BECOMING ENVIRONMENTALISTS: PREVIOUSLY INCARCERATED INDIVIDUALS' EXPERIENCES WITH SCIENCE AND SUSTAINABILITY PROGRAMS IN PRISON

by

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ABSTRACT

Science and Sustainability Programs in Prisons: Exploring the Lasting Attitude and Identity Shifts of Formerly Incarcerated Individuals Emily Passarelli

Environmental injustices often disproportionately affect people of color and people from lower income families. These groups are also less represented in the field of environmentalism. Underrepresented populations are sometimes unaware of the additional burdens they carry because of environmental injustices. These same people are also disproportionately represented in prison. Out of the 2.3 million people behind bars in the United States, 97% of them will eventually reenter their community. The Sustainability in Prisons Project (SPP) provides meaningful educational opportunities for incarcerated individuals. This study aimed to answer the question: What lasting attitude and identity shifts occurred in formerly incarcerated individuals from participating in inprison environmental programs? The study attempted to answer that question by interviewing 8 previously incarcerated individuals to gauge their experiences with SPP programming in prison. These interviews were analyzed for collective and individual themes and ideas using a phenomenological method. This study found that formerly incarcerated individuals experienced shifts associated with developing an environmental identity as described by three identity theories. Participants also described experiences of transformation stemming from nurturing, being given important responsibility, and support. The findings of this study offer a contribution to the discussion surrounding diversity in the environmental movement.

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Introduction

Our successes in the program have also shown me that I can make a difference in this world, even from behind bars. Each and every one of us has the ability to contribute to society in a positive way if given the chance.

-Former butterfly technician at The Sustainability in Prisons Project, 2016

Time is of the essence when it comes to addressing anthropogenic climate change. Every moment we wait to make choices or a change is another moment in which we are impacting the environment. Though human-induced climate change was once considered a problem for future generations, it is becoming increasingly clear that climate change is now a problem for the present. Climate scientists expect to see changes in resource availability, increased flooding and extreme weather events (Georgakakos et al., 2014), changes in food (Hatfield et al., 2014) and water availability and quality (Georgakakos et al., 2014), and increased health risks from extreme heat and disease (Luber et al., 2014). The impacts are expected to affect all parts of the United States. Even in light of the limited time we have to act and the overwhelming evidence of human-induced climate change, recent studies have found that environmental interest is not only plateauing, but potentially decreasing (Andrew et al., 2016).

For many Americans, the state of the environment remains a relatively low concern (American Environics, 2006; Andrew et al., 2016). *Towards a New Ecological Majority* (2006) found that even 30% of the Ecological Base, or those involved in the environmental movement, do *not* identify as environmentalists (p. 2). Clearly, identifying as an environmentalist is not appealing to everyone. According to *Towards a New Ecological Majority* (2006), the Ecological Base is "nearly 90% white, mostly college educated, higher income, and at least 35 years old" (p. 2). As society grows and changes,

the environmental movement is in danger of becoming irrelevant if it fails to make to make the appropriate changes, specifically increasing diversity.

Vulnerable populations, like poor communities, communities of color, indigenous populations, single mothers, children, and the elderly, are expected to experience the impacts of climate change more than the average citizen and take longer to recover (Luber et al., 2014). Similar to the devastating effects of Hurricane Katrina, these populations are more likely to be disproportionately exposed to dangerous diseases, harsher weather, and air and water pollution (Luber, et al., 2016). Vulnerable populations will likely carry the heaviest burden when it comes to climate change impacts. As mentioned above, they are also significantly underrepresented in the environmental movement. However, diversity is essential for the environmental movement to remain relevant.

It is projected that by 2050 one in every two people in the United States will be non-white (Vincent & Velkoff, 2010). Environmentalists must consider the power minority constituencies embody and how that power will continue to grow. With the added power and partnership from minority constituencies, diversity in the environmental movement could translate into "political wins, higher public support, more members, a larger volunteer base, richer partnerships, and more financial support" (Bonta and Jordan, 2007). As stated above, diversity in the environmental movement would lead to more members. More members have the potential to create more momentum and keep the movement relevant. Clearly the environmental movement needs to make diversity and inclusiveness one of its main goals. American Environics (2006) offers a few solutions to the shortage of diversity. This research focuses on their third suggestion: "Develop strategies that will more deeply engage fulfillment-oriented young Americans who don't consider themselves environmentalists." (p. 3). The target population for this study is formerly incarcerated individuals.

With 2.3 million (and growing) behind bars, the United States has more incarcerated people than any other country in the world (Wagner & Rabuy, 2016). Over 95% of those incarcerated will eventually be released back into their communities (Durose et. al, 2014). There can be no denying that the American penal system is disproportionately affecting people of color, particularly African American men. Making up 13% of the United States population, African Americans make up about 40% of the prison population (Sakala, 2014). With the right opportunities, this population could become a gateway to a more diverse and inclusive environmental movement.

Incarcerated individuals are lacking in, but very eager for educational programming. Even though education is proven to help reduce recidivism rates (Davis et al., 2013), correctional facilities continue to cut educational programming. However, The Sustainability in Prisons Project (SPP), a partnership between The Evergreen State College (Olympia, WA) and the Washington Department of Corrections, has committed providing meaningful and safe opportunities for science education and community building inside prisons. This comes in the forms of conservation nursery programs, lecture series, rearing endangered species, environmental literacy programs, and more. All SPP programming includes education or training in some degree.

This research asks the question: What attitude and identity shifts endure postrelease from participating in in-prison environmental programs? This research aims to determine whether participating in an SPP program while incarcerated has lasting effects on individual's attitudes towards the environment and their environmental identity. To pursue this question, I conducted in depth interviews with previously incarcerated individuals who participated in an SPP program while incarcerated. The interview participants also submitted an optional demographic survey.

If the results tell us that previously incarcerated individuals identify as environmentalists or that they care more about the environment more after participating in an SPP program then there is a sound basis for making the argument that sustainability and science educational programming in prisons could help to foster diversity in the environmental movement. The environmental movement could become more adaptable, resilient, equitable, and representative of the population, and better equipped to address the needs of those who will be most affected by the effects of climate change.

Chapter 1: The Sustainability in Prisons Project

Since 2003, The Sustainability in Prisons Project (SPP), a partnership between The Evergreen State College (Olympia, WA) and the Washington Department of Corrections (WA DOC), committed to providing meaningful and safe opportunities for science education and community building inside prisons. Its stated mission is to bring science and nature into prison:

We conduct ecological research and conserve biodiversity by forging collaborations with scientists, inmates, prison staff, students, and community partners. Equally important, we help reduce the environmental, economic, and human costs of prisons by inspiring and informing sustainable practices." (LeRoy et al., 2012)

Science and nature in prisons comes in the forms of conservation nursery programs, lecture series, rearing endangered species, environmental literacy programs, and more. Many of these programs provide job opportunities for incarcerated individuals and all SPP programming includes education or training in some degree. In fact, education is considered one of SPP's essential components. This means that for a program to be considered SPP it should always include an educational component. The other four essential aspects of SPP include: partnership that fosters benefits for all parties involved, bringing nature "inside," safe and sustainable operations, and evaluation, dissemination, and tracking. While not all SPP programs are able to capture all five of the essential components, most include more than one and the most successful programs tend to include all five (SPP, 2016). Below are brief descriptions of the SPP programs that interview participants were involved in: endangered species programs and Roots of Success. These are defining programs of SPP. They encompass SPP's mission of bringing nature in prison while being tied to strong, well-developed partnerships and a prominent education component. It is also important to note that other defining programs, the conservation nurseries and the science and sustainability lecture series, were not included in this research as no potential participants could be located.

Roots of Success

Roots of Success is a 50 hour, 10-module environmental literacy program. This course covers environmental topics like energy, food, and social justice issues, while also encouraging critical thinking skills that translate to community-based solutions. The class also focuses on job readiness and the green economy. Upon completion of the class, each student earns a certificate that has potential to improve further academic and work prospects be redeemed for college credit.

Roots of Success is unique in that it is inmate led. Instructor are either trained by the curriculum's creator Dr. Raquel Pinderhughes, professor of Urban Studies & Planning at San Francisco State University, or by a Master Trainer. Master Trainers are instructors who have taught at least 3 classes and showed exceptional teaching and leadership skills. To gain Master Trainer status, they go through an additional three-day training taught by Dr. Pinderhughes. In addition to traveling to Washington for trainings, Dr. Pinderhughes has also kept in touch with some students and instructors post-release and has written letters of recommendation and assisted in job searches.

This course is currently supported in almost all Washington State prisons including Airway Heights Corrections Center (AHCC), Coyote Ridge Corrections Center (CRCC), Larch Corrections Center (LCC), Monroe Correctional Complex (MCC), Stafford Creek Corrections Center (SCCC), Washington Corrections Center for Women (WCCW) and Washington State Penitentiary (WSP).

In addition, Clallam Bay Corrections Center (CBCC), Washington Corrections Center (WCC) and Mission Creek Corrections Center for Women (MCCCW) are planning to reinitiate the program in 2017.

Roots of Success Students

Students involved in Roots of Success may be taking the class for a number of different reasons. Some may be taking it because of their own interest, while others may be taking as a requirement for a job. For instance, at Washington State Penitentiary, if an incarcerated individual wants to work in the Sustainable Practice Lab, a desirable job for many, they must first complete the course. Some classes, particularly in pilot classes, have students selected by staff due to their interests and behavior. SPP's Evergreen staff do not choose who to include in classes. Well-established classes often have a first-come first-serve rule and usually have waitlists. Classes can have anywhere from 2 to 20 students.

Roots of Success uses PowerPoint presentations which include information on the module, videos, and definitions. Students are provided with a workbook which they fill out as the class progresses and are encouraged to keep the workbook after the class is complete. Instructors also facilitate group discussions between students. Every student is

encouraged to contribute to the conversations which provide a variety of opinions and deep discussions. They are encouraged to work together to find community-based solutions to environmental issues. Students often leave the class feeling more confident in speaking skills as well as with a deeper understanding of environmental issues and potential routes for green jobs.

Roots of Success Instructors

Instructors are selected by DOC staff and are typically paid for the position, though not always. Instructors are typically chosen because they have shown interest in environmental issues and have demonstrated the potential to be effective facilitators. Most classes have multiple instructors teaching, though this is not always true. Multiple instructors allow for diversity in opinions and varied classroom dynamics. Having incarcerated instructors can be difficult as DOC staff cannot allow incarcerated individuals to be in positions of power over other incarcerated individuals. However, since instructors typically stick to the script in their instructor manual, work in pairs, and work closely to DOC liaisons, power struggles are dealt with quickly if they occur at all. Instructors not only become well-versed in the subject material, but learn how to use PowerPoint, team building skills, handling diverse opinions and ideas, and developing community-based solutions to environmental issues.

Taylor's Checkerspot Butterfly Program

The Taylor's Checkerspot Butterfly (*Euphydrayas editha taylori*) population has been dramatically declining since 2001. In Washington, this federally endangered species can only be found fragmented areas. MCCCW started rearing these species in 2011, and they have released over 17,000 butterflies have been released. Between 3 to 5 incarcerated butterfly technicians work throughout the year to carefully rear and breed these butterflies. Inmate technicians not only learn to breed these endangered butterflies according to careful, genetically sensitive protocols, but also have opportunities to participate in scientific research. Previous inmate technicians have published scientific papers and gone on to study environmental science in college, post release (SPP, 2017). Technicians are hired based on their potential to work well with others and follow strict directions, as the protocols for this program are quite specific.

