to listen more and become more accepting of the culture of others, while also demonstrating concern for workers and First Nations men and women. Jay worries about animals and the environment in Love Canal and cannot understand why others can be so careless. Ada worries for the children and seniors in her community, in addition to the plants and animals.

Drawing from the field of ecopsychology, it is possible that Ada and Jay are embodying the principle of interbeing – or interdependence with the environment and other life.

Within the concept of justice, fairness and equality arose as strong themes. Sandy often spoke about the need for equity and equality for families, workers and beyond. Reflecting on her battle to receive justice for her husband, she hopes to "make [the experience] better for somebody else." Jay reflects on fairness – discussing the need to "[do] something right" and "make a difference." For Ada, the need to speak for future generations indicated her dedication to justice for others today and in the future.

In all three interviews, the participants suggest that despite the challenging nature of their work, it is not likely for them to stop fighting for justice. Considering the possibility, Ada responds, "you can't have that kind of knowledge and walk away" and Sandy concurs, "it's just so hard to shut your brain down when you have so much going on up here." Jay too, suggests he would not give up, by virtue of him being "stubborn."

# **Action and Change**

Sandy, Ada, and Jay have demonstrated the willingness to change themselves, their understandings and their behaviour in support of a better tomorrow.

Drawing from Hayward's analysis of high quality responses to anxiety, these interviews have demonstrated that Ada, Sandy and Jay have responded positively by first changing their orientation. These individuals have found the potential within themselves to influence change in the outside world. Further, the ability of all three interviewees to recite complicated and often highly scientific information is quite remarkable. For example, though Ada holds no scientific degrees, she has become a selftaught expert on the chemicals present in her community and their known adverse effects, thus indicating her ability to both confront the source of anxiety and explore the information. The fact that all three activists are strongly involved with local (and sometimes national) media suggests they are successfully engaging in dialogue – another high quality response.

Other themes that emerged from the primary research were education and communication. Jay, Sandy, and Ada believe that education is a key leverage point. Jay alludes to the need for education to motivate children and offer a sense of accomplishment in order for things to improve while Sandy believes the next generation should be taught skills that foster sustainability – such as mending clothing and gardening. Jay spoke about his challenge in creating awareness of illegal dumping to the City of Niagara Falls. For Ada, the current lack of communication from industry about spills and accidents continues to be a large challenge.

For Sandy, Jay, and Ada, their perceived probable futures involved very few changes from today. Despite this belief, they manage to keep fighting for positive change - aware of the size and power of the forces they are up against yet willing to exert their time and energy, making personal sacrifices to help others. In the book Active Hope, Joanna Macy and Chris Johnstone write, "When we respond to a situation in a way that promotes healing and transformation, we are expressing power," (2012, p. 109). Perhaps in this way, Sandy, Ada, and Jay, have found the ability to express their power from within, overriding their anxiety and uncertainty associated with a perceived probable future that is undesirable.

### Activists and Images of the Future

Reflecting on the images of the future generated by Sandy, Ada, and Jay, their best-case scenarios appeared quite achievable and tactical. Despite some level of excitement for these scenarios, there was a noticeable tone of doubt - given an understanding of how current events have unfolded today. These interpretations offered a great degree of contrast to the level of devastation that comes across in their worst-case scenarios. Jay and Ada displayed discomfort and were visibly upset when talking about the worst-case scenario. Sandy's outlook towards the worst-case scenario was quite composed yet her view involved few changes from today; suggesting that for her, our current situation is not far off from the worst-case scenario. Based on these observations, I have interpreted their advocacy and activism as stemming from a push away from a perceived negative future rather than a pull towards a preferred future. My assumption here is that fear offers a powerful source of motivation for Sandy, Ada, and Jay to change their behaviour.

In 1948, Neal E. Miller ran an experimental psychology test where albino rats were trained under conditions of fear in order to form new habits (Miller, 1948). The rats were trained to enter a specific compartment of a maze in order to escape a moderate electric shock (Miller, 1948). Given the impending threat of the shock, the rats learned to develop new behaviours and exhibit trial and error in the event that the door to the 'safe zone' was not already open (Miller, 1948). Of course, further analysis is needed in the application of this study to activists, but it is still worthwhile to note the power of fear as a driver.

### **On the Method**

The Ethnographic Futures Research (EFR) method was originally created with the intention of gathering quantitative information about regional images of the future. Yet in the last fifteen years, ethnographic futurists such as Maya Van Leemput have been taking an experimental and participatory approach to the EFR method. In collaboration with filmmaker and artist Bram Goots, Maya has been studying, collecting and creating a variety of images of the future from around the world (Agence Future). Based on the rich outputs of qualitative and quantitative data that can be generated from the EFR method, I believe this tool should be more widely shared and explored.

