Participatory Research for Resilience in EE Programs: Paying Attention to Ecological Identity, Place, and Community

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A MAJOR RESEARCH PAPER SUBMITTED TO THE FACULTY OF ENVIRONMENTAL STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF ENVIRONMENTAL STUDIES

GRADUATE PROGRAM IN ENVIRONMENTAL STUDIES YORK UNIVERSITY TORONTO, ONTARIO

AUGUST 2019

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ABSTRACT

The following is based on a qualitative study guided by Grounded Theory and Participatory Action Research (PAR) methodologies alongside two Hamilton-based not-for-profits, A Rocha and Good Shepherd Centres, examining A Rocha's environmental education (EE) program for adults with disabilities, known as Operation Wild. In light of this study, I suggest that ecological identity has thus far been theorized as a solely individualistic concept. I outline a theory of relational ecological identity, which encourages the interdependent, intergenerational, and interactive components of ecological identity-building. I demonstrate that relational ecological identity contributes to the development of EE program resilience insofar as it focuses on future generations, the safe and inclusive reinhabitation of place, and a deeper interrelatedness to the more-than-human world. I discuss three major findings of ecological identity, place consciousness, and program resilience borrowing from existing EE literature, my original research, and by prioritizing the voices of the Operation Wild program community.

DEDICATION

For you, Kaius, and for the places that you will inhabit.

ACKNOWLEDGEMENTS

This Major Research Paper has been nurtured and sustained the way tributaries converge on and fold into the flow of the river. It could only be through dialogue with patient mentors, resilient teachers and learners, academic allies, and dedicated friends that such a topography might take shape. I am grateful for the FES community at York, which has been shaped and inhabited by thinkers who imagine a different path. In particular, I would like to thank my supervisor, Traci Warkentin, for her encouragement, support, and guidance throughout the process. Other faculty who have been wonderfully generous with time and conversation include Sheila Colla, Steve Alsop, Greg Thiemann, and Deborah McGregor. And finally, I am indebted to the radical pedagogy, courageous thinking, and dialogical engagement of chris cavanagh, whose mentorship, example, and ongoing care continue to shape my approach to and understanding of EE praxis.

For the funding I received for this research, I want to thank the Social Sciences and Humanities Research Council (SSHRC) of Canada as well as the funding offered from the Faculty of Environmental Studies at York University.

A special thanks to A Rocha Ontario, Good Shepherd Centres of Hamilton, and all of the exceptional stewards and co-learners involved in the Operation Wild program community. Additionally, to the friends and allies who have critically engaged and rattled cages alongside me: I am especially grateful for Remy Bargout, Andrew Phillips, Melina Damian, Naomi Quarcoopome, William Payne, Ryan Howard, the OnePioneer family, and the Sanctuary Community.

And most importantly, none of this would be possible without Rikki-Lee, who supported the decision to make a "bad" career move, joyfully works for a better world, and who has been present on every step of this journey in radical, beautiful ways.

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INTRODUCTION AND LITERATURE REVIEW

This study documents the early stages of the Operation Wild program, which was developed by the faith-based environmental not-for-profit, A Rocha. Operation Wild is an environmental education (EE) program developed for adults with disabilities. Research was conducted using a Participant Action Research (PAR) methodological framework alongside participants and support staff from a partner organization. Good Shepherd Centres of Hamilton, as well as A Rocha staff. Three concepts emerged and are thus explored in detail in this paper: ecological identity, place consciousness, and EE program resilience. I suggest that ecological identity has thus far been theorized as a concept based on a solitary, individualistic understanding of connection to the earth. Its applications for EE have thus been largely isolating and anthropocentric concepts that do little to radically reimagine the ways we might depend on and interdepend with the natural environment. Therefore, I outline a theory of *relational* ecological identity, which encourages the interdependent, intergenerational, and interactive components of ecological identity-building. Additionally, I explore the concept of place consciousness as it pertains to the diverse communities present in this case study, which helps frame a discussion of hegemony and social capital. Using examples from this study, I demonstrate that relational ecological identity and place consciousness contribute to the development of EE program resilience insofar as they focus on upsetting the neoliberal order, considering future generations, the safe and inclusive reinhabitation of place, and a deeper connection to the more-than-human world. I discuss the three major findings of ecological identity, place consciousness, and program resilience borrowing from existing EE literature, my original research, and by prioritizing the voices of the Operation Wild program community.

EE Research and Applications

There is a wide variety of perspectives on what constitutes meaningful environmental education (EE) in conventional schooling, outdoor education centres, or in urban communities. Contemporary scholars have provided a broad range of

frameworks to help further ecological literacy through EE (Berkowitz, Ford, & Brewer, 2005) and, as expected, much of this recent research centres around scientific literacy. climate literacy, and—an increasingly popular topic—citizen science (Armstrong, Krasny, & Schuldt, 2018; Ballard, Dixon, & Harris, 2017; Bonney et al., 2009; Conrad & Hilchey, 2011; Dickinson et al., 2012; Ripple et al., 2017). Citizen science can be defined as any opportunity for the public to participate, to varying degrees, with scientists in the planning, gathering and, in some cases, even the analysis of scientific data (Conrad & Hilchey, 2011, p. 274; 276). It can be a pedagogical tool contributing to the goals of ecological literacy and scientific understanding (Bonney et al., 2009), but can also be a gateway into much more transformative, community-driven articulations of EE praxis (Conrad & Hilchey, 2011; Krasny & Bonney, 2005; Ottinger, 2010). That being said, the argument has been made that greater social capital, place attachment, and more inclusive EE programs emerge out of practices of civic ecology (Krasny, Crestol, Tidball, & Stedman, 2014; Krasny & Snyder, 2016; Krasny & Tidball, 2015), or the marriage of the two (Briggs, 2013; Briggs & Krasny, 2016). In contrast to citizen science, civic ecology refers to the stewardship efforts that emerge at the community level out of a desire to care for local ecosystems and connect to the earth (Briggs & Krasny, 2016, p. 268). These include stewardship practices ranging from tree planting, community gardens, or invasive removals, to restoring the oyster beds of New York's Hudson River (Krasny & Tidball, 2015, p. 66). Within this study, my discussion and critique of EE is largely framed by and limited to these two pedagogical approaches.

Beyond EE program design, those conducting EE research have engaged with a variety of qualitative methodologies, but few studies have examined the uses and advantages of participatory action research within EE (Ballard & Belsky, 2010; Hacking, Barratt, & Scott, 2007; Krasny & Bonney, 2005; Mordock & Krasny, 2001; Robottom & Sauvé, 2003; West Oakland Environmental Indicators Project, 2011). Further, while much research and writing on EE attempts to determine what we should teach (Disinger, 2005, p. 153; Haury, 2005, p. 190), I am much more interested in the learning that deals with how we might engage in meaningful Environmental Education praxis (Gruenewald, 2003; Haury, 2005, p. 197; Krasny & Bonney, 2005; Krasny & Tidball, 2015; Stapp, Wals, & Stankorb, 1996, p. 29-30). For instance, Bill Stapp is most often

quoted for his definition of what EE is (Stapp et al., 1969, p. 30-31) rather than his detailed account of how it might be approached (Stapp, Wals, & Stankorb, 1996, p. 4-5) —the latter, of course, is of greater interest to this study. Indeed, the question of how to implement EE forces the critical practitioner or researcher to ask also, and with whom?

Participatory and Inclusive EE

This study details an experience facilitating the emergence of and participatory research within an EE program based in the city of Hamilton, Ontario in 2018-19. The program, known as Operation Wild, has emerged out of a faith-based not-for-profit called A Rocha. Operation Wild aims to "[provide] hands-on environmental education and accessible nature experiences for adults...with barriers or disabilities, [build] inclusive and engaged communities, and encourag[e] others to support a healthy and sustainable environment" (A Rocha Ontario, 2019). The programs are hosted either at the Cedar Haven Eco-Centre, just outside Hamilton, or as urban-based programs within the city. To my knowledge, participatory research for adults with disabilities in EE is an understudied landscape among EE scholars. Interrogations of how we might crip (Sandahl, 2003, p. 37) outdoor education, interrogate the state of inclusion within EE, or even general critiques of ableism within environmental studies are infrequent and relatively recent (Brodin, 2009; Kafer, 2017; Magnusson, 2006; Nocella II, 2017; Ray & Sibara, 2017; Todd & Reid, 2006). The aims of existing scholarship include examining the social benefits for learners with exceptionalities, enhanced inclusion through outdoor education, and the promotion of lifelong learning through outdoor experiences (Brodin, 2009, p. 102). As was the case for various groups involved with Operation Wild, it is important to note that "adults with disabilities" or persons facing "barriers" to EE certainly does not refer to a homogeneous group (Brodin, 2009, p. 103).

Rather than "feed feelings of apathy and powerlessness" (Stapp, Wals, & Stankorb, 1996, preface viii), environmental education projects should allow learners to take action and be "empowered...to shape their own lives and community of which they are part" (Stapp, Wals, & Stankorb, 1996, preface viii). Paolo Freire uses the term "conscientization" to describe the process of learners becoming conscious of their ability

to act in the world and intervene in oppressive realities through "problemposing" (Freire, 2000, p. 81). A Rocha, and specifically Operation Wild, is a good example of immersing a variety of stakeholders in a problem in order to work "towards a joint solution" (Stapp, Wals, & Stankorb, 1996, preface ix). In this case, the challenge is to develop a way to engage a variety of people with a range of abilities in meaningful environmental education that connects people to their place, generates social capital, and provides meaningful access to the outdoors in an inclusive and transformative way. In terms of transformative learning, Stapp, Wals, & Stankorb (1996) provide a useful definition of environmental education insofar as it "[enables] participants to construct, transform, critique, and emancipate their world in an existential or meaningful way" (preface ix). They go on to explain how participants should build on their preexisting knowledge and lived experience, be empowered to shape the world around them, be critical of the "common sense" (in the Gramscian sense; see Patnaik, 1988, p. 2) present in society, and "emancipate in the sense of...exposing and...altering power distortions that impede communication and change" (Stapp, Wals, & Stankorb, 1996, preface ix). This research project took shape to foster this kind of emancipatory learning environment at the Operation Wild program at Cedar Haven Eco-Centre.