Western Pond Turtle Rehabilitation Program

The western pond turtle (*Actinemys marmorata*), a state listed endangered species and one of only two native turtles in Washington State, is struggling with a treatable shell disease. In a partnership with Washington Department of Fish and Wildlife, veterinarians at PAWS, Woodland Park Zoo, and Oregon zoo, incarcerated technicians clean, feed, and monitor the turtles every day. Depending on the number of turtles, technicians spend somewhere between 4 to 6 hours a day caring for and monitoring the turtles. SPP Turtle programs can be found at Cedar Creek Corrections Center (CCCC) and Larch Corrections Center (LCC) (SPP, 2017).

Recruitment for turtle technicians involves an interview with the SPP program coordinator. The coordinator looks for individuals who demonstrate good communication skills, attention to detail, and the ability to work respectfully in a team setting. There are usually 3 technicians at LCC and 2 at CCCC. In addition to caring for the turtles, technicians participate in discussing scientific literature on the turtles, help design

research plans, collect data, assist in developing important protocols, and even go on field trips to the partner zoos and turtle releases.

Oregon Spotted Frog Program

Though this CCCC program is on hold for evaluation, this was SPP's first program to work with endangered species, and as far as SPP knows, the first endangered species program in prison ever. Since the turtle program is modelled after this program, these two programs are quite similar. For example, technicians would feed, study, and observe the frogs daily based on strict animal husbandry protocols. They also participated in discussions on scientific articles and had opportunities to interact with biologists, media, and other partners.

Literature Review

The following literature review explores several topics including environmental identity, nature therapy, and animal programs in prison. The review begins with defining and exploring environmental identity and how people create meaningful and lasting connections with nature. Next discussed is nature therapy, which has been researched in health care settings, prisons, and other stressful environments. Those participating in SPP programs may not only be building connections to the environment, but may be experiencing the therapeutic effects of nature as well. The third section explores animal programs in prison, which is also thought to have therapeutic effects on individuals. The fourth section includes a short review on other SPP research. Past research has found, among other results, that SPP programs increase interest and understanding of environmental issues and topics. The review concludes with a discussion drawing from the experiences of formerly incarcerated people who have undergone educational programming during incarcerations.

Environment Identity

Identity is complex, ever-changing, and difficult to measure. Identities are so complex because there are countless elements that contribute to who we are. Identities are in part formed around how we are seen and received by others (Clayton & Opotow, 2003). In addition to the complex formation of identities, according to Clayton (2003), "we have multiple identities, varying in salience and importance according to the immediate context and to our past experience" (p. 45). Identity is generally thought to be both a product and a force that guides personal, social, and political behavior (Rosenberg, 1981, Clayton, 2003). This research focuses on one of those identities, our "environmental identity" or our E.I. Rather broadly defined, an environmental identity can be understood as "a psychological connection between oneself and the nonhuman natural environment" (Kashima et al., 2014; Clayton, 2003; Mayer & Frantz, 2004).

It is worth understanding how we develop and change our environmental identities because one's E.I. may predict environmental intentions and behaviors (Kashima et al., 2014; Terry et al., 1999). People who consider themselves "environmentally friendly" or an "environmentalist" may be more likely take part in resource conservation efforts, eco-shopping, and other environmentally friendly actions (Whitmarsh & O'Neill, 2010). This means that this research could be used to develop a better understanding of what changes need to be adopted to enable a transition into a sustainable future (Kashima et al., 2014; Bratanova et al., 2012).

However, the complex study of environmental identity puzzles researchers. As E.I. has been conceptualized using varied methods, it has also varied practical use (Kashima et al., 2014). Indeed, Carlone & Johnson (2007, p. 1189) point out that "the concept is slippery and difficult to operationalize in a way that provides solid methodological and analytic direction."

Researchers have used a variety of different theories to better understand our identities and how they relate to the environment. For example, Williams & Chawla (2016) explore E.I.'s using social practice theory, which claims that people adopt and adapt identities based on what the people around them are doing and saying. They studied the long-term impacts of participating in three nature-based programs in Colorado.

Williams & Chawla (2016) found that good experiences with instructors, feeling accepted in the group, and being entrusted with responsible tasks were the most memorable and impactful moments of being involved in the programs and contribute to how they see themselves in environmental situations. Another researcher, Stapleton (2015) used sociocultural theory to understand what roles action, practice, and recognition play in developing an environmental identity. Stapleton conducted a qualitative study based on the reflections of 13 students with varied demographic backgrounds, experience, and interests who participated in international experience on climate change impacts. She found that diversity in the learning group and a range of interest and experience can enhance the development of an environmental identity and that social interaction has a large impact on this development as well (Stapleton, 2015). Other researchers have used the theory of ego development (Searles, 1960), place theory (Sack, 1997), or have even created their own theories (Kashima et al., 2014).

In addition, the conceptual framework and assumptions underscoring their theoretical constructs are extremely varied, especially on the lasting effects of environmental learning experiences in adults, which very few studies focus on (Williams & Chawla, 2015; Stapleton, 2015; Liddicoat & Krasny, 2014). Many of the studies focused on the E.I. being developed from childhood experience and memories in nature, including involvement in outdoor environmental education, but few studies focus on the development of E.I.s in adults. These studies attempted to measure through the use of surveys and different types of interviewing (Chawla, 1999; Bogner, 1998; Matsuba & Pratt, 2013; Liddicoat & Krasny, 2014; Williams & Chawla, 2015). In addition to scarce research on the development of E.I.s on adults, Holmes (2003) noted that the

development of environmental identity across racial, ethnic, and class diversity has been greatly overlooked. Clearly, research on the lasting effects of environmental interaction and education in adults needs expansion. In addition, this area of research could expand its focus from the natural environment to the social influences that also shape our environmental identity.

Much of E.I. research focused on solely the relationship to the natural environment. For instance, many scholars attempted to understand E.I through focusing only on sense of place and attachment to place (Devine-Wright & Clayton, 2010; Blatt, 2013; Clayton, 2003; Matsuba & Pratt, 2013). While we do want to understand what impacts the natural environment has on our identities, we cannot ignore the impacts social meaning and interaction has on the identity (Stapleton, 2015; Zavestoski, 2003; Samuelson et al., 2003). Though experiences with the natural environment do appear to have significant effects on individual's environmental identity, social impacts influence ideas, personal values, and, ultimately, the salience of this identity (Stapleton, 2015; Williams & Chawla, 2016; Clayton & Opotow, 2003). According to Clayton and Opotow (2003) "environmental identity involves dynamic interplay between what is perceived as central and as peripheral, with the social and environmental encroaching on and redefining each other (p. 12). Therefore, it is imperative to understand that social impacts heavily influence how the E.I. if not only formed, but maintained.

Overall, the research surrounding the development of an E.I. is scattered and complicated. However, in the face of multiple theories, frameworks, and methodologies, this area of research is promising. Similar to those who have defined the "environment," researchers are beginning to look at both natural and social impacts on the identity. The

environmental identity could be built on a variety of factors including experiences that boost self-esteem, provide responsibilities, moments of independence, community building experiences, beauty, a deeper understanding of one's role in the environment and vice versa, exposure to new information, a sense of belonging and acceptance, and much more (Williams & Chawla, 2015; Stapleton, 2015; Clayton & Opotow, 2003;). Clearly, diverse influences and experiences shape our ever-changing environmental identity.

Nature Therapy

Research describing the therapeutic powers of nature is rich and promising. Nature therapy, which can be both formal or informal, can take form in something as simple as viewing images of nature, to forest walks, to daily involvement in gardens. Many studies found that spending even a little bit of time in nature have positive health impacts. For instance, Ulrich (1999) found that exposure to greenery and the outdoors can have rehabilitative effects on individuals, particularly on their stress and self-control levels. Berger & Tiry (2012) found that nature therapy can be "supportive of rehabilitation and growth and development of adults with emotional problems" (p. 415). This phenomenon has been studied in a variety of stressful situations including in healthcare, particularly easing feelings of anxiety about surgeries and quicker healing afterwards (Söderback et al, 2004; Marcus & Barnes, 1999; Ulrich, 1999), in veterans with PTSD, who felt calmer and included in natural settings (Poulsen et al., 2016), and children with learning disabilities who were found to have higher self-esteem and a better understanding of responsibility among other benefits (Berger, 2008). Fewer studies explore the therapeutic effects of nature in prison. One study, which looked at the effects of nature imagery on incarcerated individuals, by Nadkarni et al. (2017), found that even seeing images of natures calmed incarcerated individuals. This led to reduced violent infractions, improved relationships with prison staff, and an increased ability to control one's anger. Other studies found the view from an inmate's cell window can affect inmate health (Moore, 1981; West, 1985). For instance, West (1985) found that incarcerated individuals who had windows that faced natural settings reported fewer stress-related physical symptoms than inmates with a window facing a prison building. Moore (1981) also found that inmates with windows facing natural settings had less health complaints. Though there has been promising research exploring nature therapy in prisons, there is plenty of room for more detailed studies (Gallagher, 2013). Nadkarni (2017) contributed significantly to this area of research and nature therapy will likely be explored more thoroughly as "blue rooms," or nature imagery rooms, become more popular in prisons.

Animal Programs in Prison

Animal rehabilitation and training programs can be found in prisons around the world including Japan, Canada, and many European countries. Incarcerated individuals have the opportunity to train service or work animals, usually dogs, or to prepare animals for adoption as pets. Within the last 15-20 years, the majority of U.S. prisons have begun hosting animal rehabilitation and training programs (Furst, 2006).

In Washington State, 11 of 12 prisons have very active dog training programs that prepare dogs for adoption or for service (SPP, 2017). One remarkable program at

Washington Corrections Center for Women, called the Prison Pet Partnership (PPP), gives incarcerated women the opportunity to gain experience in grooming and handling cats and dogs. Sufficient program experience is recognized by a Pet Care Technician Certificate through the American Boarding Kennel Association. This can lead to job opportunities post-release and the Prison Pet Partnership offers support through the transition back into the community (PPP, 2017).

This area of research is fairly thorough researchers generally agree that these types of opportunities benefit the incarcerated individuals as working with animals can be "highly therapeutic and rehabilitative" (Deaton, 2005) and can allow incarcerated individuals the opportunity to understand and cope with emotions (Burger et al., 2011). Even without training, simply taking care of dogs has been linked to increased inmate self-esteem, self-worth, patience, reduced infractions, less tension, and responsibility (Allison & Ramaswamy, 2016; Britton & Button, 2005; Furst, 2006, Strimple, 2003).

While dog programs are fairly common and well-researched, programs rearing endangered species are quite the opposite. Working with endangered species in prison is quite rare. To date, there have been no studies capturing the effects these programs have on incarcerated individuals and little scientific research even mention the programs (Gallagher, 2013; Ulrich & Nadkarni, 2009). Though little explored, it is important to point out key differences between SPP's endangered species programs and popular dog programs.

SPP's endangered species rearing programs, specifically the Taylor's Checkerspot Butterfly Program and Oregon Spotted Frog Program, are unique in that while inmates

still have the opportunity to care for animals, they also include a rigorous science component. Incarcerated individuals examine, analyze, and write papers on peerreviewed scientific articles while also learning important transferable skills like data management and recording keeping (Gallagher, 2013). Inmates also work closely with professional biologists to restore local populations. This gives opportunities to give back to the community while incarcerated. For a more detailed description of these programs, please see Chapter 2.

Past SPP Research

As SPP continues to grow and provide more programming, the project constantly evaluates itself and provides research opportunities for graduate students. Since the start of SPP, there have been four theses exploring the effectiveness of different SPP programs. All theses have found an increase of interest and understanding of environmental issues. Each thesis is briefly described below.