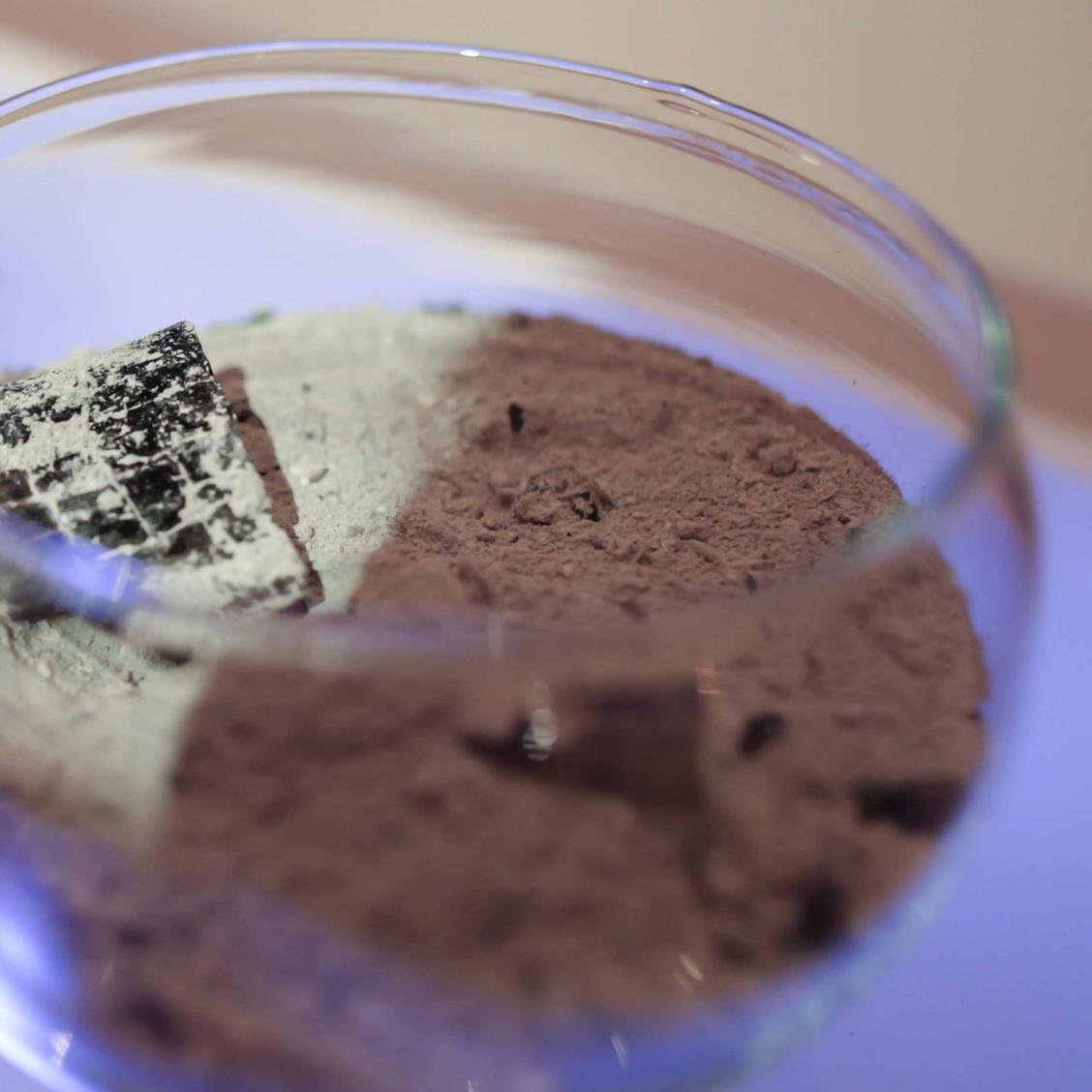
### **On the Process**

For this study to be replicated, it would be more effective to arrange for three separate interviews – first acknowledging personal change and becoming an activist, second working to create the scenarios with the EFR method, and third to recap on scenarios and co-create future artifacts with the participants.

## 



### **JAN 28 - FEB 4 2015**





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Uncertainty a...

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### **12. THE EXHIBITION**

Causing An Effect: An Exhibition of Changemakers, Uncertainty and Images of the Future was developed to explore the stories and possible future scenarios of Sandy, Ada and Jay.

Supplied with artistic license, the researcher translated the scenarios and ideas written above into found artifacts from the future using the Reverse Archaeology method (Candy, 2013). The artifacts are intended to immerse and engage visitors with fragments of possible futures inspired by the interviews.

The stories, artifacts, and scenarios have been curated into a gallery setting to provide a contextual experience for others to understand why these individuals have become activists and what images of the future inspire their work.

The Experiential Futures Ladder is based on the premise that within every setting there are "countless potential scenarios, each scenario countless situations, and each situation countless artifacts," (Candy, 2015). When the participant described a setting or scenario, the abstraction would require zeroing in on an aspect and chosing between a variety of interpretations (Candy, 2015). The icons below indicate the level of interpretation needed to translate the ideas into concrete artifacts.

