

Northwest University

Community Development through Care Farming:
Promoting Personal, Social, and Environmental Well-Being

Rachel Jones

Practicum II: Thesis

Dr. Forrest Inslee

22 April 2019

This thesis is submitted in partial fulfillment of the requirements for the degree of Master of Arts, International Community Development. Northwest University, Kirkland WA, USA. The writing found in this document includes excerpts from Fieldwork; Spirituality, Culture, and Social Justice; Leadership; and Social and Environmental Justice.

Reflection from Field Note

This connection to the land gives me strength and peace, it grounds me. I grew up in nature – being surrounded by trees, moss, ferns, lichen. I swam in a creek in my youth and laid on forest floors to revel in their intricacies. I swung on vines attached to tall trees and felt free and fierce.

I connected to the woods like no one else I knew – I could see that my home was in them.

I cherished it and felt cherished in return. I would disappear into my faery forest and feel embraced by magic. I would get to the edge and take off my shoes to better sense of the moss under my feet. I would read in the midst of the ferns and vines or just stare at the cedar filled ceiling. I belonged there, feeling close to myself and to God as silence swirled around me, interrupted occasionally by birds calling to one another and squirrels rustling in the branches.

I would build forts with friends, spending hours in our make-believe world as though we were the only ones who existed. We would fill our backpacks with essentials and go trekking through the trees, into the earth, emerging half a day later tired from our exploits.

I knew this was my safe space – my peaceful place – but didn't fully realize its impact until several years later. I didn't understand its source of groundedness for me – it felt so natural that I didn't know how much I needed it to feel whole.

I am a daughter of the Creator, part of the creation, a steward of the earth, connected to the land. A daughter and sister and mother of the natural world.

- Rachel Jones

Table of Contents

Introduction 4

Community Development 5

Magdalen Farm

- Overview 5
- Reflection 9

Gorgie Farm

- Overview 10
- Reflection 12

Interview Results 13

Personal Wellbeing 15

- Attention and Creativity
- Physiological Responses
- Technology

Social Wellbeing 22

- African Americans and the Land
- Indigenous/First Nations and the Land

Environmental Wellbeing 26

Future of Sustainability 30

Conclusion 33

Introduction

Nature based therapeutic practices have been utilized for centuries. Healing and restorative gardens have foundations in monastic cloister gardens of the 12th century, in Japanese Zen gardens, in American psychiatry of the 18th and 19th century, and in veteran's hospitals of the 1940s and 1950s (Horowitz 78). A general definition for nature therapy is the use of natural elements to assist in and promote physical, mental, spiritual, and emotional healing. Nature therapy has been shown to decrease stress, anxiety, depression, and improve social skills, physical strength, and sense of self-worth. In the past few decades the practice of nature therapy has flourished in the Netherlands and United Kingdom with the development of care farms and is now spreading around the world.

Care farms are functional farms connected to local institutions and social services (such as schools, assisted living facilities, group homes, and drug rehabilitation centers) giving community members the opportunity to cultivate, plant, grow, and harvest in pursuit of personal goals. They are a community development resource. They can be molded by culture and accommodate people of various ages, needs, and ability statuses. Care farms contribute to the health of communities by practicing environmental stewardship, leading educational and therapeutic activities, and providing space for social engagement. This thesis makes the case for the importance of care farms, outlines important values and practices that inform them, and offers a proposal for the establishment of such a farm based on these ideas (see appendix).

Throughout this paper, I will explore how care farms promote personal, social, and environmental well-being and can sustain communities with diverse cultures. This will be supported by peer-reviewed research and personal fieldwork experiences. Case studies,

reflections, and interviews were recorded from two months in the United Kingdom where I completed fieldwork at Magdalen Farm in England and at Gorgie Farm in Scotland.

Community Development

It is important to begin by giving a brief synopsis of community development and how it relates to care farms. Care farms are rooted in their communities and have proven to be impactful, but how do care farms contribute to development? Community development practice looks at three different spaces within a community. The first space is where people live, the second space is where people work or go to school, and the third space is where people congregate and socialize. Without these three spaces no sense of community can be formed. Moreover, healthy communities rely on third spaces for people to meet, get to know their neighbors, form clubs, and give back. Third spaces are vital for social capital and health.