One thesis project looked at the rehabilitative potential of SPP programming. Clarke (2011) used qualitative interviews to find that SPP programs share characteristics with successful rehabilitation programs. Clarke (2011) found that both staff and incarcerated individuals noticed that participating in SPP's Science and Sustainability Lecture Series had an increase in social interactions and positive conversations, excitement and interest in environmental topics, and an increase in job skills and opportunities for incarcerated individuals. Clarke also found less prominent themes that include increased self-esteem, altruistic motives, empathy, nurturing, hope, and increased freedom.

More thesis research on the lecture series, conducted by Weber (2012), explored the effectiveness of lecture-style and workshop-style classes focused on environmental issues. Weber (2012) analyzed pre and post surveys which included both qualitative and quantitative questions. This thesis found that there was significant improvement in inmates' attitudes towards environment and improvement in knowledge on endangered species.

Gallagher (2013) researched the effects that participating in SPP programs can have on incarcerated individuals. 253 incarcerated individuals responded to a survey which assessed attitudes towards the environment, pursuing education, work satisfaction, job skills, social relationships, and outlook on the future. Gallagher (2013) found that incarcerated individuals who worked in education/training, working with living things, and contributing to the community were associated with more pro-environmental behavior.

Finally, Webb (2016) explored responses from lecture series program surveys. This research found that students showed an increased understanding of and positive attitudes towards the environment and lecture topics. Webb (2016) also found instances of potential 'green washing,' or false advertising that a program is more environmentally friendly that it is, in Washington prisons. SPP identified the need for further evaluation of the effects of SPP programming on inmates, staff, and scientists (LeRoy et al., 2012). In addition, past graduate students have identified the need for longer-term impacts of SPP's education and conservation programs, particularly qualitative research (Clarke, 2011; Gallagher, 2013; Weber, 2012).

Accounts of Experiences with Education in Prison

Though there are plenty of examples of narratives from previously incarcerated individuals about their experiences in prison, there are few published narratives covering experiences with education and nature. Most narratives discuss the harsh realities of prison life, difficult prison dynamics, inequalities, parenting behind bars, and other hardships. However, very few previously incarcerated individuals are asked about their relationship with educational programming.

Those who did discuss education had almost entirely positive comments. They discussed how education allowed them to "leave prison with the belief and understanding that they can accomplish anything they put their minds to" (Stern, 2014, p.162). The majority of previously incarcerated students who spoke about education found post-secondary education to be a *transformative* experience (Stern, 2014; Zoukis, 2014). Many previously incarcerated individuals found that they were also able to improve communication and social skills.

Stern (2014) suggests that the more education an inmate receives the more likely the inmates are to start building healthy relationships. The narratives from previously incarcerated outside of SPP tend to agree with that. Interviewees described how education gave them the tools to express themselves. One previously incarcerated individual described that education gave him and his fellow inmates the ability to "articulate their grievances in ways in which they couldn't previously, in ways that are

more likely to be understood and acted upon" (Stern, 2014; p. 150). This autonomy and confidence can often translate into rebuilding important relationships.

Family relationships provide important support for those reentering their communities (Travis & Waul, 2003). Families are a necessary support system for those reentering the community. With the stigmas and challenges surrounding reentering society as a convicted felon, family support can be the difference between being rearrested and staying free. Studies have found that fathers who returned to their wives and children after incarceration were less likely to recidivate than those who lived alone or with a parent (Curtis and Schulman, 1984). While not all families can financially or emotionally support a previously incarcerated individual or have positive impacts on previously incarcerated individuals themselves, family relationships often spark a desire for change in incarcerated individuals (Cossyleon, 2012; Stern, 2012; Travis & Waul, 2003; Zoukis, 2014). Education can give incarcerated students the tools to rebuild important relationships and improve communication and listening skills (Stern, 2014). Other interviewees described how obtaining an education changed their relationships with family members (Stern, 2014; Cossyleon, 2012). One woman described her father, who she had had little to no contact with, helping her buy textbooks so that she could pursue her education. He told her, "as long as you're moving in the right direction, I'm gonna be there to help you any way I can" (Cossyleon, 2012; p. 28). Education has the power to rebuild important social relationships amongst family, friends, and colleagues.

The literature has represented that previously incarcerated individuals have, in general, had positive feedback on educational programming. However, none of the narratives reviewed discussed suggestions for improving programming or program

participation and the literature including narratives from previously incarcerated individuals is minimal. Those who face incarceration and reentry often have their voices stripped from them. They often cannot vote, find housing or employment, receive social services, or escape the stigmas that come with a marked record. Their input is a useful tool that we can use to empower those who are underrepresented and hear diverse thoughts and opinions. Their voices have the potential to make immediate changes to existing conditions and programming.

Chapter 2: Experiences of Incarceration

Since this research explores identity shifts in formerly incarcerated individuals, we must understand who is in prison, the environment that they lived in during these shifts, the challenges they face upon release, and how this ultimately affects than just incarcerated individuals. The first section, "Race, Education, and Prison" discusses the demographic that currently make up the U.S. incarcerated population. The second section, "Recidivism and Education," walks through recidivism, or the rate of being rearrested, the challenges faced by formerly incarcerated individuals, and incarcerated living conditions which may shape the way these individuals formed their identities. The third section of this chapter, subtitled "Education Impacts on Incarcerated Individual's Children" explores the affects that education and confidence building can have on incarcerated individual's children. If we want these behaviors and interests to be passed on to children, we must understand how incarceration can affect their children.

Race, Education, and Prison

There can be no denying that the American penal system is disproportionately affecting people of color, particularly African American men. Making up 13% of the United States population, African Americans make up about 40% of the prison population (Sakala, 2014). That number does not include the 5.1 million people who are on parole or correctional supervision (Alexander, 2012). As described earlier, reentering society is already an extremely difficult process, and for black men the process is even harsher. When black men reenter their communities they are not only less likely to receive a job offer than any other demographic, but also more likely to be discriminated against for housing and public services (Alexander, 2012; Pager, 2003).

As will be discussed below, not only is having both parents important for a child's emotional and mental health, but children with parents in prison may be more likely to someday become incarcerated themselves. According to Alexander (2012), "a black child born today is less likely to be raised by both parents than a black child born during slavery" (p.180). The US penal system is currently set up as a "revolving door" which is preventing many African American families from breaking out of the penal system. When parents are released from prison but are not able to get custody of their children, housing, employment, food stamps, or other social services, they are more likely to end up back in prison. Since many of these families are already struggling with poverty, mental illness, or addiction the penal system is only set up to fail them and their children. On top of these hardships, we must be reminded that educational programming is minimal (only about 6% of prisons have post-secondary educational programming) which means that those without privilege will be stuck in the "revolving door" (Zoukis, 2014).

There are currently more African American men in prison on drug charges alone than enrolled in undergraduate programs (Alexander, 2012). While there is little information on the demographics of those involved in correctional educational programs, SPP is dedicated to increasing diversity in programs. Narratives from previously incarcerated individuals can act as a tool to increase correctional educational diversity, inclusion, and program quality. Their stories may shed light on any racial, or other, discrepancies that are preventing or deterring people of color from participating in an educational program.

Recidivism and Education

With 2.3 million (and growing) behind bars, the United States has more incarcerated people than any other country in the world (Wagner & Rabuy, 2016). Over 95% of those incarcerated will be released back into their communities. Unfortunately, the recidivism rates are staggering. The Bureau of Justice Statistics found that 3 years after release, 67.8% are rearrested. Five years after release, the numbers are even higher, at 76.6% (Durose et. al, 2014). In Washington State has lower recidivism rates than national average. In 2006, the recidivism rates were at 31% (Evans et al., 2010). Preparing incarcerated individuals to re-enter back into society requires significant attention from the public, as these returning citizens directly affect the communities they are returning to and taxpayers. These staggering statistics act as a clear signal that punishment is not enough.

This statistic may be shockingly high, but unfortunately makes sense. Re-entry is incredibly difficult. These statistics represent the heavy burdens that come with reentering the community after incarceration. In general, incarcerated individuals are less educated than the average citizen (Durose et al., 2014). Many of the incarcerated men and women enter prison without any job experience, social or professional skills, support, a high school diploma or GED, or even the ability to read (Zoukis, 2014). According to Gideon & Sung (2011), "40% of prisoners are functionally illiterate and 19% are completely illiterate" (p. 24). According to Zoukis (2014), almost 70% of prisoners cannot write a letter or understand a bus schedule (p. 51). Being so unprepared and unsupported often results in returning to crime and being rearrested. On top of that, the

prison environment is a harsh one that inherently promotes antisocial behavior and negative self-views.

As Zoukis (2014) said, "prison may actually decrease one's ability to cope in the traditional society, as the values needed to succeed in prison often directly conflict with societal norms" (p. 10). Gideon & Sung (2011) similarly argue that "the current model of prison operations is based solely on incapacitation and not inmate rehabilitation" (p. 24). As soon as prisoners enter the prison system they are greeted with humiliation, fear, and dehumanization. They lose all personal belongings, have their body cavities searched, have their names degraded to a number, are referred to as "inmate so and so." and are subjected to intense power dynamics from staff (Stern, 2014). Not only are people's identities stripped from them upon entering prison, but they are also entering an overcrowded community of people who are equally as scared, angry, and confused as they are (Zoukis, 2014).

Many prisoners have traumatic life histories that make rehabilitation and transformation unachievable without additional support. For instance, most incarcerated individuals have extremely low self-esteem, have suffered abuse before and during their prison time, may have no family or outside support, may be struggling with drug addictions (Zoukis, 2014), and often suffer from mental problems (Gideon & Sung, 2011). In fact, more than 90% of previously incarcerated individuals have no plans for discharge (Kupers, 1999). With all these odd stacked against them, most incarcerated people have little chance of succeeding on their own in the community.

Education can provide the tools for incarcerated people to obtain employment upon release. However, even with a proper education, previously incarcerated individuals face additional hardships that come with having a criminal record, like finding meaningful employment opportunities which will hire ex-convicts and finding housing that does not discriminate against ex-convicts (Pager, 2003; Zoukis, 2014; Alexander, 2010). In addition, another law signed by Bill Clinton permanently bars those with drugconvicted felonies (most which are black men) from federally funded public assistance, including food stamps. While thirteen states have opted out of this law completely and most other states have created exceptions to the rule, there are still thousands of previously incarcerated individuals without access to food stamps (Alexander, 2013; p.157-8). If incarcerated individuals are being released back into the community without additional education or social skills and little support, crime becomes an inevitable option for survival. In its current state, the prison system is not an appropriate environment for rehabilitation and positive change, but instead is perpetrating negativity, inequality, and institutionalized racism (Gideon & Sung, 2011; Alexander, 2010; Zoukis, 2013).

In the face of all the negativity surrounding prison life, education has been found to lower recidivism rates rather substantially (Durose et al., 2014; Davis, 2013; Zoukis, 2014). Durose et al. (2014) found that those who "participated in correctional educational programming had 43% lower odds of recidivating than inmates who did not" (p. 57). They also found that prisoners who participated in educational programming during incarceration have a 13% higher chance of finding employment opportunities after release. If previously incarcerated individuals can find a stable job with a reasonable income, they are less likely to return to crime to support themselves and their families (Zoukis, 2014). Education offers incarcerated individuals a new set of social skills and new ways of thinking. Finding employment post-release can contribute to rebuilding selfesteem, connecting with a more supportive system of people, getting into a productive routine, and can seriously impact previously incarcerated individual's children.