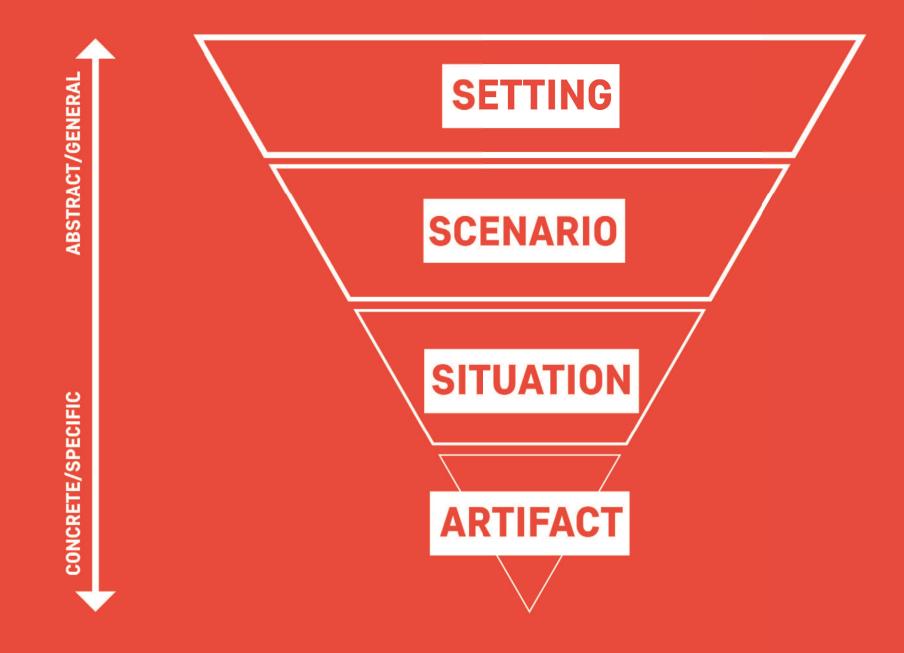
High: interpreted from setting to artifact
Medium: interpreted from scenario to artifact
Low: interpreted from situation to artifact
Very Low: interpretation of a described artifact

When the participant explicitly described an artifact the level of interpretation needed was very low. On the contrary, when the participant described a vague setting, the researcher had to intervene in a higher capacity, inferring a scenario, situation, and artifact to suit the setting.

### The Atmosphere

In addition to the visual mechanisms of the show, an audio track of a siren recorded from the Aamjiwnaang cemetery was set to play once every 15 minutes. The siren is installed by a nearby chemical plant and exhibits an array of high and low wailing sounds. Every Monday at 12:30 p.m., the alarm is tested in order to prepare workers in the plant for the possibility of a shelter-in-place warning.

### Experiential Futures Ladder by Stuart Candy<sup>1</sup>





### **OPENING NIGHT**

On January 28th, 2015, roughly 60 people gathered in OCAD University's Graduate Gallery to experience the essence of this research project. Pictured, left, are Sandy and Ada - two thirds of the dynamic trio that inspired this inquiry into changemaking and later redefined my understanding of justice and activism.

The space was filled with artifacts and information, intended to stimulate reflection, curiosity and ultimately empathy for the stories and experiences of individuals living in fence-line communities. While interesting in isolation, these sentiments offered abstract fragments of a story told through sound, image, and text.

But what happens when the story is brought to the forefront? At 7 p.m., visitors were invited to hear from Sandy and Ada. Incredibly brave and primed for dialogue, these women offered their first-hand perspectives that could not be captured in any of my interpretations.







### Air quality monitor 14698, c. 2005.

Decommissioned in 2020 after budget cuts to the Ministry of the Environment and Climate Change. Formerly stationed at Scott Road, South Sarnia.

Inspired by Sandy's pessimistic scenario, this artifact from the future represents a future setting where turbulent economic and political conditions have left the Canadian government no other choice than to abandon all efforts to mitigate climate change or regulate environmental impacts.



### Air, water, noise & vibration monitor, 2027.

Installed at Aamjiwnaang Community Centre, Implemented by the Ministry of the Environment and Climate Change for the Zero PPM 15 year Pollution Strategy.

Described by Ada in her optimistic scenario, this artifact indicates a future where Sarnia and Aamjiwnaang have been recognized as a vulnerable community. As a result, systematic efforts have been made to reduce the pollution levels and protect the wellbeing of local residents.