Care farms fall into this third space category. They are a resource for communities to foster connection to both people and land. They are accessible and inclusive, they build a sense of community by engaging people around common goals and visions. They utilize various forms of capital, such as individual, social, natural, and cultural, which are the building blocks of sustainable communities. Florence Williams states that “the access-to-nature movement... needs to grow out of schools, churches, workspaces, neighborhood associations and cities as a whole. And it won’t happen unless we acknowledge more consciously our need for nature” (256). Care farms are an incredible tool for developing healthy communities but they must be an outpouring of local, grassroots initiatives to be effective. The sections below will provide examples of grassroots organizations creating care farms and developing communities.

Magdalen Farm: Overview

Magdalen Farm is located on 134 acres in southwest England and is one of the leading care farms in the United Kingdom. I requested to volunteer on the farm for five weeks while conducting research and they graciously welcomed me. The farm offers day trips and residential opportunities for school groups and family outings. It provides courses and activities on land stewardship and care farming for people of all ages and abilities, and they employ qualified field teachers to engage children, adolescents, and adults in nature-based activities. In their brochure, they state: “we offer an adaptable and balanced mix of learning new skills and providing time for fun, reflection, and rest from daily pressures...outcomes include physical and mental relaxation and increased self-awareness.”

The farm contains pastures, woodlands, gardens, ponds, and a river. It is a diverse natural setting in a rural part of the country. The diversity of the landscape was one of my favorite aspects and several interviewees commented on its plentiful resources. The gardens have several polytunnels (plastic-covered tunnels used for year-round growing), dozens of raised beds, a soft fruit garden, and a fruit orchard. They also maintain animals in the pastures for educational purposes and to help feed the hundreds of people who come each year. These animals include chickens, pigs, goats, and horses. One of the board members comes several times a month for conservation work and to keep track of the flora and fauna on the property.

The care farming component of Magdalen caters to those with behavioral and/or mental impairments and is the reason I chose this farm for fieldwork. They have several local partners, such as schools and groups homes that come out once a week and participate in a variety of activities based on their abilities and needs. One group of adolescents with behavioral concerns is first given small tasks with oversight and work their way up to managing farm tasks on their own. It helps foster self-esteem, independence, and self-worth. In an interview with Linzi, the

garden manager, she told me the story of one of the male teenagers who was with this school group. She said that he was quiet and did not do much work because he was being influenced by two other dominant boys. When these two left the other “went from being this very quiet shy guy to being the alpha male of the group, very confident and hardworking and would banter and joke around with everybody and would show the new children how to use a drill, how to feed the animals, and what you should be doing” (Personal Interview). Linzie mentioned that it was beautiful to see such transformation in the people she works with and how proud she is of them when they are able to build on their strengths. I was able to observe Linzi interacting with this group several times and she had strong rapport built with them.

The educators at Magdalen also lead groups for adolescents who are struggling to transition in their move from school levels. These groups are held out in the community on Saturday afternoons and work to build confidence and self-esteem for children to transition more easily in the education system. One of the educators, Emma, told me of a boy who had a severe germ phobia to the extent that he had a one-on-one helper in the classroom. She commented that he could not sit on the logs in the forest and that she had to give him a piece of paper to put on the log first. She went on to say: “we did the first activity and he just kind of watched and he wasn’t really into it. Six weeks later he’s digging in the mud with his hand. He’s made a bow and arrow... Leaving him to process what was happening and that he was going to have to deal with this and he did. It was lovely to see, you know.” Emma continued to share her love for working with children of various ages and how giving them freedom to be creative and build skills gave them confidence and personal self-worth.

Two other weekly groups conducted by Magdalen Farm included children with autism from a local school and adults with autism from a local group home. Exercises are tailored to

level of functioning for each group to make sure all individuals can participate in some way. Emma mentioned that one activities she led with the adult group centered on their horse, Jenny. She said that “we groomed her and then it was so warm that we laid on her and it was quiet. Then [one of them] went off and stood on his own at the perimeter of the fence and it’s the first time he stopped talking and was quiet” which was amazing because he is very repetitive and rarely ceases to talk. Care farming tasks and activities can have several outcomes, such as physical exercise, mobility and dexterity, communication and social interaction, skill building, sensory work, and building positive coping skills, among others.