Education Impacts on Incarcerated Individual's Children

Correctional education programs not only impact those taking the courses, but also their families, especially their children. This means that education not only has the power to reduce recidivism, but also to reduce the future incarceration numbers (Zoukis, 2014; Stern, 2014). In 2008, it was reported that over half of the U.S. prison population reported having a child under the age of 18, 25% of those children being 4 years old or younger (Glaze & Maruschak, 2008). Not only do these children lose home time with their parents, but due to the costs of travel, distance, and visitation rules children are even less likely to see and spend time with their incarcerated parents (Mumola, 2000). According to Coley & Barton (2006), in California, 60% of female prisoners are from southern California, but the two largest women's prisons are 260 miles away (p. 24). In fact, Mumola (2000) reported that 57% of fathers and 54% of mothers in state prisons have not had a personal visit with their children since they began serving their prison sentence, and 60% of incarcerated parents are over 100 miles from their last place of residence. To make interacting with family even more difficult, we must be reminded that many prisoners cannot read or write letters to their families or afford call fees (Travis & Waul, 2003).

These children, who were already likely at risk due to their parents' financial situation and instability at home, are affected by their parent's incarceration in a number of ways. They may develop psychological issues like trauma, depression, or anxiety, are more likely to display disruptive behavior at school, and may be more likely to be involved criminal behavior (Travis & Waul, 2003). As one incarcerated man put, "In urban communities, you do not see many examples of the finished product of education so it is difficult to picture one's self as anything other than what you see on a daily basis. Sadly, in too many communities in America, that example is drug dealers, users, gang members, and common criminals." (Travis & Waul, 2003; p. 167).

The majority of incarcerated parents, 70% in state prisons, do not have a high school diploma (Mumola, 2000). However, when children see their parents earning colleges degrees and staying away of crime, it influences the children's future choices as well (Stern, 2014; Zoukis, 2014). According to Stern (2014), "A study from Bedford Hills College Program found that children of the women enrolled in the prison college program expressed pride in their mother's' academic achievements, were inspired to take their own education more seriously, and were more motivated to attend college themselves" (p. 178). Correctional education has the potential to inspire incarcerated individual's children to see their own potential and abilities. While not enough research has been done on the children of incarcerated people and we know very little about the long-term effects of parental incarceration on children (Travis & Waul, 2003; Arditti et al., 2003; Luther, 2015; Cassidy et al., 2010), we do know education has the potential to have positive effects on children (Zoukis, 2013; Stern, 2014).

Methods

The goal of this thesis is to understand if in-prison SPP programming can shift participant's attitude and/or identity towards environmentalism. To better understand this idea, I asked the research question: What are the lasting identity and attitude shifts in formerly incarcerated individuals who participated in an SPP program while incarcerated? This study interviewed and surveyed formerly incarcerated individuals on their experience with SPP programing and reflections on themselves and others. The surveys were used to describe the demographics of the participants. After being transcribed by ear, the interviews were then coded using qualitative analysis technique, rooted in several identity theories.

Position Statement

There was potential for bias in these interviews as I worked for The Sustainability in Prisons Project during this research. Individual's responses may have been influenced by knowing my position in SPP and the desire to keep a relationship with SPP. However, potential bias was mitigated in two ways: First, by ensuring that their identity would never be revealed and second, their responses would not affect their relationship with SPP. Some level of bias is expected in this type of research as it involves participants understanding their own past experiences and the researcher understanding the participant's past experiences (Smith & Osborn, 2013). The benefits of this research methodology outweigh the concern for bias as the number of participants available to interview was small and some level of biases are expected in this type of qualitative research.

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Research Approval

Conducting research in a prison setting can be extremely difficult. There are significant ethical concerns since incarcerated individuals represent a disempowered population that has been exploited by researchers in the past (The Belmont Report, 1979). To keep this research to be feasible and affordable, I chose to interview only previously incarcerated individuals who were not under any supervision, such as parole. This meant that I worked only within the Evergreen State College Human Subject Review, rather than the Department of Corrections. While this limited the number of interviews I could conduct, these participants were able to speak candidly on the programs and their impacts.

Participants

A total of 8 previously incarcerated individuals participated in this research. Since SPP is a young program, at 14 years old, the pool of potential interview candidates is limited. Not only are many SPP participants still incarcerated, but due to the human subject review implications, only individuals who were not under supervision could be contacted. In addition, since SPP is not a reentry program, keeping in contact with participants after re-entering society is up to the participants. Participants were recruited through social media and email. All participants were given a \$30 gift card to a vendor of their choosing for participating in the interview.

Demographic Surveys

All participants in this study participated in a voluntary demographic survey. The demographic survey collected information on each participant's release date, age, race, release date, what SPP program(s) they were involved in, preferred pronoun, highest level of completed education, and past and current job activity (including industry, title, and how much earned). To see the questions asked, please look at Appendix B. The participants came from varied and diverse backgrounds. This tool captured accurate, aggregate data without giving identifying information on the individuals. The following table describes the demographics of the individuals who participated:

Table 1: Demographics of Interview Participants			
Characteristic	Category	Number of Participants	Percent
Age	18-30	0	0%
	31-40	5	62.5%
	41-50	1	12.5%
	>50	2	25%
Race/Ethnicity	White	3	37.5%
	Hispanic or Latino	1	12.5%
	Black or African American	3	37.5%
	Native American	0	0%
	Asian/Pacific Islander	1	12.5%
	Other	0	0%
Preferred Pronoun	She/Her	4	50%

	He/His	2	25%
	They/Their	2	25%
Highest degree level of school completed	No school completed	0	0%
	Nursery school to 8th grade	0	0%
	Some high school, no diploma	0	0%
	High school graduate/GED	2	25%
	Some college, no degree	3	37.5%
	Trade/technical/vocational	0	0%
	Associate's Degree	2	25%
	Bachelor's Degree	1	12.5%
	Master's Degree	0	0%
	Doctorate Degree	0	0%

In addition to being demographically varied, participants also varied in the amount of time spent in SPP programs. Some individuals only spent a few months in a program, while others spent years in a program. The requirements and recruitment process for involvement in the programs vary from program to program as well. For more detailed information please refer to Chapter 1. The amount of time these individuals have been back in the community varied from 4 years to about a year.

Lastly, individuals also varied in their knowledge and interest in environmental issues before participation. Some individuals were aware and considered themselves environmentalists before participating in SPP, while others gained awareness during their time in SPP.

Interviews

The formerly incarcerated individuals in this study took part in a semi structured interview about their relationship with nature before and after SPP, meaningful parts (for themselves and their families) of their experiences in SPP, and reflections on themselves as part of the environmental movement. Interviews varied from 17 minutes to almost 40 minutes in length. Most interviews were held in person, though one was held through video chat. Each interview was recorded on an audio recorder and then manually transcribed.

The goals of the interview were to:

- 1. Explore participant's prior and current relationships with the environment and gauge interest in environment issues.
- 2. Explore and identify meaningful and lasting effects of SPP programs on individuals.
- 3. Explore identity and attitude shifts accredited to being involved in SPP programming.
- 4. Describe how participants now use the tools and information they developed during their time in SPP.

These goals are in tandem with the aims of interpretative phenomenological research and analysis as it explores individual's perception of objects, events, and personal lived experiences (Smith, 2004; Finlay, 2012). Seven interview questions, with four to five clarifying questions beneath, were developed to explore participant's experience with SPP, nature, and social interactions during their participation in SPP

(Smith, 2004). To see the questions and their clarifying questions, please see Appendix A. Each participant was given the questions ahead of the interview to ensure they understood the questions and felt comfortable participating.

Data collected from these interviews was analyzed following the well-established method of phenomenology along with the theoretical basis of environmental identity. This approach exploring personal experience and an individual's perception of an event. This method was chosen as it allows the researchers to understand the participant's point of view, which was useful for answering the research question (Smith & Osborn, 2003). This sample size met the standards of qualitative phenomenological research. According to Smith & Osborn (2003), 5 to 10 interview participants is common for this type of research, especially since SPP has a limited number of potential participants.

When analyzing the data, the goal was to abstract themes that describe the meaning behind the participant's answers (Smith, 2004). Each theme was assigned a code, which focused on understanding the participant's experiences with the environment, SPP programs, and identity and attitude shifts. For more information on the coding process, analysis, and results, please see the next section.

Results & Discussion

The interviews and surveys were analyzed and results show that participating in SPP programs during incarceration can contribute to developing a strong environmental identity. Though 2 participants were hesitant to call themselves "environmentalists," all participants described participating in pro-environmental action. Participants participated a variety of environmental actions like recycling and resource conservation, changing consumer habits, pursuing an education in environmental studies, and sharing information with family and friends. In line with phenomenology methodology, themes were identified throughout the interviews. After coding, I found three major themes: environmental awareness and action, transformation and personal development, and support and social connection. To analyze the findings, I decided to look at the findings through the lenses of three identity theories. Each section briefly explains the theory used, then supports theories using quotes and themes from the interviews.

Pro-Environmentalism - Action and Changes in Behavior

The majority of the participants of this research described changes in their daily habits in hopes of having positive effects on the environment. When researching environmental identity, the goal is that the individual will make changes to their habits and share information. As Clayton & Opotow (2003) suggest, there are three levels that proenvironmental action can be facilitated. These three changes are not associated with just one theory, as these three changes were summarizing a book of various peer-reviewed articles on environmental identity. However, they found that there were three tiers that seemed to be prominent in the articles included in the book. First, pro-environmentalism can be facilitated when individuals see "nature as an entity with moral standing rather than merely a source of resources to exploit." Second, action can be facilitated when the social environment is designed "to nurture a feeling of connectedness to nature and an awareness of the local impact of global environmental issues. Thirdly, pro-environmentalism action can be facilitated "when social contexts support pro-environmental identities and encourage a recognition of shared concern for the environment that crosses and blurs existing boundaries (Clayton & Opotow, 2003; p. 20).

All three of these levels were mentioned in some capacity during the interview process. The first level, or seeing nature as an entity with moral standing, was found indirectly throughout the interviews. First, we must define what it means for nature to have "moral standing." According to Schonfeld (1992), "moral standing is possessed by any entity whose continued existence and well-being or integrity are ethically desirable, and whose interests have positive moral weight (provided the entity can meaningfully be said to have interests)" (p. 353). Though none of the participants discussed the ethics or values surrounding the existence of the nature itself, all participants indirectly acknowledged nature as being worthy of protection and felt personal responsibility to carry that out. They all discussed changes they made to their habits to support the health and well-being of the environment. In terms of this entity as possessing interest, all participants acknowledged that the complex functions carried out by living creatures or by resources were important, worth protecting, and should not be meddled with by humans too much.

Understandably, the endangered species technicians mostly focused on the importance of living creatures. Nearly all technicians discussed a deep sense of respect for living creatures, particularly insects. Several technicians reported stark changes in their views on living creatures. Particularly, there were rather clear shifts in empathy after spending every day caring for and studying endangered species. These shifts translated into respect and compassion for living creates. For example, the quote below comes from a former technician who explains how she saw changes in herself after working with endangered species.

I've just become more knowledgeable. Like, "Oh, hey..." There was this one, so, before I used to be really scared of spiders, right? But after I've been working with the butterfly, because it does have little legs, and because they used to come into the greenhouse, then we would always have to capture them, but before I would just kill them, right? But, over time I would start catching them in a cup and just like releasing them. So those kind of things, you know? Like, just little changes, shifts, changes. But, definitely, like I just care more about the environment, and what I'm doing to help it, and what things I could be doing to help it more, so making those kind of choices.

This former technician clearly not only understands that spiders serve a purpose, but she developed a profound sense of respect and compassion for them. These spiders, which she once would kill freely, were now not only worthy of survival, but also respect and compassion. She acknowledges that they play an important role and serve a purpose, even if they may have made her uncomfortable. This technician allowed her respect for these creatures to overcome though maybe not eliminate, but significantly diminish her fear of insects deemed dangerous or scary. It seems that this type of work not only affects one's identity and view on the environment, but perhaps also their own moral and ethical principles. In a starkly different example, those involved in Roots of Success seemed to have a rather different view of natural resources. For some, Roots of Success was the first time individuals were exposed to sustainability and environmental issues. It is also important to note that this experience occurs in a classroom. Though the class is full of deep and meaningful discussions, students do not work directly with any animals or plants in the course. The classes are designed to promote eco-friendly behavior and prepare students for green jobs. This is worth remembering because their relationship to the environment is based on different foundations when compared to the endangered species technicians.