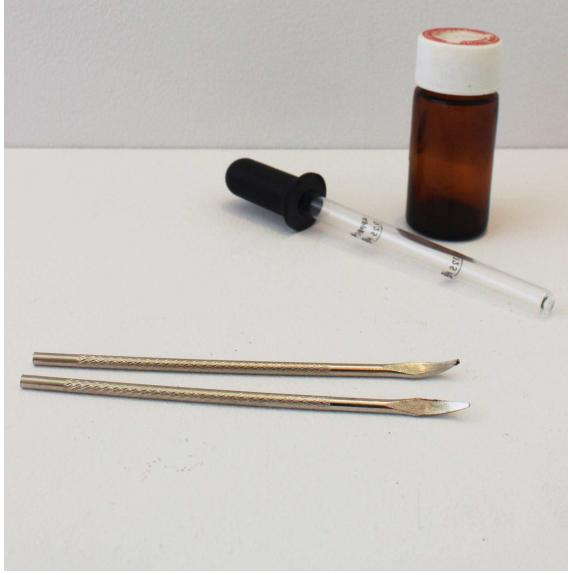










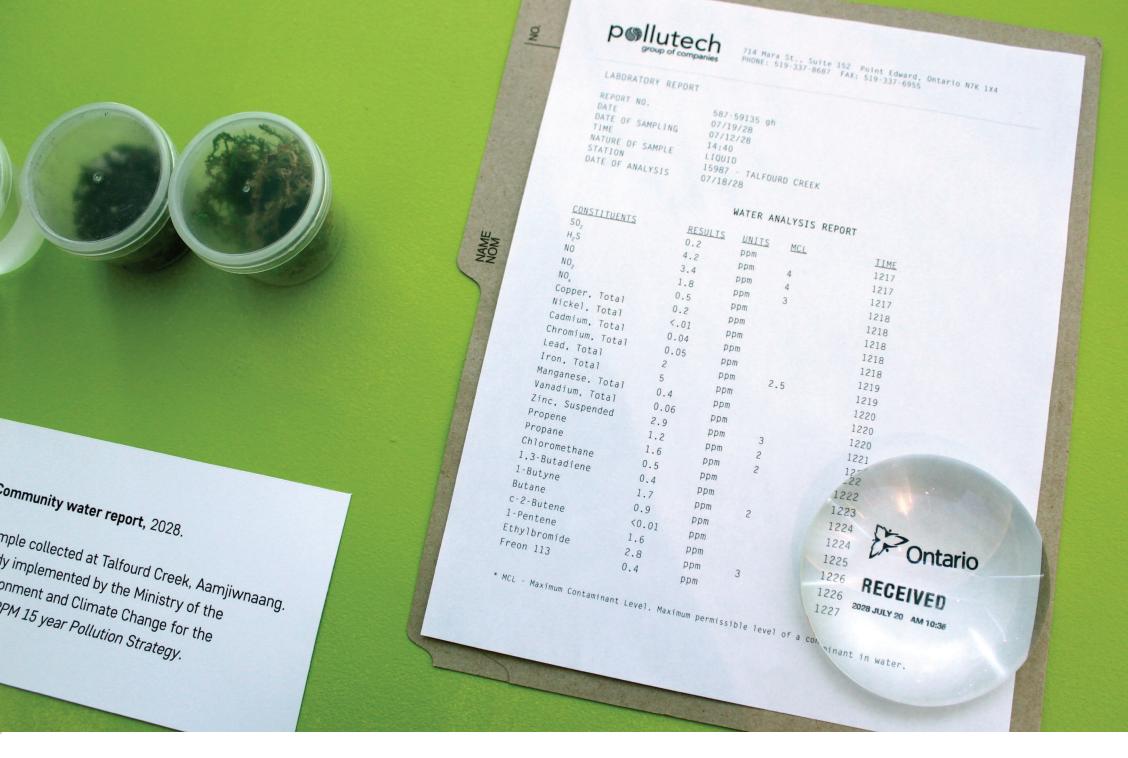


### Fish remains, 2017.

Processed by Laboratory Services Branch - Ministry of the Environment and Climate Change. Species was found with above average levels of carcinagins in formalin-fixed paraffin-embedded tissues. Sarnia, Ontario.

### **Eyedropper and bottle with histidine,** 2017.

Equipment from Laboratory Services Branch - Ministry of the Environment and Climate Change. Etobicoke, Ontario. Materials used to assess the toxicology of local bone and soil samples in Sarnia, Ontario.



### Community water report, 2028.

Sample collected at Talfourd Creek, Aamjiwnaang. Study implemented by the Ministry of the Environment and Climate Change for the Zero PPM 15 year Pollution Strategy. For Ada's optimistic scenario for 2030, Ada imagines the environmental health of Sarnia and Aamjiwnaang will be starting to improve. In the fifteen years leading to change, the provincial government has stepped in to provide a multi-year assessment of local air and water quality across Lambton County.





### Assorted photos, 1978-2023.

Love Canal, Niagara Falls, New York. Gift of Elizabeth Shaw on behalf of LaSalle Community Growers Co-op.

### Pickled beets, 2024.

Grown and canned in Love Canal, Niagara Falls, New York. Gift of Elizabeth Shaw on behalf of LaSalle Community Growers Co-op.



### Floral garden spade, c. 2023.

Love Canal, Niagara Falls, New York. Gift of Elizabeth Shaw on behalf of LaSalle Community Growers Co-op.

Inspired by Jay's optimistic scenario, these artifacts represent a future situation where residents of the LaSalle community (formerly Love Canal) have come together to improve the beauty of the Love Canal landfill site. Crime rates are dropping as a result of the dedication of a small group of citizens with the bold idea of bringing a community garden to a struggling neighbourhood.