There are several interrelated lines of inquiry guiding this major paper. Limiting the scope of my study to a Western context of Environmental Education in North America, I begin from the premise that conventional EE programs have largely only been made accessible to a small percentage of the population. I wonder how we, educators and academics, might challenge the exclusive nature of such programs, which do not appear to holistically embrace Eco-Justice Pedagogy (Bowers, 2001, p. 183). How might we provide the means for nature and nature-connection to become more accessible to those who have been predominantly excluded from programs of wilderness adventure, outdoor education, and environmental education in general? Thus far, the EE movement has largely produced models informed by and provided for educated, white, able-bodied citizens who are not asked to question issues of power, ability, diversity, or other issues of social justice (Agyeman, 2002, p. 10; Grass & Agyeman, 2002, p. 1; Tzou & Bell, 2012, p. 265). Tzou and Bell (2012) challenge the supposed neutrality of EE (p. 266) by examining the manner in which borders are

arranged in ways that demarcate learners/communities as marginalized and disempowered due to toxic actions or neighbourhoods (p. 267), rather than questioning the issues of power that result in such spatial arrangements. Indeed, much of EE limits the counter-discourse of possibility (Giroux & Simon, 1988, p. 19) or "what hooks (1990) calls the 'counter-hegemonic' dialogue" (quoted on Tzou & Bell, 2012, p. 275) by placing undue weight on scientific learning and Western ontology (Bowers, 2001, p. 79; see Berkowitz, Ford, & Brewer, 2005, p. 248, 260-1 for an example). As modern education becomes increasingly placeless (Gruenewald, 2003, p. 620), how can educators and learners seek pedagogy that is rooted in places, connected to and shaped by diverse communities and knowledges (Bowers, 2001, p. 77; Mcclaren & Hammond, 2005, p. 271), and critically engage in dialogue (Bowers, 2001, p. 191) that disrupts systems of power?

Ontological Approaches to Place

Theorists such as Relph (1976) and Tuan (1990; 1979) have grappled with how individuals develop a sense of place. Geographers and educators alike have speculated about place attachment, which "reflects how strongly people are attracted towards places" (Kudryavtsev, Stedman, & Krasny, 2012, p. 233), place meaning, which "describes the reasons for this attraction." (Kudryavtsev, Stedman, & Krasny, 2012, p. 233), and place rootedness, which Relph (1976) determines as a "a sense of deep care and concern for that place" (p. 37). One can thus see the pertinent connections between eco-justice philosophy and place theory, for if people can develop "affective ties" (Kudryavtsev, Stedman, & Krasny, 2012, p. 233) to the places in which they live, then they can be encouraged to be "better informed about local environmental issues and make decisions beneficial to their communities (Adams, Ibrahim, and Lim 2010)" (Kudryavtsev, Stedman, & Krasny, 2012, p. 233). As Pierce (2017) demonstrates in a thesis on outdoor education and sense of place, "once a student or individual loves a place, not only will they be more interested to learn, they will begin to become stewards of the environment through a personal and intimate connection that is driven by love" (Pierce, 2017, p. 54; see also Ardoin & Merrick, 2013). This reflects the

admonition of David Sobel (1995) that learners must learn to love a place "before being asked to heal its wounds" (p. 10).

Briggs and Krasny (2016) establish "love for the places [communities] have lost" (p. 269; see also Krasny & Snyder, 2016) as a central prerequisite to the emergence of civic ecology practices, which are stewardship practices that often emerge from marginalized urban communities and will be discussed later. This begs the question of how such marginalized communities generate and maintain their love of place. Yu-Fi Tuan (1990) asserts that "awareness of the past is an important element in the love of place" (p. 99; see also Pierce, 2017, p. 54). Crucial to both the love of places and reclaiming lost histories is the resistance against colonial accounts of history, which forms the basis of some recent scholarship on land education practices (Bang et al., 2014; Calderon, 2014; Tuck, McKenzie, & McCoy, 2014). Settler colonial relationships to place need to be challenged and indigenous peoples need greater visibility and contemporary acknowledgement not simply as "relics of the past" (Calderon, 2014, p. 28). This is to say, awareness of the past is not only a prerequisite to the love of place, but it is also essential to do the work of decolonizing educational narratives of place to reclaim past, present and future possibilities for new epistemological and ontological relationships to land and (human and non-human) communities.

The success of the kinds of urban EE and participatory research this study strives toward rests on the ability to make communities and places, which have historically been silenced or ignored, not only visible, but central in the formulation of new critical pedagogies of place (Gruenewald, 2003). For example, Cindy Thomashow reveals that the Urban Environmental Education program at Antioch University in Seattle seeks a Participatory Action Research approach that grapples with issues of inclusion and justice in a "complex socio-ecological place" (Thomashow, 2018). Fittingly, she quotes one of her students whose words form the basis for the challenge of who is invited to participate in the formulation of the new EE: "I've been here all along, you just haven't and don't see me"" (Thomashow, 2018). These questions of voice and visibility were at the centre of my co-participation within the Operation Wild program community over the course of this last year. Thomashow expresses this well in the following passage:

The definition of environmental education has expanded. The traditional environmental education values and goals are consistently questioned and reformulated. Our work is to better understand the nature of cities (rather than nature in the city) from the perspectives of those who live deep in their communities. (Thomashow, 2018)

Reflecting this more inclusive pedagogical approach, the Operation Wild program can be described as a combination of building an understanding of the nature of a city for communities that have experienced exclusion, while furthering the connection to and stewardship of nature in and around the city as well.

Disability and Inclusion in EE: Framing Operation Wild

Alexey Kudryavtsev determines five trends in urban environmental education (Kudryavtsev, 2013, p. 17). Operation Wild currently is developed around three of these trends: city as classroom, problem solving, and environmental stewardship (Kudryavtsev, 2013, p. 17), which form the basis for programs using environmental monitoring and citizen science, dialogue and eco-justice, and civic ecology practices, respectively. A Rocha Canada is focused on collective care for people and places and Operation Wild, more specifically, aims to develop "projects that are of real value to the community and that [assist participants in] develop[ing] real-world skills" (Powers, 2004, p. 22).

The use of citizen science in this study requires problematizing the notion of "citizen," given both the current geo-political context and the limitations of such a ubiquitous, yet seldom examined, term in a postmodern, globalized world. Misiaszek provides three useful ways of rethinking citizenship, which are helpful in discussions of citizen science and environmental citizenship. First, is the admission that globalization complicates an individual's perceptions of citizenship and who "they consider to be their fellow citizens (Jorgenson and Shultz 2012; Pak 2013; Shultz 2007)" (Misiaszek, 2016, p. 592). If EE occurs within an ecocentric framework, Misiaszek continues, not only does citizenship include Earth, but Earth is "the most oppressed citizen" (Misiaszek, 2016, p. 597). Thus, "...citizenship education must be critical environmental education

(Torres 2013)" (Misiaszek, 2016, p. 600). And finally, Misiaszek emphasizes "the need to view humans in the future as fellow citizens" (Misiaszek, 2016, p. 601). Interestingly, in a discussion of disability and citizenship, Gillian Parekh reinforces this logic as she argues that "many people can share formal citizenship and still experience exclusion, oppression, and violence from which others are protected" (Parekh, 2014, p. 39). If formal citizens can experience such exclusion and oppression, how do we respond to the citizenship of the global human community, the Earth and nonhuman community, and the futurity of each of these communities?

In terms of environmental stewardship, civic ecology is a practice that combines the widespread engagement of civil society and deep connection to land (Briggs & Krasny, 2016, p. 267). I posit that the benefits of habitat restoration, community-based gardening, and other practices of civic ecology (Briggs & Krasny, 2016; Krasny & Snyder, 2016) depend on our ontological understanding of land and non-human communities (Bang et al., 2014, p. 45). Stewardship, as with other well-intentioned activities, is at risk of being rooted in colonial desires to dominate land; what is required is an understanding of the entangled (Andreotti, 2016, p. 87; Ingold, 2008), I-Thou relationship (Bowers, 2001, p. 191; Buber, 1970) that is possible through processes of stewardship. The three "attitudes" of "embracing the city, going slow, and valuing stories" are said to strengthen civic ecology practices, though they are by no means the only way to achieve this (Silva, 2013). Operation Wild hopes to emphasize the importance of pedagogies that encourage communities to develop place attachment, question the colonial processes that have shaped, and are currently shaping, the land, and understand the ways that ecological restoration might emerge through entanglement that strengthens the social fabric of historically excluded, urban communities. It is worth mentioning that the study of place-based education conducted by Amy Powers found that community-based learning had a myriad of positive impacts on special education learners (Powers, 2004, p. 26) and that "hands-on and sustainability-related work" was similarly valuable for "students with special needs, such as immigrants learning English, those with social and emotional challenges, or those with developmental delays" (Powers, 2004, p. 27). The communities participating in Operation Wild come from a variety of assisted-living organizations operating in the city

of Hamilton, Ontario. The participants in my research study are the members of the HOMES (Housing with On-site, Mobile and Engagement Services) (Good Shepherd Centres, 2014) community, which is made up of individuals living in independent housing, but who are supported by Good Shepherd Centres of Hamilton.