The two quotes below belong to a former program participant. Though they do not discuss a close connection to nature itself (meaning they do not discuss a connection to a certain place or creature), they clearly take conserving resources seriously and are taking action. The first quote below explains their initial motivation for participating in the program. The second quote represents their habit changes, which keep them active and satisfied with their relationship to the environment. The third quote demonstrates their respect and value for the environment, which is quite different from the technician's.

I actually... thought about doing the SPP program because I wanted to figure out how I can be more inclined to being green, how I could help my bills go down when I got out, how I could be more energy efficient if you want to call it that, so that's why I got involved with that. [...] it was nice to be able to help the people out that were in there to help them also understand how they can lower their bills and stuff like that. Just being a part of—I guess going green. So that's the reason I originally decided to do that, so.

I actually probably didn't have a relationship to the environment (laughs) before Roots of Success, but now my cans go in one garbage can, my glass goes in another, my newspapers go in another, and... As I said, you know, if I'm not in a room I turn the lights off, if I'm not there I turn the fan off, uh, try not to go to the bathroom as often as you need to go. Of course, when you're in prison you're always told, "Flush. Flush, Flush." But, that just costs money. And so I've noticed that my light bills have gone down, my power bills have gone down, my heating bill has gone down.

I guess I have a newfound respect for the environment and that fact that my kids will have kids and their kids will have kids and I would like the environment to (pause), you know it's just like us. We stop smoking and we stop doing this and we get better. Same thing with the environment. If we were to stop doing all this kinda stuff, the environment will turn itself back around, so. [...] Down the road everyone else can enjoy the same things we enjoy.

This individual seems to be defining their relationship to the environment through their dedication to conserving resources, or "going green." In this case, going green is thought of as synonymous with cost savings and efficiency. Though his motivations may be different from the endangered species technicians, this individual appears to find satisfaction from conserving resources and helping the environment. They also now feel confident that they do have a relationship to the environment. In addition, once the participant discusses future generations it became clear that they do respect and value the environment for reason other than cost savings. Whether it is clean air or beauty, they do mention that we enjoy parts of the environment that should be passed onto future generations. This tells me that this individual sees that the environment is worth respecting and it is our ethical responsibility to preserve it for future generation.

The second level, which says that pro-environmental action can be facilitated when social environments build connections to nature and build an understanding local impacts of global issues, was also found throughout the interviews. One program participant, quoted below, explained that his favorite information to share with others was about pollution as is connected directly to him.

It kinda hit home because when I was learning about it, I think it was these landfills or these places where they would burn a lot of stuff, just so happen to be in lower income communities, so what I learned about that was is that it's affecting minorities the most. So, me. And people like me. That is probably the information I share the most because when something affects you directly or indirectly, in this case the communities that I come from, you're just more aware and you want to share that with other people. Like, "Listen, this is what's going on right now. These places are being built in these types of communities. Communities that we grew up in and we're not getting involved enough to protest or make an argument against why we don't want this in our communities."

This individual not only understands how the environmental issues connect directly to him and his community, but makes an effort to share this information with others. They are connecting global issues, or waste management in an over-consuming country, to local issues, environmental racism and injustices. This individual also recognizes another issue entirely: the lack of diversity in environmental voices, another global and local issue. Though it may not be in the traditional way of feeling connected to the environment, this individual represents that they see how they are directly connected to environmental issues.

Again, endangered species technicians had a different approach to the second level. One technician described how the animals he worked with allowed him to nurture a feeling of connectedness to nature. Through SPP, he gained an understanding of the small workings of ecosystems.

But being in SPP opened my eyes to a lot of things like how nature works now, you know without certain animals I mean hey, we wouldn't be nothing. I didn't even know that they said if the honeybee was to just perish off the face of the Earth humans would only have like 4 to 6 years or something like that to live. Because they pollinate so much. Our fruits, our vegetables, a whole lot of stuff. And the [endangered animal], they go test those [them], so if anything happens in our marina or anything like that, they go test [them] and water to see if its consumable for humans.

This technician connects how the endangered species he worked with directly affect him and his well-being. He recognizes not only that we rely on indicator species to tell us about the health of the environment, but also that without certain species our future would be at jeopardy. Because of the information and hands on experience from working with SPP, this individual could develop a connection to these animals and explore how these connections affect him and others.

The third level that Clayton & Opotow (2003) described pro-environmental actions facilitating when social context supports this type of identity and encourages a recognition of shared concern for the environment that crosses and blurs existing group boundaries. All participants mentioned the importance of support from SPP staff, program partners, and fellow SPP participants. The three quotes below from an endangered species technician described the vulnerable position he was in and the importance of support.

My favorite part, like I said, was the information that I obtained. I didn't know so many things and the support that I had coming from the people who I worked with and just backing me through it all. Understanding my struggle and how I grew up. Giving me a chance. To take something's life and take care of it and nurture it back to health.

When I first got incarcerated I was a knucklehead. I was immature, I always had a chip on my shoulder because I wasn't the biggest guy so growing up like that so young in prison you take on a bad attitude, you're always trying to fight, you're always trying to prove yourself. I had messed off a lot of my good time. I was actually supposed to have been out almost two years ago. I started doing work with SPP and [DOC leadership staff], he just seen something in me. [...] And I have all these certificates from SPP and I'd been working there for three years. He's like, "I'm gonna give you a shot man. A couple people called me speaking very highly of you and we all believe that you've changed. You're not the same person as when you first came in. Even since you been in this SPP Program certain things just moved you." And then I checked on Monday and I was like, "What? I get out in 2015?" I wasn't supposed to get out til 2018. It's just a blessing to be here.

Well you know one cool thing I learned about myself is that I'm a nurturer. And guys can be nurturers, it's okay.

As discussed in Chapter 2, the prison environment can be harsh and painful. With punishment culture often trumping rehabilitation, it can be difficult to find supportive and safe learning and growing environments in prison. However, in this case this individual was able to have successful learning experience because he felt supported, safe, and trusted. This support and responsibility had an impact on him, and he took it very seriously. He took is so seriously that several staff members took notice and recognized his achievements in a powerful and meaningful way. Though this is an example of this type of work being supported and recognized while also blurring existing group boundaries, it seems obvious that something much bigger also happened here. This individual underwent a significant transformation due to the power of support and education. He went from playing into prison culture to considering himself a nurturer, which he mentioned can be difficult to acknowledge as a man. These types of transformations also occurred in other endangered species technicians. A butterfly technician quoted twice below mentioned that the combined support of SPP, scientists, and media brought positive energy and ended up giving her the confidence to pursue her education in the environment.

For me now, I think it really means actually being connected and it's not so much of this dividing, it's more like a blending, right? Like, I am in the environment, but I'm a part of it so it's just different now. I associate environment and things with peace. And that's what would happen when I was working on the butterfly program. That alone time I got out there, that's when I actually started to find myself again. And so I associate that with peace and clarity, and so that kind of stuff happens to me still, like if I'm outside or when I'm studying things like that, that's what happens.

When I was, when I first got there I was very broken, you know? And, so, the program definitely helped and believing and confidence boosting in myself and believing like, "Yeah, I could further pursue college" Like I am right now, right? And before that I didn't think that. So the program definitely helped and the people, right? So it's the combination of the whole program. It's the people coming in there,

it's the media too, you know, all those things are like confidence boosters, right? They're promoting positive energy. And we're working with butterflies (laughs) again right? Cuz they're just these happy little delicate creatures. So it creates that sense of like positivity in your life, so. Yeah.

Similar to the technician who was released early, it's clear that the work, support, and education she was receiving effected not only her environmental identity, but boosted her own self-image. Her work environment was safe and supportive enough for her to find clarity and peace. The support she received from others led her to a boost in confidence and positive energy. Through others recognizing her work, she could recognize her own potential and new doors opened for her. Based on Clayton & Opotow's (2003) major findings regarding environmental identities, SPP programs are providing a safe and supportive space for incarcerated individuals to gain an understanding of their connection to the environment and all its inhabitants. However, these programs also appear to have powerful transformative effects for those who may need them most.

Social Practice Theory

Social practice theory, used by Williams & Chawla (2016), claims that "people develop multiple identities in different facets of their lives, as they respond to their environment and adopt—and adapt—the words, actions, and practices of others around them" (p. 979). Williams & Chawla (2016) found that three changes should occur as people begin to develop environmental identities. First is a sense of increased salience in environmental issues. This means that individuals are attentive and knowledge about the natural world and are aware of environmental problems. The second change is that people gain a sense of agency, begin taking responsibility for action, and begin caring about the

consequences their actions cause as well as how others evaluate them. The third change Williams & Chawla (2016) theorized was that people learn how to be involved and how to take action (p. 980).

The first change, or awareness of the natural world and environmental problems, was seen in all the participants. One former technician describes how her views shifted on endangered species after she began to understand the interconnectedness of ecosystems.

How everything interacted together. I mean I think that was bottom line. Because I was, not that I don't love every animal out there, but it was like, "Yeah okay, so that particular butterfly will go extinct. We've got a million more." See what I mean? Then it was like, "Oh, that is very crucial that we protect every species." So I mean, I learned more and more about how all the species interact together and why every one of them is part of the bigger picture in the puzzle. To have healthy land, water, air...

Once this technician studied the consequences of losing one species, species conservation became more important and relevant to her life. This importance and relevancy translated into caring more deeply about the problems of extinction and contemplating solutions.

Next, I've chosen to follow one technician as she exhibited all three changes in only two quotes. The quote below exemplifies not only the first change, but also the second change, or feeling responsible for one's actions and consequences. This technician describes how her awareness of environmental issues not only increased, but that she also spent time considering the impact she could have.

For me, I would have to say it has brought my awareness up for almost everything. From garbage disposal, to clean air and water, to the fossil fuels, to I'm against fracking. I mean there's things that I never would have even given one second thought to before. Like ice melting in Alaska and the polar bears at risk. I wouldn't have thought of any of that stuff. I would just go on about my daily business doing what I do. And now I spend a lot of time thinking about things and what I can do to help, in my part. And, you know, and how we treat our environment, I think everyone of us can help if we're more conscious about how we treat our environment.

This technician gained an understanding of problems which transformed into caring enough about these problems to take action. This enlightenment on environmental issues allowed issues that once seemed far away to suddenly hit home and caused her to feel a sense of responsibility. This same technician also represented the third change, or learning how to practically take action and to become acquainted with networks of similar people. This former technician now volunteers full-time with another endangered species. Not only is she taking action with her own time, but she also takes time to try to educate others. Her quote below shows that she not only feels responsible for the endangered species, but is indeed taking action.

Okay, so prior to the work with SPP which led me to working with the [endangered species]. I would have never, like used, for instance, Facebook as a platform to get my point across. We have had a couple of exhibitions over at the sanctuary and you know there was a lot of Facebook interactions about it. People were very negative because they said, "[they] are not for human entertainment. They should be in the wild." Well, in the wild they're getting slaughtered. [...] So, I kinda feel like I need to be an advocate. And I did respond to many of those people which is something I never would have done before. And I tried to educate them slightly about a keystone species is and, you know, there's two sides to every story.

Not only did this technician appear to go through all three of the changes described by social practice theory, but she also clearly had a boost of confidence. She was willing to try something new by responding to people on Facebook, where people can see her personal profile, likely because she identified so strongly as an advocate for this endangered species. This former technician has embraced the identity of an endangered species advocate, telling us that these SPP programs do have the potential to ignite a change in individuals that can result in an identity change.