80



### Aftermarket brake pads - front & rear, 2024.

The last asbestos containing product to be manufactured before the global ban on asbestos manufacturing and distribution. Manufactured in China. Inspired by Ada's optimistic scenario, these artifacts represent a future moment where asbestos has been banned globally. In 2015, asbestos can still be purchased in a products including "brake pads, automobile clutches, roofing materials, vinyl tile, cement piping, corrugated sheeting, home insulation and some potting soils," (The Mesothelioma Center, 2015).



### ASBESTOS: CANADA'S TOP WORKPLACE KILLER

Acclaimed for it's strength, flexibility, and flame-retardant qualities, asbestos served as Canada's 'miracle mineral' well into the 1990s, making it's way into protective clothing, insulation and other building materials.<sup>1</sup>

In spite of the product's positive features, asbestos fibers pose a serious health hazard to humans.<sup>2</sup> Exposure to asbestos can lead to mesothelioma, an aggressive form of lung cancer that holds Canada's record for the most common cause of workplace deaths over the past 6 consecutive years.<sup>3</sup> Today, Canadians are living out the legacy of this product, with many of us being unknowingly exposed to the mineral in homes, schools, offices, and other buildings built before the 1990s.<sup>4</sup>

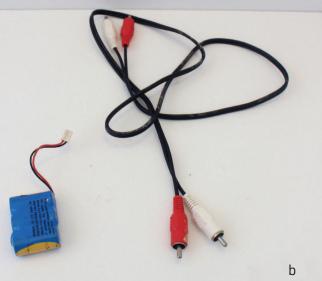
Canadian workers are subject to a higher risk of exposure to the hazardous substance, in fact, the permissible level of exposure is over 10 times higher than the limits in the U.S. and Europe.<sup>5</sup>

Today, Canada continues to import raw asbestos and products containing asbestos (such as after-market brake pads) - with 2013 figures reaching \$4.9 million CAD in imports.

### Notes:

- 1. The Globe and Mail Inc. No Safe Use: Canada's Embrace of the 'Miracle Mineral' has Seeded an Epidemic of Cancers. 2014. http://www.theglobeandmail.com/report-on-business/no-safe-use-as-the-top-workplace-killer-asbestos-leaves-a-deadly-legacy/article19151351/.
- 2. Berman, D Wayne; Crump, Kenny S (2003). Final draft:technical support document for a protocol to assess asbestos-related risk. Washington DC: U.S. Environmental Protection Agency. p. 474
- 3. The Globe and Mail Inc. No Safe Use: Canada's Embrace of the 'Miracle Mineral' has Seeded an Epidemic of Cancers. 2014.
- 4. The Globe and Mail Inc. 2014.
- 5. Ibid

















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### Unidentified survival kit, c. 2026.

Recovered by United States Army Special Forces in war-torn Niagara Falls, New York.

a. Comb, floss and band-aids - hygiene/first aid

*b.* 2/3 AAA 300mAH 7.2V Ni-MH battery pack & RCA stereo audio cable - communications

c. Thick socks, sewing, needles, thread - utility

d. Compact binocular glasses - utility

*e.* Flask & harmonica - entertainment; iron ore - financial security

f. Tool sharpener, whistle, notebook - utility, safety, & planning

g. Disposable latex gloves - sanitation

h. Mobile phone with improvised antenna - communications

Inspired by Jay's pessimistic scenario, the items in this kit suggest just some of the tools one might need in order to survive in a world filled with extreme hardship, violence and scarcity in the United States.









### Steel-toed boots, c.2020.

Recovered from Chemical Valley Explosion of 2029. Sarnia, Ontario

Inspired by Ada's pessimistic scenario, these charred artifacts represent the aftermath of a catastrophic explosion that occured near Sarnia, Ontario.

A pair of work boots were the only artifact recovered from the site of the explosion. The worker who owned these boots has not yet been identified.













### Assorted debris, 2029.

Recovered after Chemical Valley Explosion.

### a. "The Great Lakes" book, 1985.

Recovered from local residence after Chemical Valley Explosion of 2029. Sarnia, Ontario.

### b. Detail, "The Great Lakes" book

### c. Ashes, 2029.

Recovered from nearby chemical services plant after Chemical Valley Explosion of 2029. Sarnia, Ontario.

### *d.* **Assorted Jewelry,** c. 1980-2029.

Recovered from local residence after Chemical Valley Explosion of 2029. Sarnia, Ontario.

### e. Spice Holder, c. 1979.

Made in Holland. Recovered from local residence after Chemical Valley Explosion of 2029. Sarnia, Ontario.



### In the future, l want change adain

BUS

# EXPERIENCE



### **13.THE EXPERIENCE**

About 90 students, faculty, and working professionals attended the exhibition Causing an Effect over the short duration. During the regular exhibition hours, I engaged in light observation of visitors as they wandered through the exhibition. Guests tended to stay for either 10-15 minutes or 25-30 minutes. Some guests asked for an interpreted tour of the exhibition while others preferred a self-directed experience. Following the tour, I would invite the visitors to reflect on what they heard, saw, and felt.