This research sought to critically examine EE practices, particularly citizen science and civic ecology, aimed at increasing social capital and place attachment for Operation Wild participants. The Good Shepherd HOMES community is largely made up of high functioning adults who, despite this, are at risk of homelessness for a variety of complex reasons related to mental health, addiction, and/or trauma. I began from the foundation of asking: what stories emerge from places used in EE programming for adults with disabilities? How is involvement in citizen science and civic ecology experienced in this special education context? To what extent do adults from the Good Shepherd community feel they have agency in the planning and facilitation of Operation Wild? My aim was to imagine how more inclusive forms of EE might better inform the development of future projects, and thus inspire more progressive approaches to and understanding of EE programming, eco-justice pedagogy, and place theory. Taking this one step further, I wonder if such programs are capable of cultivating Baker's (2007) understanding of "landfulness" (p. 249). That is to say, can they provide "an engagement with the land that extends beyond simply knowing the names of trees." but rather is about "relating to the land is a part of who we are" (Baker, 2007, p. 249). For EE program designers and facilitators, this starts by challenging the collective understanding of who "we" are.

METHODS

Methodology: PAR, Grounded Theory, and the Go-along

PAR

This research project was guided by processes of Participant Action Research (PAR) insofar as the research aimed to directly benefit (Cresswell and Cresswell, 2018, p. 69-70) the communities involved in Operation Wild. The use of Participatory Action Research is helpful "where people are often poor and lack political power" (Krasny & Bonney, 2005, p. 305) and where groups are given an opportunity to "give back" to the community" (Krasny & Bonney, 2005, p. 305). Just as education is not neutral (Freire & Ramos, 1984, p. 19), so too is action research never neutral; it serves to provide a voice for the communities involved through a variety of potential methodological approaches (Mcclaren & Hammond, 2005, p. 288). An important aspect of Operation Wild is the gratitude circle that occurs at the end of each program. All members of the program community are asked to mention something that happened during the day that they are grateful for. In considering the gratitude circle as a kind of focus group, I wondered what it might look like to also gather to address our hopes for the program. This would be in keeping with the "shift from a focus on 'getting information to people' to create awareness, to 'getting people together' with information so that they can deliberate problems and endeavour to bring about change to resolve the concerns at hand" (O'Donoghue, 2014, p. 11). The intent was to strengthen the Operation Wild program in a manner that occurred by and with program participants and stakeholders. It was a collaboration between community members (Good Shepherd Hamilton), notfor-profit based conservation and environmental educators (A Rocha Ontario staff at the Cedar Haven Eco-Centre) and the researcher (York University). As researcher, I entered this process recognizing my need for reflexivity as well as my positionality as a white, able-bodied, settler, cis-gendered male in an outdoor education context that has generally been shaped by and provided for people like me (Agyeman, 2002, p. 10; Grass & Agyeman, 2002, p. 1; Tzou & Bell, 2012, p. 265).

Grounded Theory

While PAR is ultimately what guided my research goals, grounded theory allowed me to employ an "intermeshing" of returning to the field, analysing data, and reframing research questions in order to best serve the needs of the participants and provide the most accurate picture of the data available (Glaser & Strauss, 2009, p. 73). Problems and questions were determined in part by the researcher, insofar as the study commenced with the theme of examining "the stories that emerge from place" in a program designed for adults with physical, cognitive, or socio-emotional barriers preventing meaningful inclusion in EE. This began with attempting to explore the impact of place attachment on environmental education, the impact of nature therapy and EE on the development of social capital, and the early stages of EE programming with communities of adults for whom access to EE and outdoor spaces has been limited. Grounded theory allowed me to analyse my interview data and field notes throughout the process to assess the presence of place attachment, social capital, and any other emergent themes, which included ecological identity and place consciousness. This iterative process quickly revealed that certain themes were obvious, while others were irrelevant to the experience of the program community. This gave me the opportunity to restructure the kinds of prompts I might use in my interviews; ultimately, the interviews with the program community guided the subsequent design of the focus group, which occurred toward the end of the study.

The Go-along Interview

To analyze specific emergent themes and desires for program development, I adopted the methodology of the go-along interview, with which I could conduct a semi-structured interview, allowing the participant to guide the interview process as they saw fit, while letting their "experience-in-place" (Manzo, 2005, p. 74) influence the shape of the interviews as well. In emphasizing a participatory interview process, I did my best to allow the interviewee to guide the interview process, acknowledging that the program community might "have the best questions as well as the best answers, and may perceive a different, more relevant scope, to the area of inquiry" (Rishbeth, 2013, p. 103). I conducted go-along interviews with the following three groups: members of A

Rocha staff at the Cedar Haven Eco-Centre (the not-for-profit organization); community support staff from Good Shepherd Hamilton (the partner organization); and the adult residents of Good Shepherd who are participants in A Rocha's Operation Wild program. I refer to these three groups together as the "program community." These interviews were conducted on a walk (or while sitting, based on interviewee preference) on the Cedar Haven site, at the Royal Botanical Gardens (RBG) in Hamilton, and one was conducted as a "ride-along" (Kusenbach 2003, p. 464) interview as well. Although goalongs are designed to be conducted with as little guidance from the interviewer as possible (Kusenbach 2003, p. 465), I did compile a few questions based on my field observations of the program as well as conversations and previous interviews. The existence and repetition of these I attribute to the fact that my research focused not solely on the "experience-in-place" (Manzo, 2005, p. 74) of the program community, but rather the experience of a particular pedagogy of place (Gruenewald, 2003) experienced by this community. Indeed, this study specifically sought to establish the interrelated phenomena of research participants' learning, participation, and connection with place. I refer to the following not as questions, but more as "prompts," which were provided during go-alongs if and when necessary:

- What stands out / What is significant for you from Operation Wild?
- What learning and/or place do you connect with the most at Operation Wild?
- What do you know about the place where you live? What are some of your most special memories of being outdoors/in nature? How is this place similar or different?
- How do you connect to nature/the earth?
- Do you feel like you have a voice in what happens here at Cedar Haven?
- What would you change? What might make you take more away from each visit?
- Do you feel more connected to other participants and/or facilitators through this program?

Operation Wild is a program intended to enhance participants' learning from, and connection to, place. Thus, in considering a meaningful, participant-centred research

design. I aspired to utilize a methodology that might further the aims of the program itself. In recognizing that conversation, dialogue, and story-telling practices allow communities of people to cultivate meaningful connections to places (Kudryavtsev, Krasny, & Stedman, 2012, p. 4; Stokowski, 2002, p. 372; Williams, 2013, p. 95), my methods were designed to scaffold the stated aims of the program I was researching. The goal of the research was to determine the stories of place that emerge from EE programming for adults with disabilities, which, in other words, is a project built around paying attention to the diverse voices of urban communities (Rishbeth, 2013, p. 101). This level of freedom and agency is important in contexts where "the participant group may be less able to articulate about their experiences in a more formal interview situation" (Rishbeth, 2013, p. 101). Moreover, storytelling and go-along interview methods emphasize the value of prolonged informal contact and casual interaction with research participants for over half a year as a way to build trust and rapport with the community (Rishbeth, 2013, p. 108; see also Lesseliers, Hove, & Vandevelde, 2009, p. 416). As a result, I have spent the past 8 months involved with Operation Wild programming helping facilitate programs using my background as a teacher and naturalist. Despite my privileged identity and positionality as researcher, I was able to develop a rapport with the Operation Wild community by being an insider and collaborator, rather than entering from the outside. As Rishbeth (2013) reveals, located storytelling and participatory approaches have been shown to aid in cross-cultural research and in addressing power relations in qualitative research, which fosters "more inclusive engagement [for] many people" (p. 109). The stories collected informed the ongoing, cyclical research process in order to better represent the full story of Operation Wild and result in authentic feedback for the continued growth of this kind of inclusive, accessible EE programming.

Process

My ongoing involvement with Operation Wild began in November, 2018—despite having visited the Cedar Haven Eco-Centre prior to that. Interviews took place in March and April of 2019, followed by a focus group in May. The original intent was to interview

2-4 people from each group: A Rocha staff members; Good Shepherd support staff; and Good Shepherd HOMES tenants who were also participants in Operation Wild. The minimum requirement for participation in the study was at least four visits to Cedar Haven for Operation Wild programming. Recruitment was difficult for a variety of reasons:

- Several members of the Good Shepherd community had been inconsistent in their participation in the program;
- Operation Wild is such a new program that the community did not yet have a wide range of experiences in the program;
- Interview scheduling often needed to match the schedules of Good Shepherd support staff, participants, and Cedar Haven site staff in order to successfully engage in go-along interviews on site—some HOMES tenants preferred to engage in an interview with a support staff present to aid in their comfort level.

For these reasons and others, some participants were unable to engage in an interview. Two A Rocha staff, two Good Shepherd support staff, and two HOMES community members took part in go-along interviews, while an additional two HOMES tenants attended the focus group (for a total of four research participants from the HOMES community). Interviews were intended to be 60-90 minutes in length, in accordance with the recommended length (Kusenbach, 2003, p. 464), although some did not reach this as a result of scheduling and participant preference. Good Shepherd HOMES community members generally enjoyed a go-along lasting closer to 40 minutes—the walking/moving portion of this was generally much shorter. The majority of participants spent time conversing on a park bench and half of one interview was spent on a drive back from Cedar Haven to downtown Hamilton.