Self-Determination Theory

One theory used to describe the formation of identities is Self Determination Theory. Though this theory was not used in the literature I examined on environmental identity, shifts and changes in overall identity are still salient. Support and positive social interactions appear to have caused changes in not only individuals' environmental identity, but changes in self-confidence and empathy were also observed. In addition, this theory seemed to fit well with other themes found in the interviews as well as the context of living in the prison environment. As mentioned in Chapter 2, the prison environment is harsh and does not always promote creativity and change. Inmates are also constantly reminded of their mistakes and are given destructive labels that affect how they see themselves. Self-image in prison is typically poor, which is while selfdetermination fits well to this research. Self-determination theory is the idea that people are naturally motivated to behave in effective and healthy ways. According to Aitken et al. (2016) this theory is based on the desire to satisfy three basic psychological needs: "autonomy (feeling free to act), competence (feeling capable), and relatedness (feeling connected)" (p. 154). Satisfying these needs allows for natural growth in an individual.

These three needs were described by all the participants, particularly feeling competent and connected. Increased confidence was mentioned by almost all of the participants. This increase of self-efficacy transformed individuals into mature and patient adults. Below is a quote is from a former program participant describing changes he thought his family saw in him after participating in the program. The main change they thought their family saw in them was maturity:

I describe maturity as being...just conscious about what's going on with my life. What going on with me. And learning about myself and learning about the things that aren't good for me. Getting barriers and boundaries for myself. Setting goals and striving and reaching, and accomplishing those goals. Just being thoughtful of the future and making plans for the future, 5-10 years down the line and really just taking charge of my life. Not just kinda flowing with things.

This work gave this individual the chance to feel a sense of autonomy over their own life and the confidence to take control. They also could identify their own personal boundaries and barriers. This allowed them to build confidence in setting and working towards goals. Below, another program participant describes his motivation for joining an SPP program:

Well, what interested me was that it was an opportunity to kinda look beyond just the current environment that I had found myself in. And what that means is I wanted to know exactly what I could possibly engage in while I was there and that I could continue on beyond the premises that I found myself currently in in that moment. So that was I believe the overall motivating thing of why I got involved was just to continue on in my own personal development. And also be able to segue that into something sustainable, you know, beyond being in the environment I was in.

This individual found the freedom, or autonomy, to make a choice about his personal development. He wanted to challenge himself to go beyond what the prison environment was offering. He took up this program to involve himself in something new and potentially useful. Similarly, a technician, quoted below, found both autonomy and competence through her work with SPP.

And it taught me a lot about myself. I mean the time that I was at SPP was really, really good for me. Um, you know, I was... I felt really unappreciated and wasn't

good at what I was doing. And then, and then this just all kinda reminded me that, you know, you're a good person and you're doing the right thing, so. [...] So, having programs like this really teaches them and gives the confidence that they need to say, "Hey, I don't need that world anymore. There's a whole 'nother world that is open to me. And I am capable of surviving in."

Clearly, this type of work is helping incarcerated individuals gain confidence and stability in a difficult environment. This new confidence opened her eyes to new opportunities even in the face of incarceration. She could rebuild the relationship she had with herself and came out of it with confidence and direction. Another technician experienced such profound changes in herself that she compared her own changes to the transformation of the Taylor's Checkerspot Butterfly.

Like I said my self-esteem happened, but there—I can just see the difference that, you know, I cared again. [...] me just being broken and here's this butterfly and they're tiny and they need help and love and so that whole, like, I'm going through the process with them and like, I'm almost getting the same out of it as they are. If that makes sense. So, it's my own metamorphosis as well as theirs.

This technician recognized that through support and care, just like what she was giving to the butterflies, was affecting and changing her. She experienced a transformation along with the butterflies that led to a deep connection to the butterfly, but also increased selfesteem. In a similar vein, another technician had a very similar experience. This technician not only feels deeply connected to the butterflies, but also was able to take control and learn patience and appreciate the calm.

So, when I first got to the program, and I'll just say it too cuz it's.., but I was addicted to drugs for a long time, right? From like 15 to about 20... when I first came incarcerated I think 27? Or 28? [...] So when I first got to the program, in comparison to the end, I could see myself, maybe the others couldn't, but I was kind really abrupt or more rough, you know? But also that has to do with the side effects, right? Of coming off of drugs, but then, as like time went on and I'm

working with this butterfly and it's like delicate and has all these scales on it, you don't want to [hurt them] you know, and so I just learned how to just how to be gentle all over again, how to be calm. Like, and you could just—I could start to see it happen over time and so that program I think helped me a lot doing that. And, I was just coming to this peaceful, calm, like, I didn't have to be so crazy all the time, right? (laughs) But, yeah, so I really feel like it helped me a lot. Me, personally. Like, my own person and how I react to others or how I react to situations, so.

This technician not only developed a deep and meaningful connection to the butterflies, but was able to find clarity and control. When she could find herself while working with the butterflies, she was able to develop an identity associated with positivity and peace. Because of this newfound peace she was able to communicate more effectively by changing how she reacted to others. This technician experienced tremendous personal growth which she associates her work with the butterflies. Clearly, all three selfdetermination theory needs were satisfied through this program and allowed for personal growth, confidence, and peace.

Overcoming Fear

Overcoming fear, which was scarcely discussed in literature other than by Williams & Chawla (2015), was mentioned often throughout these interviews. Whether it was overcoming fear of animals or of public speaking, several participants experienced and remembered the satisfaction and confidence boost that comes with overcoming a fear. Below, one endangered species technician describes not only overcoming their fear of the frogs, but learning to forming deep emotional bonds:

I mean I was scared of a cat at one point in time. I remember when I first, off subject real quick, I remember when I first started working with the frogs that guy that I worked with who actually got me the job he noticed that "dude, why didn't you get in the pond and grab one of the frogs?" And I'm like trying to play it off like I'm not scared. And he must have grabbed one and tried to chase me with it and I was like Pshh! I was gone. He was like, "Man you can't be scared working here. It's not gonna bite you or anything like that." So I just ended up really falling in love with

them and taking care of them and I don't know. It's crazy because I get emotional about it.

Besides forming a bond with animals, it appears there was an empathy shift that still affects the technician today. This technician challenged himself to try something new, which ended with a deep emotional bond with animals that still affected him during the interview. Overcoming this fear of animals opened new doors that he did not know where previously available. Another endangered species technician described a similar interaction. Not only did she overcome a fear, but she gained an understanding, respect for, and compassion for living creatures and the roles they play in the ecosystem. This compassion and understanding caused her to change habits towards pro-environmentalism.

I would have to say probably... compassion for everything. Not just my chosen, let's say, dogs, cats, people, okay. And I hated spiders, I hated bees, and, you know, I would kill a spider, I would kill a bee. And I don't do that anymore because they serve their purpose. I don't like them, I don't like them at all, but I'm not going to go squash a spider just because I don't like it. So I think maybe that was one of the things I learned was greater compassion.

This technician experienced a profound change in her identity which affected her attitude towards insects and spiders. Nurturing butterflies daily and studying them thoroughly allowed her to see the value in all living creatures. She identified as an advocate and nurturer for living creatures which lessened her fear or hatred of the insects. Her compassion outweighed her fear. Overcoming fear creates memorable experiences that can have lasting effects on one's identity and personal growth.

Identifying as an Environmentalist

Based on the attitude and identity shifts represented in the interviews, it appears that all interviewees have developed an environmental identity. Though they may vary in strength, SPP programs did influence their relationship with the environment. However, not all participants felt that they qualified as environmentalists. Out of the 8 participants, 2 did not consider themselves environmentalists. Interestingly, both of those participants were involved with Roots of Success. Both individuals made changes to their lifestyles either through recycling or changing purchasing habits and share their knowledge with their friends and family. This strikes an interesting question about how we define what an environmentalist is. Both individuals felt that they could not identify as an environmentalist because they believed that to be considered an environmentalist, they must be completely committed and active. One participant compared them self to the creator of Roots of Success.

When I think of environmentalists, I think of people who are sorely dedicated to changing the environment and their commitment is a real focus. And when I think of environmentalists, I think of Raquel actually. She's—I've never seen someone so excited and passionate about the things going on in the environment. So when I think about myself and ask myself "Am I an environmentalist?" it's like "I'm not like Raquel."

Though this individual knows that they are contributing in a positive way to environment, there appears to be some sort of barrier stopping them from identifying as an environmentalist. To this individual, being an environmentalist is a fully committed and environmentally-focused person, essentially someone who committed their life to the environment. Somewhere along the road, this individual set incredibly high standards for environmentalists. Similarly, the other participant also felt like he had not committed the way an "environmentalist" would.

I'm conscious of the environment, I'm making all the right efforts, I recycle where I'm supposed to, I don't litter, do things of that nature, but I'm sure I use some shampoos that are not organic, that are harmful to the environment. So I think that someone who is an environmentalist would be very conscious of all of their intake and output on the environment. So I know there's certain shampoos that we should refrain from. I'm not even honestly certain if they're harmful or not harmful to the environment because I haven't looked into it. I've done other different things that I know I'm aware of, but I need to look into things like that, so to truly call myself an environmentalist I would need to look at everything that I use that goes into the environment, and also everything that's extracted from the environment that goes into me as well. Because if it's harmful being extracted I have to get rid of it at some point in time and that means if I'm getting rid of it, I'm releasing it back into the environment. Whether I'm sweating it out, using the facilities, or whatever the case may be. So to truly say that I'm an environmentalist I think that I would have to have more a sustainable approach.

This participant also appears to have very high standards for environmentalists. To him, environmentalists are aware of every move they make and every product they buy. This tells me that perhaps he views environmentalists as people who can afford to spend both time and money on eco-friendly products. Clearly, there is another, maybe the same, barrier here. It may be that he did not feel represented. Perhaps the people represented in the program who he remembers most clearly from his time in Roots of Success could give their full attention and time to the environment. As someone with a record and countless other challenges, he felt because he could not devote his entire self to the environment, he was not part of the group. It is important to note that after taking Roots of Success, this individual knows more about the environment than most of the general population. This individual has also taken steps to further his education and make changes to his daily habits. Clearly, there is work to be done with term "environmentalist." If we want to reach more people, this identity needs to be more relatable and obtainable.

Limitations

A number of limitations arose when conducting this research. Though working with formerly incarcerated individuals allowed me to work around the difficult human subjects review process for working with incarcerated individuals, the pool of participants was quite limited. This research also was only able to capture individuals who participated in endangered species programs and Roots of Success. This means this research missed out on exploring the lasting effects from the science and sustainability lecture series, conservation nursery programs, and general sustainable operation jobs, like recycling and composting.

In addition, Washington's Roots of Success has reached over 1,000 graduates. However, only two individuals, who took the course during the pilot period, were interviewed. Since there are several logistical problems that occur when first beginning any program in prison, it is possible that these individuals may not have had an experience that is representative of most Roots of Success instructors and students. Though they did describe attitude and identity shifts that coincide with an environmental identity, it would be interesting to hear the experiences of more graduates or instructors.

I was also unable to contact anyone who was currently on probation or under supervision. This means this research may have been missing information on what individuals are doing directly after release, like pursuing education or green jobs. On the other side, this research also did not reach anyone who had been released for five years or longer. The longest any of the participants had been back in the community was 4 years, while several had only been released about a year. Since SPP is still fairly young, this was expected. However, this warrants interesting future research.

Suggestions for Future Research

There are a number of interesting research opportunities with The Sustainability in Prisons Project. Firstly, it would be interesting to interview formerly incarcerated individuals, perhaps even the same individuals interviewed in this research, over the next few years to follow the lasting effects of these programs. This could provide researchers with a better understanding of how to maintain and continue developing environmental identities. This research would not require an intensive human subjects review, making this research easier and more doable than in-prison research.