In many cases, the siren would interrupt the visitor's experience or our conversation mid-sentence. This feature was an intentional aspect of the show, aiming to replicate the lack of control or certainty in fence-line communities.

The dialogue that was generated in the gallery space was very thought provoking and diverse. Many guests were open to sharing their opinions about politics surrounding the themes of the show while others felt compelled to share personal experiences and stories that related to the work. For example, one guest had grown up in Love Canal, Niagara Falls and had personally overcome a significant health scare in the past due to the known environmental health challenges of the community. Another theme that arose in conversation was of "willingness to be complicit" in the face of harsh truths. In this conversation, the role of the worker within the industry came to the foreground, creating empathy for the expectation of workers to be loyal and to "not bite the hand that feeds." Of course, the educational setting of the exhibition also staged some interesting discussions on ethnography, design research, and ethical considerations. A student from McMaster was eager to discuss the implications of reflecting on the future with research participants, mitigating emotional risks and creating a safe space for the interview.

### Feedback

A few days after the show closed, visitors were invited to participate in a voluntary and anonymous survey reflecting on their experience. Of the 23 respondents, 9 were present for the opening night. Prior to the show, 74% of respondents were aware of Sarnia and 70% of respondents were aware of Love Canal. Only 4% were aware of Aamjiwnaang. Additionally 4% of the respondents knew about Ada and 4% knew about Jay. Of the 23 participants, 6 were present for the guest introductions and 3 had the chance to speak with Sandy and/or Ada.

> eye-opening encouraged awareness Erin Brockovich interesting thoughtful empathy CUTIOUS uneasy aware change angry act help hopeful concerned hope awe shocked engaged Sad surprised ired worried emotional wonder<sup>®</sup>real informed discouraged exhilarated awesome reflective disturbed empowering despair energized

Word Cloud of emotional responses to the question "Overall, how did you feel after visiting the show?"

The emotional response to the show ranged both across and within responses – some visitors felt hopeful (2) and inspired (5) by the show, while others felt concerned (3), sad (5), or discouraged (1). More often than not, the individual exhibited several emotions. 56% of respondents reflected on feeling a mix of emotions and 22% demonstrated both an optimistic and pessimistic emotional response. For example one respondent said they felt "sad about the situations. Encouraged by the tenacity of the change agents."

Of the 23 respondents, a small number indicated feeling "inspired to act" and "curious about why we don't take action in masses to create a larger impact." Perhaps for these individuals, the show succeeded in replicating some aspects of the journey Ada, Sandy and Jay experienced in their transition into changemakers.

process representation released pyramid future dates uncovering vulnerability facilities chemical chemical plants believe warning reverse archaeology evidence exposed back sad idea children Sarnia impression toxic lives fear case question feel spoke area activists person school think force food broke visual ordinary scary ability advocates Stories boots industries artifacts sensitive issues build realistic maps siren way avoid scenario plumes board polluting related artifacts powerful jarring fish touch rotting Sandy Ada situation layout toxins air layout clean felt shome shome situation situatio objects personal curiosity rouse home gardens chalk offensive information & facts health overall explosion community speakers intimacy belongings industrial possibility affected potential Maslow's Hierarchy nerve locations

Word Cloud of responses to "What part of the show (if anything) spoke to you the most?

The most significant aspect of the show that drew in visitors involved the exploration of possible futures. The word "future" came through in 52% of survey responses, in addition to future dates, and reverse archaeology. Subsequently, visitors noted the power of the artifacts (in general) and the stories of the activists as aspects they were drawn to. Sound was also a powerful element of the show with 4 people touching on the use of sound and 3 people explicitly mentioning the siren.

### **Participant Experience**

At the opening night, I was able to observe Sandy and Ada encountering the artifacts inspired by their scenarios. Both Ada and Sandy showed enthusiasm over the presence of an air monitor with a simulated App for users to interact with real-time, in-depth, local air quality information. Sandy acknowledged the set of brake pads on display, inspired by her scenario in which asbestos had been banned worldwide. In that moment, she paused to comment on the likely presence of asbestos in the very building we were standing in. Another occurrence that stood out was Ada's encounter with the artifacts from a possible explosion in the future. For a moment, Ada became slightly panicked by the implications of such an event, before acknowledging that the concept was inspired by her own scenario.

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# **13. CONCLUSIONS**

This project was designed as a participatory research and design fiction exploration in response to the question, "How might individuals transform into changemakers and take action in their communities?" Looking to the fields of individual foresight, ecopsychology and activism, the goal was to discover possible future scenarios, give voice to citizen activists, and initiate a strategic conversation.

From the literature review, a template for the transition experience was created to suggest key moments of understanding that need to happen in the individual in order for a significant change to occur. The activists interviewed in this project demonstrated immense determination despite acknowledging that the most likely future scenario for the year 2030 will look a lot like today; that few of the changes they desire will actually occur. Yet these activists are still exerting their time and energy in support of making tomorrow better for others, even in small ways. In the book Active Hope, Joanna Macy and Chris Johnstone write, "When we respond to a situation in a way that promotes healing and transformation, we are expressing power," (2012, p. 109).