All interviews and the focus group were recorded using an audio recording device (with permission) and transcribed by hand by the researcher; the data was anonymized using pseudonyms. The transcription process allowed for greater immediate reflection on the words and events of the interview, which included meaningful interruptions from birds, traffic, and snow/mud on the ground. Transcribed interviews were coded initially by looking for themes of place attachment and social capital. Program elements that were also noted were aspects of civic ecology and/or

citizen science that were mentioned by the program community. Other informal conversations with research participants were sometimes included in my research notes if and when the comments pertained to the study at hand. Interviews and notes were then coded for any emergent themes, some of which were very unexpected, such as a recurring emphasis on concepts associated with place consciousness. I created a "Program Engagement Scale" chart (Appendix A) with all dominant themes from the interviews, giving each participating member of the program community a score on a scale from 1-5 for each of the following themes:

- Civic Ecology
- Citizen Science
- Social Capital
- Ecological Identity
- Place Attachment
- Place Consciousness

The scoring on this scale was based on a number of factors. First and foremost, higher scores on the engagement scale came as a result of a participant's perceived value attributed to each area. For instance, a Social Capital score of 5 was not a result of a participant appearing to have achieved high levels social capital, but rather as appearing to attribute value to this as an important aspect of Operation Wild. Thus. program staff can look at the engagement scale and understand what elements of the program needed to be emphasized and taken up in meaningful ways to the benefit of the entire program community. For place consciousness, the score received by participants was generated based on David Greenwood's (Gruenewald, 2003) understanding of five "dimensions" of place that are part of a "badly needed conversation" (p. 623) between systems of education and our local places: the perceptual, the ideological, the sociological, the ecological, and the political (Gruenewald, 2003, p. 623). Thus, research participants were evaluated on their understanding of the interweaving of each of these dimensions vis a vis their consciousness of the places they inhabit—specifically in relation to those places inhabited by the Operation Wild program (being predominantly Cedar Haven and the city of Hamilton).

An additional chart was created based on the interviews and subsequent community focus group, entitled "Learning Community Collaboration" (Appendix B). This chart is an effort to keep track of every program recommendation and ideas resulting from the involvement of the Good Shepherd community (support staff and residents). Program ideas were then scored from 1-3 in terms of the level of attention paid to each recommendation by the A Rocha staff community:

- 1 = Not yet responded to by the A Rocha staff community
- 2 = Partially responded to by the A Rocha staff community
- 3 = Responded to by the A Rocha staff community

This chart has allowed the ideas of the program community to directly impact all members of the research project, thus fulfilling the important mandate of PAR to positively benefit research participants (Cresswell and Cresswell, 2018, p. 69-70). The results and discussion section of this paper will examine meanings and conclusions drawn from the Program Engagement Scale and Learning Community Collaboration.

Ultimately, one of the central goals was to allow participant stories and voices to shape the future of the program itself. This featured an adaptation of the "Learning Communities" (Krasny and Bonney, 2005) model: rather than combining the local knowledge of environmental educators with university scientists, this participatory study specifically emphasized the experiences of program participants as a valuable part of the learning community. Thus, rather than prioritize specific aspects (be they related to citizen science, civic ecology, or other forms) of EE, the research emphasized the voices of program participants in developing programming. Simultaneously, the study attempted to measure and respond to the program community's experience of social capital, place attachment, and any other emergent themes.

Themes from field observations and interviews formed the basis for specific topics and questions that were addressed in a final focus group with all interviewees, along with two other community members (Good Shepherd participants) who elected to take part in the focus group as well. The focus group (and informal conversations during actual programming) became the central avenues for participants, support staff, and A Rocha staff to be brought together to tackle the questions, concerns, and desires for future EE program development. Involvement in the study encouraged all participants to

be vocal about their hopes and dreams for the program. Ultimately, three questions became the basis for the program community's focus group discussion:

- 1) What is missing from Operation Wild?
- 2) How do we connect to the earth?
- 3) What prevents us from that connection?

Interestingly, the stories that emerge from place, in this particular case, had less to do with particular place attachment and social capital than was originally hypothesized. The emergent themes were concerned with ecological identity, place consciousness, and program resilience. These I will discuss in the next section.

RESULTS AND DISCUSSION

Relational Ecological Identity

Mitchell Thomashow, in his book Ecological Identity: Becoming a Reflective Environmentalist, describes how "Ecological Identity refers to how people perceive themselves in reference to nature, as living and breathing beings connected to the rhythms of the earth" (Thomashow, 1996, p. xiii). I have found the concept of Ecological Identity to be useful in the analysis of the Operation Wild program community, insofar as they have demonstrated the perception of self as connected to the earth and helped answer four guestions that Thomashow suggests are "at the heart" (xvii) of EE:

What do I know about the place where I live? Where do things come from? How do I connect to the earth? What is my purpose as a human being? (Thomashow, 1996, p. xvii)

I used these questions to guide my reading and coding of participant interviews and focus group discussion, but I also found that being "connected to the rhythms of the earth" took on other forms perhaps overlooked in Thomashow's discussion. The concept of Ecological Identity appears drawn solely from the personal (read: human) experience of the natural world, such as childhood memories, perceptions of wilderness, and reactions to the ecological crisis (Thomashow, 1996, p. xvi). David Greenwood (Gruenewald, 2003) reveals the ecocentric dimension of this identity-building: the recognition that "places themselves have something to say" and thus, an emphasis on "learn[ing] to listen (and otherwise perceive)" (p. 624) the more-than-human world. Thus, when a focus group is interrupted by house sparrows, the following exchange can occur:

Penelope: "Yeah the birds - they want part of it..." [upon hearing the house sparrows outside the window]

All: [Laughter and nodding]

Andrew: "Yeah let's bring them in here - get their opinion."

Yi-Fu Tuan (1990) discusses the vulnerability and awe we experience in nature with our auditory sense (p. 8). During the focus group, Phoebe, a Good Shepherd

HOMES tenant offered comments that revealed the impact of leaving one auditory landscape for another:

"It was nice being out away from the city. Away from the sirens and the police car and everything else, you know. It's nice to get out in nature, you know, and stuff like that. I really enjoy [being] out and doing things"

With regards to increasing the accessibility of Operation Wild programming, Penelope also emphasizes auditory engagement:

"And if you're visually impaired and you come - and your group came to the farm, how could you make that person see what you're actually describing, without them actually seeing it?"

One might argue that Tuan's theory of Topophilia—"the affective bond between people and place or setting" (p. 4)—is sufficient to describe the experiences of Operation Wild participants, but that would fail to describe the ecological worldview wherein someone can experience the ecosystem as "part of oneself" (Thomashow, 1996, p. 12). Perhaps Operation Wild participant Paul said it best when he revealed:

"...for me, all I can say is, it feels like that's where my roots are as a human being. As a living being. And, I can sum it all up as I don't call it "Cedar Haven" farm, I call it "Cedar Heaven" farm - that's how I feel when I'm there, well, and most outdoor places too..."

He Adds:

"...what you folks are doing at the farm is really interesting, because that's what we all did naturally 2-3-4 hundred years ago...on our little plots, on our little farmlands, we were connected to the land...now we're trying to figure out how to do that again, but we're kind of moving more the other way generally."

Penelope discussed the way that she spends time crossing different landscapes using old rail tracks in and near the city. Despite struggling with the way that land has been developed and impacted by human settlement, walking the rail tracks is a way that she has felt connected to the earth:

"...so for me, it's about seeing that track that goes between two pieces of land, which is pretty amazing—like, I mean, stuff has to be transported

somehow, so I get it, but, yeah so for me I think, part of the—land has always been part of...who I am. I think that's important."

The engagement with the earth expressed here situates the self in terms of where things come from and how one experiences profound moments of connection. What differentiates ecological identity from place attachment in these comments is the focus on the general, ongoing connection to the planet we inhabit, rather than the specific, particularity found in examples of place attachment. The "roots" Paul describes are embedded in "most outdoor places," while Penelope describes the way that land and the paths across it are a part of who she is.

A component that bears added emphasis in this discussion of ecological identity is the idea that it is relational. Members of the Operation Wild program community demonstrated an ecological identity that was collectively produced; it acknowledged an interconnectedness and interdependence on the community—that is, the other humans, the nonhuman, and the land. The latter being reminiscent of David Abram's insistence that we experience "a rejuvenation of our carnal, sensorial empathy with the living land that sustains us" (p. 69)" (quoted in Gruenewald, 2003, p. 624). Indeed, the ecological identity experienced by Operation Wild participants is motivated by an empathy for land, inspired by the perceptual and ecological dimensions of place (as discussed in Gruenewald, 2003, p. 623 and 633). For several participants, this is motivated by childhood experiences on farms and rural areas, legitimizing Tuan's (1990) claim that the farmer's physical relationship to and dependence on land results in land functioning to preserve memory and hope (p. 97). Poppy revealed longstanding memories of caring for the land through bodily sacrifice:

Poppy: ...And my grandfather asked me to dig for the plants and I remember I had a big big - how do you call, you know, the—when it's filled with the liquid?

Sarah: Blister?

Poppy: Blister! Oh god, so so bad. Because I was doing so much! hahaha, it took a while to heal...

Me: ooh yeah Sarah: mmm Me: So gardening has been in your life a long time?

Poppy: Yeah it has been—and my balcony is always fully flowers...

The concept of empathy can also be present in the desire for the development of ecological identity in other communities and even generations. Herein lies another shortcoming of Thomashow's individualistic concept of ecological identity. The Operation Wild participants demonstrate that the heightening of someone's relational ecological identity is predicated on the desire to bring the earth into relationship with others as well. It is not only a question of how I connect to the earth, but how do we collectively connect and develop our understanding together? Though the notion of intergenerational care is expressed in ecopedagogy theory (Misiaszek, 2016, p. 601), it has yet to be considered within the concept of ecological identity in an EE context. Relational ecological identity extends beyond the boundary of the "individual;" the relational community "re-members" (see Krasny & Tidball, 2015, p. 19 for a discussion on the re-membering of community life amidst urban decline) itself in its ability to imagine its own futurity. This is clearly demonstrated in Penelope's desire to generate a summer camp or a kind of educational training ground for the next generation:

"...I think [a summer camp would] be great to have...for kids to be able to come out...that could be really cool for me I think—again, we're looking down the road, but that would be really cool. Cuz that's where this starts. That's where the environment stuff starts—with those kids—it doesn't start with me. It's starts with them."