Surveys and follow-ups of the care farming groups consistently report of people, they describe as “learners,” improving in confidence, expressing themselves, working through fears and anxieties, being relaxed, engaging in social situations, improved moods, new pride in themselves and what they can accomplish, feeling happy and relaxed, improved communication skills/more verbal, being positively challenged, and learning to adapt. Building upon existing or creating new relationships was foundational. I was able to observe this consistently during my time there. Children, adolescents, and adults enjoyed not only being outdoors, but being outdoors with others.

Rebecca King, the Learning and Wellbeing Manager, utilizes the Warwick-Edinburgh Mental Well-Being Scale to guide activities and monitor mental health. She states that “there are 5 evidence-based steps that the scale is based upon and is proven to help everyone with increasing their sense of wellbeing: get active, connect with others, keep learning, be aware of yourself and the world, give to others” (CLP Final Report). She then lists examples of how activities will relate to these five categories, such as physical exercise, team work, educational sessions, hands-on learning exercises, and feeding and grooming the animals (CLP Final

Report). In one report King highlights survey responses from twenty-three individuals with long-term mental health concerns. She writes that 61% reported improved physical health, 78% stated improved well-being, 70% stated increased confidence, and 74% stated improved social relationships (CLP Final Report).

In addition, children from mainstream schools self-reported that making new friends and working together in the activities was their favorite part of their experience. Their teachers reported seeing increases in confidence, communication skills, relationship building and social skills, cooperating and interacting with each other, emotional and social improvements, problem solving, and supporting one another. No matter the age or ability of the survey participants, research results and observations show improvements in confidence, relationships, and skills.

Magdalen Farm: Reflection

The following section is a compilation of reflective fieldnotes written from May 31 to July 2 in 2018 while living and volunteering at Magdalen Farm in southern England for five weeks.

Magdalen Farm is a beautiful piece of land. I am getting a sense of the land by walking it and I have sketched out a map to help me remember. It has nice wooded areas but is predominantly pasture land. I love being surrounded by all the wild nature, groomed lands, maintained gardens, and cared for animals. It does my soul well. I am much more active here which I (and my body) enjoy. Beautiful walks are available right outside my door and the work of feeding animals and gardening keeps me moving. I spend my days planting, weeding, watering, and harvesting. I strangely love working with the tomato plants, picking the offshoots and carefully tying them to the bamboo stakes. They grow quickly and it is satisfying to tie them again because it means they are thriving. I'm looking forward to getting tomatoes from them in a couple of weeks. I get quite a bit of

sun weeding outside and am exhausted at night but there is a very satisfying feeling that comes after a long, productive day of working the earth.

One day I spent the entire morning and afternoon weeding and mowing the vegetable patch. My body was exhausted from pushing and wrangling the push-mower into submission but it was very edifying to see it come together. It looks well maintained now and it is a good feeling knowing I contributed to its beauty. Another day was spent cleaning out a raised bed and planting leeks. They are slightly more technical, and it boosts my confidence being knowledgeable about their planting. We then picked onions with white rot, cleaned and weeded several beds, and then planted tomatoes and squash. It is nice to work with my hands and feel my body getting stronger. It boosts my self-esteem when I know how to do something and can do it independently. One of the highlights of yesterday was getting to hold and cuddle one of the baby goats that was born a few days ago. I had watched them quite a bit but hadn't yet held them. We were trying to bottle feed one of them, so I picked it up for Linzi [Magdalen's farm manager] to feed and then struggled to put it down. It was so soft and was camped out on my lap. Putting him back in with the mom was difficult. I could have sat there for an hour just petting him.

Overall, this place has been healing for me emotionally and spiritually. My body has gotten stronger and my mind feels clearer. I am no longer in survival mode which gives me more time to rest, pray, and read. I will miss this peaceful place – the walks around the property, going down to the river, watering the polytunnels, the time to listen to music, to pray, to think. I will miss the people and sense of community here. The chores, the opportunity to learn, to listen, to ask questions. I will miss the diverse environment of

pasture, woodland, gardens, and water. What a blessing to have this opportunity. I have learned, I have grown. I feel relaxed for the first time in a while. The staff believe in what they are doing because they see its impact. I have felt at home here, among kindred spirits, and I will miss their warmth and guidance.