Through the experience of gaining personal agency over the future of their communities, the activists featured in this research project have expressed their power over the situation. These activists have transformed from within in order to ignite change in their communities and beyond.

#### Impact

Discerning of the polarizing response to the work of activists, this project aimed to provoke the reactionary stance on taking direct action. Growing up in Sarnia, it rarely occurred for me to challenge the system that supported my family. As an ironworker, my father spent half of his working life in Chemical Valley. The comfortable lifestyle my family experienced was made possible by the petrochemical industry. My parents have always been extremely supportive of my work yet, unsurprisingly, they were less than enthused when I started researching the impact of pollution on our hometown.

Parallel to a misguided self-diagnosis, sharing data on local air quality with your loved ones only succeeds in producing anxiety and discomfort. When I brought up the idea of working with activists, it only served to further distance myself from my parents. They instantly responded with the question, "Why would you want to work with *those people*?" When I spoke with friends from back home I would hear, "Why don't you speak with someone that's focusing on the positive side of environmentalism?" I became discouraged. The perception of activists as dangerous or threatening made me hesitant about sharing my research topic. Having worked with activists in the past, I felt conflicted by the negative reactions. I knew activists as average people doing extraordinary, often selfless things. From here I realized the effect I was hoping to cause. My endeavor existed to question the distribution of risk and vulnerability in a community. To shed light on how the experience of a place varies across individuals. To call attention to places in the system that are in need of improvement. To acknowledge the courage and strength needed to stand up against the status quo. To recognize the deep care that environmental activists have for the health and wellbeing of a community. If I could change the mind of one person, moving him or her from a state of ostracizing activists to a state of openness, then this project will have succeeded.

In the twelve-month process of my major research project, my relationship towards Sarnia, activistm and foresight have fluctuated and evolved. At the same time, the opinions of my parents and friends had also changed. In my interview with Ada, she described a shelter-in-place experience where the intensity of a nearby smokestack flare woke her up in the middle of the night like these proved crucial in changing the minds of those close to me. After hearing stories like these, people understood why I needed to do this. It became easier for them to imagine themselves in the experience and how angry, afraid, or frustrated these people were entitled to feel. For my parents, I felt this project allowed them to consider the individual first before judging his or her behavior as an activist.

#### **New Communication Approaches**

As global problems like climate change become more complex and challenging, new communication approaches will be necessary in order to encourage a significant change in behaviour. In 2009, the World Wildlife Fund executed an empirical study to understand why environmental campaigns were failing. The authors found that "to the extent people prioritize values and goals such as achievement, money, power, status and image, they tend to hold more negative attitudes towards the environment, are less likely to engage in positive environmental behaviours, and are more likely to use natural resources unsustainably," (Crompton and Kasser, 2009, p. 10). In order to truly intervene with unsustainable behaviours, we need to encourage values that are "psychologically opposed" to materialism (Crompton and Kasser, 2009, p. 26). In the interviews, the values exhibited by Sandy, Ada, and Jay included justice, empathy, fairness, and equality. These interviews led to the development of scenarios and supporting artifacts that demonstrated these values.

### **Empathy & Experiential Futures**

Experiential futures offers an opportunity to create empathy and build understanding for the perspectives of others. The exhibition enabled the creation of a space for others to momentarily "walk in the shoes" of Sandy, Ada, and Jay – experiencing their struggle to make change. On the opening night, the experience was amplified by the presence of Ada and Sandy, offering their stories first-hand and imbuing greater meaning to the artifacts on display. By crafting and materializing the scenarios, the ideas about change desired by these individuals became more approachable. In response to the study by the University of Toronto on perceptions of activists as "hostile" and "unconventional" (Bashir, Lockwood, Chasteen, Nadolyn, & Noyes, 2013, p. 614), perhaps most individuals haven't had the opportunity to really understand the motivations and experiences of many activists. The choice to create an experience based on the ideas of three ordinary people who have become dedicated environmental and social advocates was intended to shed light on how this change can happen in individuals. Beyond the project goal of giving voice to citizen activists, experiential futures created an opportunity to honour their stories.

# **15. RECOMMENDATIONS**

The first goal of this project – to discover possible future scenarios, was intended to provide an opportunity to counterbalance the amount of negative images of the future currently being produced. Due to the detail and intensity of the pessimistic scenarios, the research and supporting exhibition took on a more serious and grave tone, despite the presence of optimistic scenarios. To an outsider, the optimistic scenarios and the related artifacts might seem dark (i.e. fish remains) or unnerving (asbestos containing brake pads), yet the sentiments behind these scenarios are truly progressive in the minds of the research participants, given the changes they would like to see. Society's "fear of the future" is a legitimate concern and more positive images of the future need to be fostered and cultivated in order to build a capacity for foresight and long-term thinking.