It is also worth mentioning that this is reminiscent of Wendell Berry's advice for sustaining local communities; he states, "the community knows and remembers itself by the association of old and young" (paraphrased in Bowers, 2001, p. 12). Relational Ecological Identity is also present in Penelope's desire to speak on behalf of participants with different levels of mobility:

"...Phoebe brought something up to me, and I thought of Phoebe...how do we make Cedar Haven accessible to walkers and wheelchairs without kind of, disturbing the land? ...'cause it makes it—'cause you can only go so many places in your walker and your wheelchair so you don't really get the same...equal opportunity...so how do we make it accessible...without

disturbing that environment? ...So it [the major questions for our group/ learning community] can go: what's missing and...what prevents you from connecting? 'Cause that can be a big issue, right? Especially on a rainy day or a muddy day - like, you know, if you have a walker or wheelchair, it's really hard to manoeuvre—so I'm not sure how you could do that and still keep it environmentally friendly..."

Penelope not only takes up issues faced by other participants (Phoebe) who are more reluctant to share their experience, but also suggests new research questions that need to be asked. Thus, she drives the participatory aspect of the research to the extent that the questions themselves come from the participants and in such a way that the research actually leads to direct benefits for them as well. Her line of questioning combines the specific theme of program needs with the much broader theme of collective ecological identity and discovering the ways each of us connects differently to the earth. She reveals that this program needs to address its shortcomings of infrastructure and accessibility insofar as they actually can impact the development of ecological identity for everyone involved. EE programming needs to consider that the participants themselves, once invited into the learning community, have essential perspectives for guiding the way programs are designed and barriers are revealed; they not only address needs that impact them personally, but they work to tackle the needs and barriers that limit the community as a whole. These emerge out of the social dimensions of connecting to place, described here as relational ecological identity, which shares concerns for the self, the land, and fellow participants.

It is important to make note of the way social capital presented itself in this research study. Marianne Krasny and Keith Tidball (2015) outline the ways that Robert Putnam's domains of social capital emerge in civic ecology practices (p. 56). These domains feature aspects present in the Operation Wild program, such as social trust, interracial trust, a diversity of friendship network, faith-based social engagement, informal socializing, giving and volunteering, and even the desire for protest politics participation (Krasny and Tidball, 2015, p. 56), which was noted during the interviews and community focus group. Much of the social capital present in the community of Good Shepherd tenants and support staff who participated in the research study must

be attributed to the work of the Good Shepherd organization in Hamilton, which orchestrates countless ways to reconnect people in an age of declining social capital. "as people retreat into their homes and spend hours in front of their TVs and computers" (Krasny and Tidball, 2015, p. 57) and, I would add, cellphones. Thus, the participants of this particular research study, for the most part, appeared to arrive with a preestablished sense of community, connectedness, and friendship. These, as signifiers of healthy social capital, both "[enable and result] from community environmental stewardship" (Krasny and Tidball, 2015, p. 55) in what is described as a "chicken or the egg" situation (Krasny and Tidball, 2015, p. 55). In this case, "in a [situation] where social capital [was] already strong, it [has provided] a basis for people to act collectively when confronted with environmental or other problems" (Krasny and Tidball, 2015, p. 55). One such method for generating social capital at Good Shepherd, which was brought up in several conversations, interviews, and during the focus group, was gardening. Caring for the land at Cedar Haven Eco-Centre was a natural extension of this important practice, which has been found to "[provide an opportunity] for residents to get to know each other" (Krasny and Tidball, 2015, p. 58) as gardens become "sites for social activities" (Krasny and Tidball, 2015, p. 58) in urban communities at risk of isolation. This concept mirrors the idea of a relational ecological identity, which is foreshadowed by Aldo Leopold in his description of a context where "humans [are] citizens and stewards of a "land-community," a community whose boundaries "include soils, waters, plants, and animals, or collectively: the land."" (Leopold, 1949, p. 240, quoted in Krasny and Tidball, 2015, p. 61).

Despite the obvious presence of social capital, my engagement scale notes relatively low scores for program participants, who appeared to place less value on social capital, as compared to say, consciousness of place or connectedness to the earth. Their goals for the Operation Wild program community were thus more focused on, as A Rocha staff member Andrew related, "engag[ing] land and creatures" and, as Good Shepherd tenant Paul put it, "...plant[ing] some trees or do[ing] something..." Indeed, Paul summed up his thoughts as wanting the community to "dedicate our time to something worth doing" (Interview transcript). The wonderful truth of the matter is that these desires for reciprocity and healing the land will, as Krasny and Tidball (2015)

assert, also lead to greater social capital and thus more sustainable civic ecology projects (p. 55).

It should be noted that the highest scores for valuing social capital as an essential part of Operation Wild came from A Rocha and Good Shepherd staff members. A Rocha staff member Abby made an important point, which suggests the importance of and the degree to which these programs are truly aimed at engaging marginalized communities in meaningful, liberatory ways:

"I think it would be amazing if...some former Operation Wild participants became...A Rocha employees...even...on a part-time basis...I think that would be my ideal...that we move from a model of...programming for and with people with disabilities—to...employing people!...the idea of like, working yourself out of a job?"

This sentiment is reminiscent of Tina Lynn Evans' (2012) radical and emancipatory call to teachers: "I hope that educators will, to the great benefit of people everywhere, gradually work themselves out of their jobs" (173). Relational ecological identity stretches the anthropocentric notions of social capital into realms of social relations that are constituted by interspecies relationally, which will be addressed in a discussion of naming practices and place.

The process of naming provides important implications for a discussion of ecological identity. Frank Vanclay asserts that "[p]laces exist when we start naming them" (Vanclay, 2008, p. 4). That said, knowing about the place where you live and where things come from implies that some work is done to disrupt colonial processes of naming, which disconnects places from their history (Bradley, 2015). To use a geographically relevant example, the Haldimand Tract is in close proximity to Cedar Haven Eco-Centre, which offers an opportunity for the program community to engage with a significant example of local settler colonialism and treaty violation (Stevenson, 2018, p. 104-105). One Program participant, Penelope, declared her determination to learn about the complex history of the land that Cedar Haven operates on:

"I'd love to learn the history—as far back with this piece of land and what did it look like then compared to now. And what was it—what'd they use it for then compared to now. Like, what was it then, like, did it have cattle,

did it have...what was it?...And how does that affect how the land is today?"

This echoes Tuan's (1990) claim that the understanding of the past is an important prerequisite in one's love of place (p. 99).

One of the ways that relational ecological identity (and place consciousness, which will be discussed later) became evident in this study was in the desire of participants to name aspects of the landscape. This was communicated in a manner of attending to ""personal drama" or a "communal situation" (p. 148)" (Seamus Heaney, quoted in Gruenewald, 2003, p. 626) experienced by participants of Operation Wild. Insofar as participants had a relationship and a desire to commune with specific places, they wanted these places to carry names (Gruchow, 1995, p. 130) in the same way that the Cedar Haven horse, a rescue named Art, could be referred to by name, spoken to, or called over to join participants. This comparison was offered by Penelope during the Focus Group:

"I think [naming the pond] makes it special from another pond. Like, it's different - it gives it some identity. 'Cause, "The Pond" just doesn't cut it with me. It's like, if you named Arty nothing - like generic—"the Horse"—no it's not the Horse, the horse has a name...so the pond is also a living thing, so it should also have a name. The pond is a living part of—yeah, so it should have a name."

The kinship inherent in relational ecological identity recognizes individual identities in nonhumans and invites them into these constellations of relations through a collective process of recognition and naming. It may also, where appropriate, call into question colonial processes of naming in order to reconnect place and story. Rather than being a colonizing force, the emphasis on naming was a way for Operation Wild participants to engage in the concept of landfullness, that is "relating to the land is a part of who we are" (Baker, 2007, p. 249).

Place Consciousness

With the exception of A Rocha staff, the program community generally exhibited lower levels of place attachment to Cedar Haven than expected. This was noted in a few ways. When go-alongs passed a location used in Operation Wild programming, there was seldom any mention of familiarity with that place. Similarly, when conversation veered toward specific memories and connections made on the site, participants tended to steer the conversation toward the general feelings they harboured for nature or the outdoors. The most detailed stories dealt with a community garden near their home, a childhood memory, or the future possibilities for a given place on site. The site itself was seen more often for its potential than for being a keeper of stories and a place with shared history. With this in mind, I began reading my interview transcripts looking for other dimensions found in the study of place. I found, again and again, the acknowledgement that places are shaped by the forces of capitalism and hegemony. Operation Wild participants, in particular, were not fooled by the "common sense" of neoliberal development regimes. Indeed, they were conscious of the way in which places are a result of specific choices, political decisions, and ideological (and perhaps theological) underpinnings in dominant, Western, anthropocentric society. This PAR model gave participants an opportunity to voice their frustration and grief over the places that have been lost to them as a result of what Jason W. Moore (2017; 2018) has termed the Capitalocene. Operation Wild participant Penelope described the following:

[What prevents us from connecting to the earth is...] Money hungry developers...if you go down to the waterfront now, if you take a look at the waterfront—where we used to go fishing? That whole thing is going to be condos...There's gonna be condos. And then...where the sisters of St. Joseph's used to be just downtown...they're putting up a condo in a hotel building and they just came in and just took all these trees that were living things and they just chopped them all down...just chopped them all down! Like, didn't think of it...and like, the stump is still there. So like, couldn't you have just pruned the tree? ...So there's things like that that...prevent you from [accessing nature]...And now nature is so far away from the city

because we used to be—I mean, when I was a kid, Mountain Plaza Mall, like Upper James at Mohawk, was the country…"

Paul: Oh wow!