Gorgie Farm: Overview

Gorgie farm is a two-acre farm located on a main road in the Gorgie district of Edinburgh. I found their website online and asked if there was a program I could help with during the summer. They gave me a short-term role and allowed me to conduct interviews of the staff. Interestingly, Gorgie has been there for forty years and has become a staple in the community. In 2016 they went through a financial crisis and were able to raise 100k GBP in six weeks to continue operations and have since flourished under the leadership of a new director. Helen is the fundraiser at Gorgie, who shared with me that when they hired her several years ago during their financial meltdown, the community rallied behind the farm and they raised their 6-month goal in 6 weeks, showing the value the community places on the farm.

It was exciting to see what programs they offer kids year-round, all of which help the farm be sustainable, whether through monetary fees or voluntary labor. They have Animal Crackers for 5-7 years old and Farmers Helpers from 8-13. At 14 years old, youth can start volunteering on weekends for work experience. The farm is accessible to people of varying ability statuses and they have many adults who come to volunteer, many of which are referred and have higher needs. Their volunteer program is a main feature of the farm and allows them to operate with just a core staff, most of whom are Volunteer Support Workers, who oversee the volunteers and their tasks. Many of their volunteers are there for the purpose of building both soft and hard skills. They work on social skills and team building while learning to garden and

care for animals. I interviewed four Volunteer Support Workers (VSWs) to learn how their volunteers benefit from working at the farm.

Their stories centered on confidence building for both the volunteers and for themselves. Building soft or hard skills makes people feel good, it is empowering to recognize growth and personal strengths. Leah, one of the VSWs, mentioned that her confidence grew with her ability to lead a team and “juggle different personalities with different capabilities.” She mentioned that the volunteers “learn how to work with members of staff, how to take instruction, and they learn social interaction with other people.” Similarly, Jack stated that “many people like feeling like they’re a part of a team...they find themselves six months later with a whole bunch of friends and being able to talk to the public (visitors at the farm).” Learning to communicate with others was a central component for the workers and the volunteers.

Amber, another VSW, mentions that she works with a number of people who are isolated, whether at school or in the community, and coming to the farm gives them “a chance to be around people and with people and chat with member of the public or members of the staff. The social and personal development is really important because it’s very transferable. Your work with people here means you’ve got a better engagement with people in other places.” The value of this is immeasurable for people who have previously been cut off from community. The volunteers learn about themselves, the people they work with, and how to work in such an environment. Their VSWs meet them where they are at and they feel safe and valued. The inclusive nature of the farm was repeated in all of the interviews and deemed fundamental.

Gorgie Farm: Reflection

The following section is a compilation of fieldnotes written from July 6 to July 29 in 2018 while volunteering at Gorgie Farm in Edinburgh, Scotland for three weeks.

I arrived at Gorgie around nine in the morning for a tour with Elspeth, the Education Officer, who explained my role for the next three weeks while showing me the property. During the summer holiday Gorgie has a program called Farmer's Helpers for kids to come and participate on the farm. My role is to help with these groups, which is opposite from Magdalen, but will be good for me to be in a leader role, which will be a helpful lesson for me personally.

I have started getting more comfortable with the kids and the activities – mainly the various animals here. I have held a guinea pig, a ferret, and a bunny over the past few days. I never understood pet therapy but having cuddled a baby goat at Magdalen and now these small pets I am beginning to understand. There is something magical about having a small creature contentedly lay on your lap and be stroked.

It is fun to see all the families come to Gorgie with their small kids. There is quite a bit of diversity in this area of the city and it creates a beautiful atmosphere on the farm. It is always nice when elderly people come – today two care-takers brought two elderly people in wheelchairs and they pushed them around to see the various animals and gardens. Another couple just sat in the gardens enjoying the space. Families tend to come for a while then eat lunch on the benches or at the café. It really is a place for all ages. Grandparents bring their grandchildren, parents bring their children, teens can be seen wondering around in small groups. People of all ages also book a “cuddle corner” meaning time spent with the animals in the pet lodge. It's a neat atmosphere in the middle of the city.

One day at Gorgie we began with bottle feeding the lambs, we then moved to feed and cuddle the baby goats, we had break, and then went to groom the bunnies and change out

their water and feed. The kids love the bunnies, they all wanted to hold and pet them. We then went to the gardens where we picked red and black currants, which the farm will then make into jam to sell. We finished the day with the new micro pigs which are adorable. Two of the girls wanted to spend extra time with the micro pigs at the end of the session and they scratched the pigs' belly until one of them plopped right over at their feet and fell asleep while being cuddled. The girls thought it was the most fantastic thing. Another day we had a 13-year-old girl with learning disabilities, speech difficulties, and muscle problems who loved the animals and did so well. She said the black micro pig was her favorite and when I asked her why she said: "because it comes to me." Sometimes it is that simple. Being acknowledged.