Another interesting research prospect could be reaching a wider audience of formerly incarcerated individuals who participated in SPP programs, perhaps through a survey or interviews. Though finding willing participants would require time and effort, it would be interesting to see if different programs have different impacts on individuals. This research did not reach individuals who participated in important SPP programs like the lecture series or conservation nurseries. It would be interesting to compare working closely with plants in the conservations nurseries to working with endangered animal species. Do conservation nursery technicians experience the same attitude and identity shifts than endangered species technicians? Since working with endangered animal species is rare in other prisons, perhaps plant conservation nurseries could be a way to reach more individuals with meaningful programming.

Conclusion

This research has explored the lasting effects SPP programming can have on formerly incarcerated individuals' attitudes and identities, particularly as they relate to the environment. I found that participants described not only experiences that match identity development theories, but also that the participants have indeed made daily changes to support the environment and combat environmental issues. Participants, particularly those involved in endangered species programs, built strong connections to the environment which led to a greater understanding of environmental issues, feelings of responsibility towards protecting and serving the environment, and were taking action through pursuing education and changing spending and resource habits.

In addition to developing an environmental identity, these programs also appear to have meaningful transformative effects on participants. This is attributed to not only the support from SPP staff, DOC staff, community partners, and even media, but also being trusted with important responsibilities and being given a second chance. Lastly, participants overcome fears of animals and insects which led positive shifts in empathy and self-esteem. These powerful transformative effects appear to stick with individuals even years after released. Interestingly, these effected were noted by Clarke (2011) as being only minor themes in her thesis findings on the lecture series. Though I cannot assume that the effects found are as powerful in all SPP programs, they point to the potential to promote self-confidence, empathy, and hope more widely.

This research suggests that SPP programs hold considerable promise for promoting lasting environmental identities in incarcerated individuals. Given the

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potential benefits for a variety of partners and stakeholders, it is recommended to continue rigorous quantitative and qualitative research to determine the long-term effects of SPP programming. Programs like SPP have potential to improve incarcerated individual's quality of life and potentially offer transformative effects for an individual's life.

In the face of climate change and other environmental issues, these individuals could be the new voices of the environmental and social justice movements. SPP programing can bring awareness and opportunity to those who will be most affected by environmental burdens. Providing support and education to incarcerated individuals has the potential to develop confident and compassionate environmentalists who can give back to and expand the environmental movement.

References

- Aitken, N., Pelletier, L., & Baxter, D. (2016). Doing the Difficult Stuff: Influence of Self-Determined Motivation Toward the Environment on Transportation
 Proenvironmental Behavior. *Ecopsychology*, 8(2), 153-162.
 doi:10.1089/eco.2015.0079
- Alexander, M. (2012). *The new Jim Crow: mass incarceration in the age of colorblindness*. New York: The New Press.
- Allison, M., & Ramaswamy, M. (2016). Adapting Animal-Assisted Therapy Trials to Prison-Based Animal Programs. *Public Health Nursing*, *33*(5), 472-480. doi:10.1111/phn.12276
- American Environics. (2006). *Toward a New Ecological Majority* (Rep.). American Environics.
- Andrew, L., Arndt, D., Beristain, N., Cass, T., Clow, T., Colmenares, B., . . . McCallum,
 M. (2016). Changes in United States' Citizens' Interest in Sustainability (2004 2014). *Life: The Excitement of Biology*, 4(3), 138-164.
 doi:10.9784/LEB4(3)Andrew.01
- Arditti, J. A. (2006). Mothers' Reentry into Family Life Following Incarceration. *Criminal Justice Policy Review*, 17(1), 103-123. doi:10.1177/0887403405282450
- Berger, R. (2008). Going on a journey: a case study of nature therapy with children with a learning difficulty. *Emotional and Behavioral Difficulties*, 13(4), 315-326. doi:10.1080/13632750802440361
- Berger, R., & Tiry, M. (2012). The enchanting forest and the healing sand—Nature therapy with people coping with psychiatric difficulties. *The Arts in*

Psychotherapy, 39(5), 412-416. doi:10.1016/j.aip.2012.03.009

- Blatt, E. N. (2012). Exploring environmental identity and behavioral change in an
 Environmental Science course. *Cultural Studies of Science Education*, 8(2), 467488. doi:10.1007/s11422-012-9459-2
- Bogner, F. X. (1998). The Influence of Short-Term Outdoor Ecology Education on Long-Term Variables of Environmental Perspective. *The Journal of Environmental Education*, 29(4), 17-29. doi:10.1080/00958969809599124
- Bonta, M., & Jordan, C. (2007). Diversifying the American Environmental Movement. In
 E. Enderle (Ed.), *Diversity and the Future of the U.S. Environmental Movement*.
 CT: Yale School of Forestry & Environmental Studies.
- Bratanova, B., Loughnan, S., & Gatersleben, B. (2012). The moral circle as a common motivational cause of cross-situational pro-environmentalism. *European Journal* of Social Psychology, 42(5), 539-545. doi:10.1002/ejsp.1871
- Britton, D. M., & Button, A. (2005). Prison Pups: Assessing the Effects of Dog Training
 Programs in Correctional Facilities. *Journal of Family Social Work*, 9(4), 79-95.
 doi:10.1300/j039v09n04_06
- Burger, E., Stetina, B. U., Turner, K., Mcelheney, J., & Handlos, U. (2011). Dog-assisted therapy in prison: emotional competences and emotional status of drug-addicted criminal offenders. *Journal of Veterinary Behavior: Clinical Applications and Research*, 6(1), 79-80. doi:10.1016/j.jveb.2010.09.011
- Carlone, H. B., & Johnson, A. (2007). Understanding the science experiences of successful women of color: Science identity as an analytic lens. *Journal of Research in Science Teaching*, 44(8), 1187-1218. doi:10.1002/tea.20237

- Cassidy, J., Poehlmann, J., & Shaver, P. R. (2010). An attachment perspective on incarcerated parents and their children. *Human Development*, 12(4), 285-288. doi:10.1080/14616730903417110
- Chawla, L. (1999). Life Paths Into Effective Environmental Action. *The Journal of Environmental Education*, *31*(1), 15-26. doi:10.1080/00958969909598628
- Clarke, S. (2011). Assessing the Rehabilitative Potential of Science and Sustainability Education in Prisons: A Study of the Sustainable Prisons Project (Master's thesis). Olympia, The Evergreen State College.
- Clayton, S. (2003). Environmental Identity: A Conceptual and an Operational Definiton. In *Identity and the Natural Environment* (pp. 45-65). Cambridge, MA: MIT Press.
- Clayton, S., & Opotow, S. (2003). *Identity and the natural environment: the psychological significance of nature*. Cambridge, MA: MIT Press.
- Coley, R., & Barton, P. (2006). Locked Up and Locked Out: An Educational Perspective on the U.S. Prison Population (Rep.). Princeton, NJ: Policy Information Report.
- Cossyleon, J. (2012). Family in Context: (Re)entry Narratives of Formerly Incarcerated Individuals (Master's thesis, Loyola University Chicago, 2012). Chicago.
- Currie, N. (2008). A case study of incarcerated males participating in a canine training program (Doctoral dissertation, Kansas State University).
- Curtis, R. L., & Schulman, S. (1984). Ex-Offenders, Family Relations, and Economic
 Supports: The "Significant Women" Study of the TARP Project. *Crime & amp; Delinquency*, 30(4), 507-528. doi:10.1177/0011128784030004003

Deaton, C. (2005). Humanizing Prison with Animals: A closer look at "Cell Dogs" and

horse programs in correctional institutions. *Journal of Correctional Education*, 56(1), 46-62.

- Devine-Wright, P., & Clayton, S. (2010). Introduction to the special issue: Place, identity and environmental behavior. *Journal of Environmental Psychology*, *30*(3), 267-270. doi:10.1016/s0272-4944(10)00078-2
- Durose, M., Cooper, A., & Snyder, H. (2014). *Recidivism of Prisoners Released in 30* States in 2005: Patterns from 2005 to 2010 (Rep.). Bureau of Justice Statistics.
- Evans, M., Herold-Prayer, T., Herold-Prayer, S., Yette, E., Lawson, I., & Semegen, S. (2010). *Recidivism Revisited* (Rep.). Washington Department of Corrections.
- Finlay, L. (2012). Debating. In C. Henriksson, T. Saevi, & N. Friesen (Eds.), Hermeneutic phenomenology in education: method and practice. Rotterdam: Sense .
- Furst, G. (2006). Prison-Based Animal Programs: A National Survey. *The Prison Journal*, 86(4), 407-430. doi:10.1177/0032885506293242
- Gallagher, B. (2013). Science and Sustainability Programs in Prisons: Assessing the Effects of Participation on Inmates. (Master's thesis, Olympia, The Evergreen State College, 2013). Olympia: MES.
- Georgakakos, A., Fleming, P., Dettinger, M., Peters-Lidard, C., Richmond, T., Reckhow,
 K., . . . Yates, D. (2014). Chapter 3: Water Resources. In *Climate Change Impacts in the United States: The Third National Climate Assessment* (pp. 69112). U.S. Global Change Research Program. doi:10.7930/ J0G44N6T
- Gideon, L., & Sung, H. (2011). *Rethinking corrections: rehabilitation, reentry, and reintegration*. Los Angeles: SAGE.

- Glaze, L., & Maruschak, L. (2008). Parents in Prison and Their Minor Children (Rep.).Bureau of Justice Statistics Special Report.
- Hatfield, J., Takle, G., Grotjahn, R., Holden, P., Izaurralde, R., Mader, T., & Marshall, E. (n.d.). Chapter 6: Agriculture. In J. Melillo, T. Richmond, & G. Yohe (Eds.), *Climate Change Impacts in the United States: The Third National Climate Assessment*, (pp. 150-174). U.S. Global Change Research Program. doi: doi:10.7930/J02Z13FR
- Holmes, S. (2003). Some lives and some theories. In *Identity and the Natural Environment* (pp. 25-41). Cambridge, MA: MIT Press.
- Kashima, Y., Paladino, A., & Margetts, E. A. (2014). Environmentalist identity and environmental striving. *Journal of Environmental Psychology*, *38*, 64-75. doi:10.1016/j.jenvp.2013.12.014
- Kellen-Taylor, M. (1998). Imagination and the world: a call for ecological expressive therapies. *The Arts in Psychotherapy*, 25(5), 303-311. doi:doi:10.1016/s0197-4556(98)00048-3
- Kempton, W., & Holland, D. (2003). Identity and Sustained Environmental Practice. In *Identity and the Natural Environment* (pp. 317-341). Cambridge, MA: MIT Press.
- Kupers, T. A. (1999). Prison madness: the mental health crisis behind bars and what we must do about it. San Francisco: Jossey-bass.
- LeRoy, C., Bush, K., Trivett, J., & Gallagher, B. (2012). The Sustainability in Prisons Project: An overview (2004-2012). Olympia, WA: The Sustainability in Prisons Project.