Penelope: "And now you have to go miles, like almost to the airport, before you get to the country. So I think the farther that nature gets away from you, the harder it is to get there..."

It is perhaps no coincidence that much of the Good Shepherd community has experienced homelessness or have been precariously housed at various times as a result of their social and economic realities. This population has good reason to distrust systems of development that seem to continue to preserve the interests of able-bodied, wealthy settlers, thus preserving colonial ontologies of land, all while escalating and reinforcing the exclusion of adults with disabilities and exceptionalities.

Another barrier facing urban communities trying to access nature is both the real and perceived threats to personal safety. Good Shepherd community members noted the dangers they experience and, in some cases, have faced in local trail systems and fishing holes.

Paul: "...I used to go to...these places with my dad at 6 in the morning. They—the trout—would be jumping, swirling...And then we saw some guys down there with beer...and then they started throwing grocery carts and mattresses and it was finished...that was the end of it...And yet for that maybe decade—or 11 or 12 years—there was like an oasis—it was like a heaven—a fishing heaven. And now it's gone, it's dead. I bet you very few people probably even know it existed. Yeah. Yeah we went there one time—we knew something was really bad—we went there once, I guess I was around 14 and my dad had been going there for years—guys were shooting 22s—we had to duck eh!? Like they're drunk eh and they're shooting stuff eh!

Me: oh man

Paul: But we used to go there ourselves—dad and I—when there was nobody else there...everything so peaceful and green. Nobody else was there...oh man..."

The threats to safety seemed to be felt or experienced most often at the intersections of ability, class, and gender. Cedar Haven was perceived as more safe as a result of it being private land, not accessible by transit, and with trusted people who could protect the community if and when needed:

Penelope: See the problem that prevents some people from connecting to the natural environment versus going to Cedar Haven is when I was six...I would go on the Red Hill and not think about anybody attacking me...Where, today, you better have someone with you, 'cause you don't know who the heck's on there, where if I go to Cedar Haven I know that Tim's gonna back me up—like no one's gonna beat me up with Tim there.

Me: I got your back.

Penelope: Tim's my personal bodyguard!

Group: [Laughter]

Of course, this is just as much an issue of place consciousness as it is one of consciousness of bridging social capital (Mihaylov & Perkins, 2013, p. 70)—what is the nature of the violence visited on particular communities with various vulnerabilities and lower levels of social capital? Bridging social capital refers to the experience of having connections to individuals with political agency outside one's own community (Mihaylov & Perkins, 2013, p. 70). In this case, individuals who have experienced an inability to cultivate such "bridging" relationships feel a sense of precariousness around their ability to access nature—especially the perception of an increasingly dangerous urban nature. How might EE build and maintain community resilience in the face of violent systems of oppression? This violence being that of gentrification, social exclusion, as well as the increasing accounts of unsafe green spaces—all of which are interrelated and part of the matrix of modern capitalist patriarchy. This exchange from our focus group deals with some of these concerns and potential responses to them:

Penelope: But if I go onto the Bruce Trail, I don't know who I'm gonna—like, even if you have a cell phone, you're not going to get reception there.

Sarah: mmhmm

Penelope: When I was a kid I never thought of that—never thought of that stuff, ever.

Paul: Yeah it's a real shame—

Penelope: But today it's a problem

Paul: —especially for the women.

Penelope: That's what keeps a lot of people from connecting to the

environment is the safety...I don't know that you can...

Me: ...solve it?

Sarah: Yeah—connect people together..."

While Operation Wild participants are conscious of the ways that places—and thus specific bodies—have been neglected, support staff like Sarah view bridging and bonding social capital as the best way to combat these processes. Bridging and bonding social capital can be important avenues for change. Mihaylov and Perkins (2013) relate that bonding social capital refers to social interactions within a place (p. 69), while bridging social capital, as discussed earlier, refers to connections to sources of power (p. 70), which is a good summary of the solution imagined by Sarah in this exchange. That said, it is not clear whether the entire program community sees this as a possibility.

David Greenwood's cogent summary is essential to my recognition of the presence of place consciousness in the participants of Operation Wild:

"...when we accept the existence of places as unproblematic—places such as the farm, the bank, the landfill, the strip mall, the gated community, and the new car lot—we also become complicit in the political processes, however problematic, that stewarded these places into being and that continue to legitimize them. Thus places produce and teach particular ways of thinking about and being in the world. They tell us the way things are, even when they operate pedagogically beneath a conscious level" (Gruenewald, 2003, p. 627)

It is worth noting that this is less a conversation about place accessibility and more about participants' ability to critically read and understand the places and built environments that they inhabit. The fact that the program community problematizes the political processes and examines land as the result of the choices people have made about places is indicative of the need for further examination of eco-ability (Nocella II,

2017), and core to my insistence that program resilience is predicated on dialogical engagement with a diversity of place conscious participants. If places are indeed pedagogical (Gruenewald, 2003, p. 623), then we must find ways for all people regardless of class, ability, or gender to access the places where they feel a sense of belonging and connection to the earth. In EE programs, diverse communities must be offered opportunities to speak to this, as they have a deeper understanding of the way that particular exclusions are visited upon them, and thus are uniquely equipped with ideas for possible solutions. Operation Wild participants are gifted with the ability to refuse to take for granted (Bowers, 2001, p. 16; Gruenewald, 2003, p. 627) the ways their local places have been constructed by neoliberal, capitalist forces of development, real or potential violence, and/or practices of consumption that preclude them from accessing the natural places that they have long connected with. Perceiving the problematic nature of modern place-making is the first step in resisting these exclusionary forces and working to restore broken places using tools like civic ecology.

Program Resilience

Healthy ecological systems are full of diversity, capable of adapting to changes as a result of a complex web of interdependent organisms in constant evolutionary flux. In healthy states, ecosystems respond to and benefit the local environment that they interact with. A grassland or a marsh may behave differently as a result of soil composition, precipitation, or latitudinal position, but the key to its success lies in its ongoing, ever-interacting, diversity of interdependent organisms. These systems are a fitting metaphor for the success of community-based environmental education programs. As in the case of ecosystem biodiversity or a more diverse economy (Evans, 2012, p. 163), diverse voices in EE program development cultivate resilient programs—programs capable of confronting a placeless education system (Gruenewald, 2003, p. 627), our current ecological crisis, and ableist outdoor education practices. Anthony Nocella II's (Duncan, II, & Bentley, 2012; Nocella II, 2017) concept of Eco-Ability highlights the fact that both the ecological diversity of Cedar Haven and the diverse abilities of Operation Wild participants offer an increase in interdependency and respect

for difference (Nocella II, 2017, p. 150) essential for greater social-ecological adaptive potential. In this section, I comment on the ways in which Operation Wild seeks to "engage in action toward increasing the resiliency of our communities by wisely (re)inhabiting our places" (Evans, 2012, p. 166).

While the common sense of capitalism is the drive toward normalcy and uniformity (Nocella II, 2017, p. 161), both the theory of Eco-Ability and the impetus for Operation Wild represent a desire for greater difference and variability. Borrowing from Arjen Wals and colleagues, Krasny and Tidball relate that "the outcome of the learning" experience—the action steps that will be taken—is not determined a priori, just as when members of a jazz band bring together their different instruments and talents, and improvise to create music" (Krasny & Tidball, 2015, p. 116)—a process that has been called "the acoustics of social learning" (Krasny & Tidball, 2015, p. 116). This participatory research with Operation Wild fostered an opportunity for such collaborative and jazzy social learning. Social learning relies on social capital and enhances the mutual development of civic ecology practices and responses to the ecological crisis through the process of "collectively coming to understand a situation" (Krasny & Tidball, 2015, p. 117). One of the shared goals of the Good Shepherd and A Rocha communities was the ability to co-design a program where each participant, with differing abilities, can play a role (see Nocella II, 2017, p. 143). Krasny and Tidball (2015) go on to argue that social learning is not about a didactic transmission of knowledge or the "content that constitutes environmental or scientific literacy and is evaluated on standardized tests" (p. 118) but rather it is the learning that occurs through "interactions with other people" (Krasny and Tidball, 2015, p. 118), and thus is dialogical and dynamic. Indeed, when Operation Wild participant Paul described his initial reactions to the program, he repeatedly framed them in terms of what kind of an "interaction" they were:

"...the interaction where we pick the cedar twigs and make the tea - that's...awesome. Maybe, maybe a little more inter[action]—well you had more interaction last time...you had us plant seeds, so that was good interaction..."

It is worth noting that the examples Paul was referring to were both interspecies interactions. This reinforces the emphasis on a relational ecological identity predicated on "the joy and pain of / entanglement" (Andreotti, 2016, p. 87). What is essential for many in the program community is to engage in a kind of interdependency that reminds us of our place within the larger social-ecological fabric.