Interview Results

I conducted thirteen interviews in total of staff members at Magdalen and Gorgie Farms. Interviews ranged from fifteen to sixty minutes. Several questions were asked of each of the interviewees, such as: why is this job/this place important you, how are people impacted by coming here, and how are you impacted by working here? Other questions asked of several of them include: what is your favorite activity here, what have you learned in your work, what impact has the farm had on the community, what outcome do you hope to achieve? The responses to these interviews, regarding the impacts of care farms, can be categorized into three overarching themes: personal, social, and environmental well-being. Each of these themes have distinct characteristics but they are also interwoven together. The chart below shows these three themes and corresponding descriptive words and phrases used to communicate by respondents the effects of the farms in the interviews:

Personal Well-Being	Social Well-Being	Environmental Well-Being
Gained confidence	Accessibility	Education
Support systems	Included	Cyclical nature of things
Individualized approaches	Building relationships	Nurture and grow
Patience	Connecting with others	Getting back to roots
Leadership skills	Sharing feelings	Food and waste
Positive thinking	Part of cohesive group	Outdoor learning
Building trust	Forming friendships	Safe and peaceful place
Belief in themselves	Embedded in community	Exploration
Coming out of shell	Meaningful interactions	Fresh air
Treated like an equal	Learning from each other	Reconnect with nature
Building resilience	Part of a team	Running around
Self-worth	Walking/working alongside others	Connection between people and land
Feeling valuable	Cultural connections	Freedom
Personal development	How to work with others	Green spaces
Problem solving	Learning social interactions	Calm of plants and animals
Therapeutic	Relaxed space	Touching something alive
Learning practical skills	Safe space	Feeling different seasons
Decision making	No judgement	Accessible
Setting and meeting challenges and targets	Team building	Respect for nature leads to caring for nature
Boosting mood	Exploration	Food chains/systems
Allowed to just “be”	Freedom	Caring for animals
Independent learning	Inclusivity	Ecosystem
Creativity and imagination	Brings people together	Global warming
Restful and relaxing	Builds family	Importance of nature
Peaceful	Support system	Relationship with the land
Learning to enjoy nature	Sense of community	Connecting to animals
Learning by doing	Interdependence	Small steps w/ big impact
Pride and ownership	Social skills	Helping to nurture/grow
Reconnect with the land	Help each other – empathy	Animal welfare
Skill building	Everybody brings something	Changing consumption
Persistence	Ownerships	Empathy
Sensory experiences	Bonding with animals	Land and community
Freedom of nature	Build trust	Environmental stewardship
Time to think	Hospitality	Environmental footprint
Learn about self	Land and community	Rhythm of daily life
Testing out new experiences	Small, simple changes	Reconnecting with being a creature
Personal gratification	Conversation	Therapy around hope
Limiting isolation	Moving together	Practical steps
Being present	Repetitive actions together	Experience driven environmental education
Connecting to their bodies	Tight bonds	Environmental ethic

Responsibility	Everyone is important	Hospitality
----------------	-----------------------	-------------

The themes revolve around creating accessible, safe spaces to nurture and be nurtured. Leading activities that allow for exploration, connection, and education. Inspiring others to engage with the land, to respect it, to care for it – and to understand the implications of not doing so. Promoting simple, small, practical steps that give hope for the future. Modeling how to build relationships with self, others, and the earth for continued growth and development. The three themes of personal, social, and environmental wellbeing will be explored separately and will highlight how they are each interconnected.

Personal Wellbeing

Attention and Creativity

Florence Williams, journalist and author of *The Nature Fix*, states that “attention is our currency, and it’s precious” (42). She quotes Paul Atchely, who says “we have far more information than we can deal with. Most of what the brain is doing is filtering, tuning stuff out so we can focus in on things that are relevant” (43). Attention is a focal point for researchers looking at the cognitive benefits of engaging with nature. Stephen and Rachel Kaplan, psychologists and leading authorities on Attention Restorative Theory, look at how nature causes the brain to rest and restore itself. William Sullivan and Rachel Kaplan state:

Attention Restorative Theory (ART) postulates that contact with nature helps people recover from mental fatigue...having a view to a setting that contains natural elements (e.g. trees, flowers, water), or actually being in such a space for even just a few minutes, can restore your capacity to focus because it provides the mechanism necessary to block distractions an opportunity to rest and restore. (7)

The Kaplans differentiate between direct attention and involuntary attention and state that “interacting with environments rich with inherently fascinating stimuli (e.g. sunsets) invoke *involuntary* attention *modestly*, allowing *directed*-attention mechanisms a chance to replenish” (Berman, Jonides, & Kaplan 1207). Western culture is driven by multitasking and performance-driven routines. When direct attention is burned out and fatigued it can lead to stress, frustration, poor decision making, and other negative consequences. A balance between direct and indirect attention must be fostered for personal wellbeing and engaging in nature is a great solution for doing so.

Richard Louv comments that “the Kaplans’ work suggests that nature simultaneously calms and focuses the mind, and at the same time offers a state that transcends relaxation” (28). It allows the mind to recalibrate by focusing on aspects that engage fascination and wonder, it releases the tension of being detailed-oriented and performance driven and allows people to just “be.” Clemens Arvay comments that the Kaplans “discovered that nature is downright full of things that trigger fascination and attract our attention in a very natural way” (55). This suggests that if people are aware of and present in their surroundings, then fascination will be a natural byproduct. People do not try to be fascinated or filled with wonder, it is a result of being taken captive. Given this, researchers are now looking at the potential nature has to “helps us think, solve problems and work together” (Williams 34). One of these researchers is David Strayer who is looking at the connection between nature and creativity. Initial research for a pilot study showed “a 50 percent improvement in creativity after just a few days in nature” for fifty-six Outward Bound participants (Williams 37). The heightened attention and creativity that emerges from contact with nature is being explored by both social and medical scientists. The next section focuses on the physiological changes that occur.

Physiological Responses (Mental and Physical)

Yoshimui Miyazaki, professor and leading expert on shinrin-yoku (forest bathing), states that “the basic concept behind nature therapy is to increase physiological relaxation and act as a preventative medicine by improving the body’s natural resistance to disease, which is suppressed under conditions of stress” (24). He comments that “humans have spent over 99.99 per cent of their time in a natural environment” and that our bodies and minds are created for this context (26). Because over half of the world now lives in urbanized areas it is crucial to continue valuing and using forests and natural environments, for both social and environmental health. Miyazaki states that “our physiological functions are still adapted to nature. Because of this, the sympathetic nervous system is in constant state of over-stimulation and stress levels are often too high” (29). The sympathetic nervous system is what engages flight or fight responses which is good under dangerous situations but when these adrenalin hormones are being released frequently due to high stress situations it can be harmful to the body.

The parasympathetic system is what allows the body to resume a state of rest and restoration after heightened stress. It services to calm the body and bring it back to homeostasis, but when the body experiences chronic stress this good system can be immobilized which is harmful to physical wellbeing (Miyazaki 31). Miyazaki gives a list of stress-related illnesses such as: the common cold; back, neck, and shoulder pain; slower healing; weigh gain and loss; sleep dysfunction; depression; irritable bowel syndrome; ulcers and stomach problems; heart disease; and cancer risk (33). Reducing stress and allowing for rest and relaxing is a critical aspect to living a physically and mentally healthy life.

To help reduce high levels of stress among people in Japan, Miyazaki and his colleagues have introduced a new approach to nature therapy research as they measure stress by monitoring

brain activity, autonomic nervous system activity, cortisol levels in saliva, and immune activity in their participants (130). In addition, pulse rate and blood pressure are often used as measuring tools. Their numerous studies show improvement of weakened immunity, increased relaxation, reduced stress, reduced blood pressure, and a general sense of wellbeing (34). For one study, participants also reported “an increased feeling of comfort, an increased feeling of calm, and increased feeling refreshed, an improvement in their emotional state, [and] a reduction in anxiety” (146). Similarly, Richard Louv comments on a study by the University of Sussex in 2009 that of more than 1,850 participants of green exercise three broad outcomes were reported: “improvement of psychological wellbeing (by enhancing mood and self-esteem, while reducing feelings of anger, confusion, depression, and tension); generation of physical health benefits (by reducing blood pressure and burning calories); and the building of social networks “(59). All three are interconnected and dependent on the others.