Liddicoat, K. R., & Krasny, M. E. (2014). Memories as Useful Outcomes of Residential Outdoor Environmental Education. *The Journal of Environmental Education*, 45(3), 178-193. doi:10.1080/00958964.2014.905431

Luber, G., Knowlton, K., Balbus, J., Frumkin, H., Hayden, M., Hess, J., . . . Sheats, N. (2014). Chapter 9: Human Health. In J. Melillo, T. Richmond, & W. Yohe (Eds.), *Climate Change Impacts in the United States: The Third National Climate Assessment*, (pp. 220-256). U.S. Global Change Research Program. doi:10.7930/J0PN93H5

- Luther, K. (2015). Examining Social Support Among Adult Children of Incarcerated Parents. *Family Relations*, 64(4), 505-518. doi:10.1111/fare.12134
- Marcus, C. C., & Barnes, M. (1999). *Healing gardens: therapeutic benefits and design* recommendations. New York: Wiley.
- Matsuba, M., & Pratt, M. (n.d.). The Making of an Environmental Activist: A
 Developmental Psychological Perspective. In M. Matsuba, P. King, & K. Bronk
 (Eds.), *Exemplar methods and research: Strategies for Investigation. New*Directions for Child and Adolescent Development (Vol. 142, pp. 59-74).
- Mayer, F., & Frantz, C. M. (2004). The connectedness to nature scale: A measure of individuals' feeling in community with nature. *Journal of Environmental Psychology*, 24(4), 503-515. doi:10.1016/j.jenvp.2004.10.001

Moore, E. O. (1981). A Prison Environment's Effect on Health Care Service Demands. Journal of Environmental Systems, 11(1), 17-34. doi:10.2190/km50-wh2k-k2d1dm69

Mumola, C. J. (2000). Incarcerated Parents and Their Children (Rep.). Bureau of Justice

Statistics Special Report).

- Myers, G., & Russell, A. (2003). Human Identity in Relation= to Wild Black Bears: A Natural-Social Ecology of Subjective Creatures. In *Identity and the Natural Environment* (pp. 67-90). Cambridge, MA: MIT Press.
- Nadkarni, N., Schnacker, L., Hasbach, P., & Gaines Crockett, E. (2017). How nature imagery affects inmates in the "Blue Room". *Corrections Today*, 79(1).
- Pager, D. (2003). The Mark of a Criminal Record. *American Journal of Sociology*, *108*(5), 937-975.
- Poulsen, D. V., Stigsdotter, U. K., Djernis, D., & Sidenius, U. (2016). 'Everything just seems much more right in nature': How veterans with post-traumatic stress disorder experience nature-based activities in a forest therapy garden. *Health Psychology Open*, 3(1), 205510291663709. doi:10.1177/2055102916637090
- Prison Pet Partnership (PPP). (n.d.). Retrieved March 02, 2017, from http://www.prisonpetpartnership.org/
- Sack, R. D. (1997). Homo geographicus: a framework for action, awareness, and moral concern. Baltimore: Johns Hopkins University Press.
- Sakala, L. (2010). Breaking Down Mass Incarceration in the 2010 Census: State-by-State Incarceration Rates by Race/Ethnicity. *Prison Policy Initiative*.
- Samuelson, M., Carmody, J., Kabat-Zinn, J., & Bratt, M. A. (2007). Mindfulness-Based Stress Reduction in Massachusetts Correctional Facilities. *The Prison Journal*, 87(2), 254-268. doi:10.1177/0032885507303753
- Schönfeld, M. (1992). Who or What has Moral Standing? *American Philosophical Quarterly*, 29(4), 353-362.

- Schönfeld, M. (1992). Who or What has Moral Standing? *American Philosophical Quarterly*, 29(4), 353-362.
- Searles, H. F. (1960). *The nonhuman environment in normal development and schizophrenia*. New York: International Universities Press.
- Smith, J., & Osborn, M. (2013). Interpretative Phenomenological Analysis. In J. Smith,
 P. Flowers, & M. Larkin (Eds.), *Interpretative phenomenological analysis: theory, method and research* (pp. 53-80). Los Angeles: Sage.
- Smith, J. (2004). Reflecting on the development of interpretative phenomenological analysis and its contribution to qualitative research in psychology. . *Qualitative Research in Psychology*, 1, 39-54. doi:10.1191/1478088704qp004oa
- Stapleton, S. R. (2015). Environmental Identity Development Through Social Interactions, Action, and Recognition. *The Journal of Environmental Education*, 46(2), 94-113. doi:10.1080/00958964.2014.1000813
- Stern, K. (2014). Voices from American prisons: faith, education and healing. London: Routledge.
- Strimple, E. O. (2003). A History of Prison Inmate-Animal Interaction Programs. *American Behavioral Scientist*, *47*(1), 70-78. doi:10.1177/0002764203255212
- Sustainability in Prisons Project (SPP). (n.d.). Retrieved February 02, 2017, from http://sustainabilityinprisons.org/
- Söderback, I., Söderström, M., & Schälander, E. (2004). Horticultural therapy: the 'healing garden' and gardening in rehabilitation measures at Danderyd hospital rehabilitation clinic, Sweden. *Pediatric Rehabilitation*, 7(4), 245-260. doi:10.1080/13638490410001711416

- Terry, D. J., Hogg, M. A., & White, K. M. (1999). The theory of planned behaviour: Selfidentity, social identity and group norms. *British Journal of Social Psychology*, 38(3), 225-244. doi:10.1348/014466699164149
- The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. (1979). *The Belmont Report : Ethical Principles and Guidelines for the Protection of Human Subjects of Research* (Rep.). Washington D.C.
- Thomashow, M. (1995). *Ecological identity: becoming a reflective environmentalist*. Cambridge (MA): MIT Press.
- Travis, J., & Waul, M. (2004). Prisoners once removed: the impact of incarceration and reentry on children, families, and communities. Washington, D.C.: Urban Institute Press.
- Travis, J., & Waul, M. (2004). Prisoners once removed: the impact of incarceration and reentry on children, families, and communities. Washington, D.C.: Urban Institute Press.
- Ulrich, R. (1999). Effects of gardens on health outcomes: Theory and Research. In C.
 Cooper-Marcus & M. Barnes (Eds.), *Healing gardens: Therapeutic benefits and design recommendations* (pp. 27-86). New York: John Wiley.
- Ulrich, R., & Nadkarni, N. (2009). Sustainability research and practices in enforced residential institutions: Collaborations of ecologists and prisoners. *Environment, Development, and Sustainability*, 11(4), 815-832.
- Vincent, G., & Velkoff, V. (2010). *Current Population Reports* (Rep.). US Census Bureau.

- Wagner, P., & Rabuy, B. (2016). Mass Incarceration: The Whole Pie 2016. Prison Policy Initiative.
- Webb, T. (2016). Connecting Environmental Justice and Prisons: A critical look at social movements, environment and mass incarceration (Master's thesis). Olympia, The Evergreen State College.
- Weber, S. (2012). Environmental Education in Prison: A Comparison of Teaching Methods and Their Influence on Inmate Attitudes and Knowledge of Environmental Topics (Master's thesis) (pp. 1-75). Olympia, WA: The Evergreen State College.
- West, M. (1985). Landscape views and stress response in the prison environment (Unpublished master's thesis, 1985). University of Washington, Seattle.
- Whitmarsh, L., & O'neill, S. (2010). Green identity, green living? The role of proenvironmental self-identity in determining consistency across diverse proenvironmental behaviours. *Journal of Environmental Psychology*, *30*(3), 305-314. doi:10.1016/j.jenvp.2010.01.003
- Williams, C. C., & Chawla, L. (2015). Environmental identity formation in nonformal environmental education programs. *Environmental Education Research*, 22(7), 978-1001. doi:10.1080/13504622.2015.1055553
- Zavestoski, S. (2003). Constructing and maintaining ecological identities: the strategies of deep ecologists. In S. Clayton & S. Opotow (Eds.), *Identity and the natural environment: The psychological significance of nature* (pp. 297-315). MIT Press.

Zoukis, C. (2014). College for convicts: the case for higher education in American

prisons. Jefferson: McFarland.

Appendices

Appendix A: Interview Questions

Appendix B: Demographic Survey

Appendix A: Interview Questions

Interview Questions

Please note this is a semi-structured interview. This means that Emily can ask clarifying questions or ask you to elaborate. Possible clarifying questions have been added, but may not be asked. This interview is optional, and you are free to skip any question or stop at any time.

What interested you in being a part of the SPP program you were involved with?

Tell me about your time in the SPP program.

Potential follow up/clarifying questions:

What did you do with SPP?

Did you enjoy it?

What was the best part? Worst part?

What did your friends think about you working with SPP?

How would you describe your relationship to the environment before participating in SPP programming?

Potential follow up/clarifying questions:

What did you think about the environment?

What did you like to do outside?

How did you consider or take action on environmental problems?

How would you describe your relationship with the environment after participating in SPP programming?

Potential follow up/clarifying questions:

What do you think about the environment now?

What do you like to do outside now?

How do you consider or take action on environmental problems?

What changes did you see in yourself that you would attribute to your work with SPP opportunities?

Potential follow up/clarifying questions:

Did you find yourself calmer in general?

Did you find yourself better able to communicate problems or ideas?

Did you find yourself more interested in pursuing education?

Did you find yourself handling problems or arguments differently?

What changes do you think your family or friends see in you that you would attribute to you work with SPP opportunities?

Potential follow up/clarifying questions:

Would your family consider you a better role model?

Is your family able to communicate better with you?

Do you consider yourself a part of the environmental movement?

Potential follow up/clarifying questions:

Imagine it is 2030 and family and friends are discussing environmental problems from 2017, will you picture yourself as part of the environmental movements from 2017?

Do you think you'll still be interested in protecting or saving the environment in 2030?

Appendix B: Demographic Survey

Interview Participant Demographic Survey

This survey is optional and how you fill it out does not affect your participation in the interview. Your responses to this survey will be kept **anonymous**. If you prefer not to answer the questions, or want to stop at any time, please feel free to do so.

- 1. What SPP Program(s) were you involved in, and for how long?
- 2. When was your release date?
- 3. What is your age?

18-30	41-50
31-40	>50

4. What race(s) do you most identify with?

White	Hispanic or Latino	Black or African American
Native American or American Indian	Asian / Pacific Islander	Other
indian		Prefer not to answer

5. What is your preferred pronoun?

She/Her

He/His

They/Their

6. What is the high degree of level of school you have completed? *If currently enrolled, highest degree received.*

No school completed	Nursery school to 8 th grade
Some high school, no diploma	High school graduate, diploma, or equivalent (GED)
Some college credit, no degree.	Trade/technical/vocational training
Associate Degree	Bachelor's Degree
Master's Degree	Doctorate Degree

7. With regard to your past job activity:

a. In what kind of business or industry do did you work in before incarceration if applicable?

(For example: hospital, newpaper publishing, mail order house, auto engine manufacturing, breakfast cereal manufacturing.)

b. What kind of work did you do? (Job Title)

(For example: registered nurse, personnel manager, supervisior of order department, gasoline engine assembler, grinder operator.)

c. How much did you earn, before taxes and other deductions, in an average year before incarcation?

_____Less than \$5,000

_____\$5,000 through \$11,999

_____\$12,000 through \$15,999

_____\$16,000 through \$24,999

_____\$25,000 through \$34,999

_____\$35,000 through \$49,999

____\$50,000 through \$74,999

____\$75,000 through \$99,999

_____\$100,000 and greater

Don't know

____No response

Question 6. With regard to your current or most recent job activity:

a. In what kind of business or industry do you work?

(For example: hospital, newspaper publishing, mail order house, auto engine manufacturing, breakfast cereal manufacturing.)

b. What kind of work do you do? (Job Title)

(For example: registered nurse, personnel manager, supervisor of order department, gasoline engine assembler, grinder operator.)

c. How much did you earn, before taxes and other deductions, during the past 12 months?

- _____Less than \$5,000
- _____\$5,000 through \$11,999
- ____\$12,000 through \$15,999
- _____\$16,000 through \$24,999
- ____\$25,000 through \$34,999
- _____\$35,000 through \$49,999
- _____\$50,000 through \$74,999
- _____\$75,000 through \$99,999
- _____\$100,000 and greater
- ____Don't know
- _____No response