David Greenwood emphasizes the problematic nature of standardization within modern education practices as they work toward making schools increasingly placeless and in so doing, "cut off the process of teaching and learning from community life" (Gruenewald, 2003, p. 620). Cultivating educational spaces where the local is prioritized is essential to the resilience of robust, community pedagogy and socialecological systems. T.L. Evans writes, "diverse, place centered lifeways [are] capable of contributing in important ways to the resilience of human societies everywhere by resisting the standardization and synchronization of the globalized world-system and fostering localized resiliency" (Evans, 2012, p. 165). In both the urban-based Operation Wild sessions and the EE learning at Cedar Haven, a consistent factor in the success of each session is the presence of community support staff or Operation Wild staff who listen to participants, which I repeatedly observed in my research. These acts of listening enrich the fabric of the learning community by demonstrating that the diverse experiences present there are valued. Listening—and the subsequent dialogue that this necessitates—is an act of interdependency that strengthens the ability for EE programs to adapt to the needs of particular local communities, thereby becoming more resilient. The following is an early exchange I had with a Good Shepherd community member, Penelope, which demonstrates the importance of this interdependency when helping shape the future of community programs:

P: And sometimes it's because, well, it wasn't—and a lot of times—it's because it's not their idea...I don't care...I don't want any accolades for it. When I see it I'll know it's done. When I see it done, when I see it come, then I know.

Me: Yeah...

P: As long as I know that what I did made a difference...it doesn't matter what anybody else does.

Me: Yeah.

P: And I think that's the thing. And so how do ya get it? How do you do that? And where do you go from here? Do you get like a group of concerned citizens together and you sit down and have a jam session? Me: yeah!

P: I think that'd be really cool too. To get a bunch of people together...

Me: And even with this community, right?

P: Yeah, but even to get like, people from, so you get—even if you had [other] groups here, like you had a couple people from each...and you sat down and you had like a jam session somewhere, like for a couple hours in the night. And you threw ideas out.

What is particularly noteworthy in the resilience literature is that social-ecological resilience is not simply a product of such adaptive, dialogical processes (Dubois & Krasny, 2016, p. 257), but an iterative process in which adaptive capacity, selforganization, and ongoing learning are constantly reinforced as a result of such processes (Krasny and Tidball, 2015, p. 159). Indeed, Arjen Wals and other resilience scholars have shown that social-ecological systems resilience and psychological resilience can be mutually strengthened by EE programs (Dubois & Krasny, 2016, p. 257). It can even be argued that the most resilient EE programs aren't truly EE programs at all, but rather community driven efforts at revitalizing or "re-membering" a community using a garden plot in a local neighbourhood (Krasny & Tidball, 2015, p. 19). To extend this requires that we pursue formalized EE program resilience on the basis of Eco-Ability, which begins from the premise that the biosphere itself is "an argument for respecting differing abilities and the uniqueness of all living beings" (Nocella II, 2017, p. 143). To risk belabouring the metaphor, just as a monocrop limits the adaptive capacity of an ecological system, so too do unilateral, anthropocentric, ableist pedagogies limit the resilience potential of EE programs.

What is certainly essential for research such as this is participant investment and allegiance to the resilience of the program. Additionally, program resilience demands participation from the funding avenues, stakeholder involvement, as well as the commitment of the participants themselves in furthering the work of the organization (A

Rocha or otherwise); this means seeing themselves as vital partners in that work. Thus, authentic program resilience means all members of the learning community can function as guides, liaisons, volunteers, and even employees. Each of these roles depends on a perception of self-efficacy (Armstrong, Krasny, Schultd, 2018, p. 28) in their own mastery of the co-determined EE goals and learning objectives. Program designers must ask themselves: "What are the processes that allow this kind of program durability, given the demographic(s) involved in inclusive EE programming? Is this program critical and reflexive enough to foster this resilience in a transformative way for donors, stakeholders, and participants?"

With these questions in mind, T.L. Evans (2012) helps further Krasny and Bonney's (2005) writing on learning communities by adding the components of servant leadership and reinhabitation. These concepts emphasize the importance of resisting hierarchical forces, which are constantly a product of ever-present hegemonic forces, and reimagining inclusive practices to benefit the voices and presence of people, place, and the nonhuman world (Evans, 2012, p. 166, 168, 172). Though her comments are directed at developing "sustainable societies" (Evans, 2012, p. 166), I argue that the "decentralized, inclusive leadership" (Evans, 2012, p. 166) she describes is applicable in this discussion of resilient EE programs. Indeed, "inclusive leadership and governance for (re)inhabitation must encourage all community members to play roles in guiding community life" (Evans, 2012, p. 168). Reinhabitation is a prerequisite for the kind of program resilience described above. This is because reinhabitation assumes the necessary interplay between people and place; this dance or dialogue (pick your metaphor) features the reciprocity between "disrupted and injured" (Gruenewald, 2003, p. 9) places and communities that have been similarly disrupted "within globalized late capitalism" (Evans, 2012, p. 172). Evans claims that reinhabitation occurs via shifting ontologies of place and the "widespread practice of servant leadership" (Evans, 2012, p. 172). Correspondingly, then, EE program resilience is thus dependent on the learning community's ability to unlearn (Gruenewald, 2003, p. 9) the lessons of neoliberalism; my sense is that this is perhaps especially necessary for privileged educators and program developers.

The goals of a learning community are to define program direction, provide leadership, and gain new professional skills (Krasny & Bonney, 2005, p. 308). Rather than forming a learning community as a student-Scientist or educator-scientist partnership (Krasny & Bonney, 2005, p. 304), this research study focused on a learning community that combined educators, conservation staff, community support staff, program participants, and the researcher. Perhaps for this reason, though Citizen Science projects were once a stated goal of the program educators at A Rocha, this component did not play a large role in early programming and was not a major area of discussions with program participants.

The idea of a learning community was an important part of this study, although in some cases research participants noted that their involvement was purely based on an enjoyment of the outdoors, the therapeutic aspects of nature, ecological identity, and attachment to place rather than a desire to co-construct/co-research specific aspects of the EE programming featured at Operation Wild—a point referenced in the research on learning communities by Marianne Krasny and Rick Bonney (Krasny & Bonney, 2005, p. 305). In general, significant aspects of feedback dealt with program accessibility, shared place consciousness and anxieties (even grief) around significant places. Program ideas were generated around what was currently offered and what we might do more of —all suggestions dealing with greater immersion, more consistent programming, longer time spent outside, and the development of programs for "the next generation"—this was very interesting as it opens doors to co-facilitate EE learning for young learners and shows a level of ecological identity that demands to be shared and extended toward the future. Interestingly, this longing for the past and mourning of lost places co-existed alongside hope and generative discussion about our collective future (Field notes; See comments from Penelope and Paul). In numerous cases, participants preferred to share and emphasize their vision for the future of the program, rather than stories of connection from the program itself. That said, participants loved sharing about the ways in which they had fostered a connection to the earth in general, prior to or in addition to their involvement at Operation Wild, perhaps demonstrating

- 1) the fledgling stages of the programming
- 2) the depth of place attachment found at home or their childhood home

- 3) the long term way that ecological identity develops and is manifested
- 4) Operation Wild has not yet developed via the feedback mechanism of the learning community and needs to pursue program design more closely based on participant feedback

Ecological identity is indeed something that develops over a longer period of time than can be experienced in most EE programs. The places actively inhabited and experienced within a particular EE program may be able to offer only a reminder of a pre-existing place attachment to a childhood home. That said, an EE program goal might include the increased recognition or articulation of participant's ecological identity; EE programs can facilitate a critical engagement with the relational ecological identity in ways that participants were not conscious of prior to their involvement. Perhaps what is most relevant about "the place," be it Cedar Haven Eco-Centre or elsewhere, is that it provides an interactive milieu that can be collectively experienced, shared and actively reinhabited, while also literally and figuratively "grounding" the collaborative, iterative process of developing EE programming that is safe, emancipatory, decolonizing, diversely enabling, and resilient.

I will offer an anecdote from recent programming: In my interview with Penelope, a member of the program learning community, she related the following:

"...I think it'd be great...for kids to be able to come out...I think that could be really cool for me...'Cause that's where this starts. That's where the environment stuff starts—with those kids—it doesn't start with me. It starts with them."

As a result of comments like this from the learning community, inspiring future leaders had been a goal generated by program participants. Thus, when A Rocha received a request for educational programming for a local elementary homeschool group, they were invited to Cedar Haven. The program featured a bird monitoring walk with a focus on key grassland species, including the threatened Bobolink and Eastern Meadowlark, whose local breeding viability had been in question by A Rocha staff working on conservation projects. Toward the end of the program, a young student pointed to a bird in the distance and asked, "is that a bobolink there?" Indeed it was. And the group watched as two birds flew peacefully across the field together, causing much elation,

especially in the student who had noticed them first. Not only does this anecdote remind us of the importance of listening and responding to the ideas of the entire learning community to affirm the agency of all participants, but it points to the strengthened social-ecological relationships when we truly listen to one another. That same week, a latent plan to restore the grassland habitats of Cedar Haven was reinvigorated and the process of protecting the fields being used by the resident bobolink and meadowlark population was set in motion. Truly an example of a learning community collaborating at various levels to adapt (and if need be, radically transform itself) for the benefit of the entire social-ecological network.

CONCLUSION

The key findings of this paper provide the basis for a critique of ecological identity—grounded in the study of the Operation Wild program—as it has previously been theorized as merely the solitary experience of a human self connecting to "nature." I suggest a new theory of relational ecological identity as one that is necessarily interactive and interdependent with one's human community as well as the more-than-human world. This has interesting implications for the concept of ecological identity within EE insofar as it moves programs toward a deeper empathy for future generations, greater entanglement with the land and place, and the recognition of interdependence with diverse (human and nonhuman) communities. Additionally, I argue that this move toward the collective or relational capacity for ecological identity within EE is ultimately a move toward greater program resilience through processes of inclusive dialogue, reinhabitation of places, and social learning that embraces variability, and even, Eco-Ability.