As an experimental investigation, a variety of opportunities for further research and investigation emerged in the process.

#### **Exhibition Research**

Further research should be done to understand the visitor experience of this type of exhibition that subtly pushes a shift in values or behavior. It would be beneficial to determine whether the visitors felt differently about activists or themselves before and after experiencing the show and if they felt compelled to make changes in the long term.

#### **Transition Experience**

From my understanding of the transition Ada, Sandy, and Jay experienced in becoming activists, I don't believe it is possible to recreate the first stage, Awareness & Reality that profoundly changed how these individuals experience reality. A further understanding or modification of the transition experience offers a rich space for inquiry as the topic has been mainly addressed from a small sample of real-life experiences and practices.

#### **Individual Foresight**

Individual applications of foresight should be more extensively explored. As argued by Floyd, Burns, & Ramos, the integral framework developed by Ken Wilber offers an opportunity for the foresight field to take on a more holistic approach (2008).

# **16. NEXT STEPS**

In order to truly foster a strategic conversation about the future of small, industrial communities, it is critical to engage the right people in a safe place. Beyond the scope of the major research project, I intend to bring these exhibitions to the local communities that were involved in the study. At the time of publication, I have been collaborating with Ada and Sandy to bring the exhibition to the Sarnia area. The hope is to invite the voluntary participation of key stakeholders in the complex environmental and political climate of Sarnia and Aamjiwnaang – across public, corporate, and academic settings.

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# **18. APPENDICES**

### APPENDIX A: PRIMARY RESEARCH LETTER OF INVITATION

I'd like to invite you to participate in a research study and cocreative design exhibition project. The purpose of this study is to explore how individuals living in conditions of environmental toxicity find a sense of personal agency and strive to better their communities. As an active citizen involved in positive change in [community name], your contribution to this study would be greatly appreciated.

Your participation in this study is completely voluntary, and would consist of an interview, lasting about one hour. During the interview, you will be asked questions related to your experience living in an environmentally vulnerable area and your contributions to improving your community. With your permission, the interview will be recorded (audio only) for my reference.

At the start of the interview, I will review with you and ask you to sign a consent form that outlines the possible risks and benefits of your participation. A feature of this research is to understand how and why activists emerge so that others might find the strength to make positive change in their communities. I will also be asking you about what you perceive to be possible in the future of your community. With your permission, quotes from your interview, attributed to you, will be featured in the published findings.

Following the interview, I plan to interpret the insights and ideas from your interview into a collective set of three scenarios – optimistic, pessimistic, and probable. From here, I will be

translating these ideas into "Artifacts from the Future" which will be showcased in art gallery settings throughout the months of January and February 2015. With your permission, your stories will be featured and attributed in the show in and your participation in generating the ideas that were interpreted for the exhibition will be acknowledged. Further, a website will be created to support the exhibition. Content generated from your interview may be featured on this site (example, your activist story, your visions for the future). The website will be live from January – June 2015.

I am undertaking this project as a Master of Design candidate at OCAD University in the Strategic Foresight and Innovation program. This research will seek to enhance the understanding of how environmental activists emerge by looking towards the fields of individual foresight and ecopsychology. For the purposes of this research, individual foresight is defined as the capacity of individuals to both think about the future and act in the present day with future-oriented decisions. Ecopsychology is the field of psychology addressing how people relate to the natural environment.

Please RSVP if you are interested in participating in this study. Please contact me if you have any questions. If you decide to participate, I will be in touch soon to set up an interview.

Thank you,

Kelly Kornet, Principal Student Investigator

## APPENDIX B: PRIMARY RESEARCH DISCUSSION GUIDE

### **Discovery**

How did you find out about pollution in your community? What was your initial response? Why did you respond this way? How did it make you feel? Why?

### Action

When did you start engaging in positive change in your community?

Can you recall your experience of this "switch" or change?

What was your first positive action? How did it make you feel?

Why did you choose to respond this way?

What was your motivation?

What motivates you to continue to engage in positive change today?

What would happen if you stopped? How would it make you feel?

### **Future-Orientation**

In the last year, have you thought about your future? The future of your community?

### **Emotions**

When you think about the future, what emotion(s) stand out? When you think about the environment, what emotion(s) stand out?

### EFR Method (Textor, 1995)

Imagine a scale of 1-100, with one representing the worst possible social future for the community and 100 representing the best possible social future for the year 2030.

1. Concentrate on a possible optimistic scenario, about 90 on the continuum. This isn't the very best (100), but it's desirable from your perspective.

2. Concentrate on a possible pessimistic scenario, about 10 on the continuum. This isn't the very worst (1) that could happen, but it's clearly undesirable.

\*Note: The process of collecting optimistic and pessimistic scenarios can help clarify the interviewee's personal values.

3. Concentrate on the most probable scenario. In this scenario, it's important to note that it's no longer what you wish for, but what you believe will happen.

EFR Category prompts: economy, environment, politics and government, society, communication, education, religion, the arts, and community identity.