What I have found in this undertaking is that Operation Wild is not first and foremost an environmental educational project in the traditional sense. It is a form of ecological community; the forging of a collective ecological identity across the boundaries of age, location, socioeconomic status, and ability. It has much more to do with reshaping ontology and place conscious pedagogy than with attitudes and literacies involving the natural sciences as emphasized in citizen science and conventional Western EE. Despite a desire to conduct citizen science monitoring as part of the program, participants were drawn to multiple other venues for "interacting" with and reinhabiting their local places. The act of accessing the natural world became a venue for expressions of connection to it. The program community was fuelled by an imagination of future EE programs, a desire to connect to the earth, and a willingness to participate in the resilience-building of a community of interwoven and increasing complexities. The program community believed and recognized the way in which program resilience is dependent on, or perhaps interdependent with, the kind of environmental thinking that considers and includes the lives of future generations. Thus, the kind of ontological frame that EE program resilience is predicated on is one that

acknowledges the stories yet to be told; relational ecological identity produces resilient programs that can listen to the voices of future generations because, first and foremost, the intergenerational voice is one that is perceived as real. This was perhaps the most striking revelation of participant ecological identities as relational insofar as they extended beyond the imagined boundary of the "individual" and even beyond "human;" they proved to be less isolated or exclusive to self than typically thought or discussed in EE literature.

Though I set out to assess, albeit in a loosely structured way, "the stories that emerge from place," it seems to me that rather than examining a pedagogy of place, this experience has been one of documenting a pedagogy of relational ecological identity. It is a pedagogy of eco-ability problem posing, which takes as its starting point, a particular place. The place itself is relevant insofar as it is a place where marginalized communities might "operate" freely; this being a place wherein the constraints of disempowerment are not invited to attend, wherein the pedagogy of conversation guides the communal search for story, for land, for a conscientization (Freire & Ramos, 1984) focused on the ways that our places, shared or not, are the result of particular systems of oppression. The place is one that is sacred to this community—a "Cedar Heaven" (Paul in Focus Group). The politics of visibility do not apply to the community in this place; it is a place where private land is not restricted, where education is authentic. collaborative, and emancipatory, and where community's who have experienced life at the fenceline of the visible are invited to participate in its deconstruction. There is much work to do. The environment must continue to build people as people in turn build the environment (Krasny and Tidball, 2015)—that is, the broken places beyond the fenceline. It is the slow work of inhabiting places—one that combats the slow violence (Nixon, 2011) of their demise. It relies on the reinhabitation (Gruenewald, 2003; Evans, 2012, p. 166) of Hamilton, a process which itself is a product of place consciousness, ecological identity, and the participatory processes of diverse, resilient communities. EE program resilience can only be built to last among communities who have faced denial and exclusion, for in so doing, they have maintained place memories, cultivated a rich connection to the perceptual, ecological, and sociological dimensions of place

(Gruenewald, 2003), and been invigorated by a conscientization (Freire & Ramos, 1984) that is merely awaiting the invitation both to speak and to listen.

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Appendix A: Program Engagement Scale

Research Participants	Citizen Science Interest	Civic Ecology Interest	Social Capital	Ecological Identity	CHEC Place Attachment	Place Consciousness
Paul	1	4	3	5	3	5
Penelope	3	3	3	5	4	4
Phoebe	0	2	1	3	2	1
Рорру	0	1	1	5	1	1
Sarah	1	4	5	5	3	3
Sean	1	3	5	5	2	4
Andrew	5	4	4	5	5	5
Abby	2	3	5	5	4	3

Appendix B: Learning Community Collaboration

Program Community Member	Program Feedback	Program aspects	Responded to	Partially Responded to	Not yet responded to
Paul	More interaction: planting, "doing something"	Civic Ecology		Planting Maple seedlings	
	Shelter from cold and/or rain	Infrastructure, design		Finding more wind-protected places for closing circle	
	More learning about "pruning" and invasive plants	Civic Ecology		Garlic Mustard, Good Shepherd invited to the "Buckthorn pull"	
	Survival Instruction	Nature Connection and Practical knowledge			x
	Longer programs	Design, Ecological Identity			x
	Specific Pond Ecology Learning	Design, Learning			x
	Where is the water going? Is it drinkable?	Place consciousness, citizen science			x
	Fishing	Ecological Identity, Nature Connection and practical knowledge			x
	Volunteering (Plant some trees, groom a trail, feed the horses etc)	Civic Ecology, Ecological Identity, nature connection		Garden cleanup and prep days	

Connect with the right people for trail building ideas	Social Capital	Sarah, Andrew, and I planning to visit a accessible trail site developed by a local organization to learn from them	
Levelling the slopes for better access	Design, Infrastructure	A Rocha in dialogue with conservation authority about restrictions	
Garbage fine for people who litter (a kind of gag fundraising ploy?)			x
"Develop your water resources" - build a dam or a pool etc	Design, Infrastructure	Plan to build a bridge to even out water flow, but need to do more teaching about the importance of wetland ecology	
Stocking the pond with fish to have fishing programs	Design, infrastructure	Andrew explains that the pond was originally stocked, has fish, and a renaturalization plan has been made to enhance fish habitat	

Penelope	Start a project examining the history of the Cedar Haven land and how it has changed	Place Consciousness			x
	More learning opportunities for kids - schools, summer camps — the next generation matters	Ecological Identity, Nature Connection and practical knowledge	Cedar Haven staff have responded to requests from local school groups		
	Trail building in ways that provide better access for wheelchairs and walkers, so that all people can connect	Ecological Identity, Place Attachment		Sarah, Andrew, and I planning to visit a accessible trail site developed by a local organization to learn from them	
	Investing in 10 pairs of binoculars to allow participants to engage more in bird watching/ monitoring	Citizen science, Ecological Identity	A Rocha partnered with Vortex Canada - asking for 10 pairs of binoculars (6 purchased so far)		
	Bi-weekly/ monthly e- newsletter for community		In circulation from A Rocha Ontario office		
	Semi-annual garbage cleanup day				x

1	i		1
Using a vehicle to enhance access (golf cart etc?)		Mobility devices are permitted, but Cedar Haven does not use a golf cart/vehicle on site	
Provide virtual tour to enhance access for those who cannot access any trails	Ecological Identity, Nature Connection and practical knowledge	Andrew has emailed the first ideas around how A Rocha might use technology to help provide a kind of "access" to their trails	
Network to find tech-savvy person who might help with a virtual tour	Social Capital, Design		х
Add sensory garden with plants that participants can interact with and learn from	Ecological Identity, Infrastructure, Design, Nature Connection	There are currently plans in the works - staff are designing and plan to plant an accessible sensory garden near the entrance to the property	
Sensory experiences for participants who are visually impaired	Ecological Identity, Place Attachment	There are currently plans in the works - staff are designing and plan to plant an accessible sensory garden near the entrance to the property	

	Get 10-15 pairs of rubber boots donated to help people access wet/muddy areas of the site	Ecological Identity, Design, Nature connection		10-15 pairs of rubber boots have been requested from local Canadian Tire Stores, other boots have been donated/ collected	
	Have a "name the pond" contest	Place attachment			x
	Water monitoring comparing Cedar Haven and Hamilton Bay Area	Citizen Science			х
	Water monitoring and advocating for clean water with City of Hamilton and Factories etc	Transformative Citizen Science, Place Consciousness			х
Sean	Garden cleanup and prep	Nature Connection and Practical knowledge	Good Shepherd staff and participants have been invited and some have participated in these activities already		
	Becoming more active on social media to announce events etc	Design, Social Capital		There is some activity on the A Rocha Ontario facebook page. Email has also been used to invite Good Shepherd participants to events and offer transportation.	
	Day long tree planting session for program	Civic Ecology, Ecological Identity			x

Sarah	Include Tenants in picking from the list of online booking options	Design			x
	Participant feedback - "can we check on the maple seedlings?"	Civic Ecology, Citizen science monitoring		Some seedlings have been monitored.	
	Small, intimate group outings vs program-based, large group	Social Capital			x
	Volunteer Team "happy to dig in and do things"	Civic Ecology, Design			x
	Transportation provided for volunteers	Design			x
	Program timing - not early mornings, not too long given "stamina" of population	Design	х		
	Gardening as shared responsibility with A Rocha	Design, Ecological Identity, Social Capital	x		
	Shelter for rain/ inclement weather	Infrastructure, design			x
	Teaching on how to preserve foods (grown in the garden)	Design, Ecological Identity (where do things come from?)			x
	More mindfulness exercises	Design, Ecological Identity, Place Consciousness?	х		

Nighttime evening programming	Design, Ecological Identity	Star-gazing and evening programming offered		
Fishing (evening)	Design, Ecological Identity			x
In town programming to help participants get to know staff and feel comfortable	Design, Social Capital	"In-home" sessions offered by Operation Wild staff		
Outdoor programming in local parks to "just learn and be"	Ecological Identity, Place attachment, place consciousness	"In-home" sessions offered by Operation Wild staff		
Local indoor programs during bad weather	Ecological Identity, Nature Connection and practical knowledge		"In-home" sessions offered by Operation Wild staff— requires more planning.	
Offering local programs and shorter time commitments to increase access/ interest	Social Capital, Design	"In-home" sessions offered by Operation Wild staff		
Cedar Haven as a site option for conservation visits and community picnic?	Social Capital, Ecological Identity, Place Attachment			x
Learning from Bean and Stock and other organizations that provide nature access	Social Capital		Sarah, Andrew, and I planning to visit a accessible trail site developed by a local organization to learn from them	

	Using rooms and community spaces at Good Shepherd for "in home" programs	Social Capital, Design, Ecological Identity		Rooms used for focus group, but not yet formal programming	
	Sarah and Penelope: project to learn bird songs	Ecological Identity, Citizen Science			x
Рорру	Gardening as shared responsibility with A Rocha	Ecological Identity, Nature connection	Good Shepherd staff and participants have been invited and some have participated in these activities already		