The physiological impacts of nature on both the physical and mental also extends to the exercise people enjoy when being outdoors. Louv states that “nearby nature can be an antidote to obesity” and quotes Gilbert C. Liu, MD: “our new study of over 3,800 inner city children revealed that living in areas with green space has a long-term positive impact on children’s weight and thus health” (47). Florence Williams adds that “childhood obesity rates have tripled and allergy and asthma rates have increased dramatically in the U.S. in the last three decades” (234). She also states that vitamin D deficiency and insufficiency among children is pervasive and impacts tens of millions of youth (234).

However, sunshine is not only important for vitamins. Arvay reports that natural light can also impact pain-relief. He states that “the release of the ‘happy hormone’ serotonin is enhanced by sunlight. Because serotonin can inhibit the transmission of pain impulses in the central

nervous system, pain is alleviated. Serotonin also gives us the feelings of serenity, satisfaction, and peace of mind” (74). In addition, Louv highlights initial research that shows nearsightedness (myopia) as linked to spending less time outdoors “where eyes are conditioned to focus on longer distances” (17). Also in regards to youth, Miyazaki states that “children who spend regular time in nature on average experience an increase in self-confidence, problem-solving skills, motor skills, and the capacity to learn” (90).

Similarly, Williams notes that “nature play enhances at least two activities known to develop children’s cognitive and emotional development: exercise and exploratory play,” however this is not always an option available to children (232). Children who grow up in urban areas may not have access to green space and families who live in neighborhoods where crime is persistent may not allow their children to play outside. In addition, school systems have reduced the amount of recess children receive, even eliminating it altogether in some areas. This lack of access is having negative impacts on youth, which can be seen in reverse by research that takes children outside for educational programs. Louv cites the following research of an outdoor program for students:

So-called at-risk students who have not had much experience in nature show a marked improvement of 27 percent in test scores, related to mastery of science, when they learn in weeklong residential outdoor education programs. They also showed enhanced cooperation and conflict-resolution skills; gains in self-esteem; gains in positive environmental behavior; and improvements in problem-solving, motivation to learn, and classroom behavior. (30)

Creating spaces for children, adolescents, and adults to run around and play outside is crucial for physical and mental health in all communities. It increases physical activity, lowers rates of

obesity, enhances soft skills, and promotes social engagement and community building, just to name a few. One impediment to this is the increasing dependence and addiction on technology.

Technology

One reason children and adults in Western countries particularly spend less time outside is due to an increase in the availability of technology. Miyazaki comments that “increased pressure to study and the rise of in use of technology such as smartphones is leaving our children feeling frazzled” (90). Research in Korea is trying to address adolescent technology addicts. Korea, China, Japan, and the U.S. are all performance driven countries, but Williams reports that in Korea:

A 2011 survey found 87.9 percent of [high school students] feeling stress ‘in the past week.’ Teenagers in Japan, China, and the United States report half that level. South Koreans are, according to researchers at Yonsei University, the unhappiest students in any industrialized nation. In a country where mental illness is highly stigmatized, South Koreans have the highest suicide rate in the world. (67)

Due to this increased risk, a national program, the Korean Forest Agency, is experimenting with new ways to teach digital detox with a free ten-week program for mothers and their children, structured so that “the session[s] included a clever mix of games, sensory interludes and trust exercises” (Williams 79). Williams reports that “two South Koreans studies looked at eleven- and twelve-year-olds who qualified as borderline technology addicts. After trips to the forest of two days each, researchers found both lowered cortisol levels and significant improvements in measures of self-esteem” (81). Park Bum-Jin summarized the results, stating that “kids with

higher self-esteem are less likely to get addicted” to technology and that there needs to be a change in mindset to how children and adults view nature – not as dirty and messy but as life giving (Williams 81-82). Engaging with nature *can* be dirty, but it can also be gratifying and fulfilling as people learn new aspects about who they are and what they are capable of doing.

Lisa Graham McMinn, author of *To the Table: A Spirituality of Food, Farming, and Community*, lists seven “good things” that are derived from gardening and working the land and are related to personal wellbeing: gardening answers our call to cultivate and be stewards of our home; gardening provides good and meaningful labor; failure is okay, expected, and a good teacher besides; we see the interconnection of things and our place within creation; we learn tenacity and hope; we learn that some stress is good; and we learn to pay attention (153-169). There is an awareness that develops when engaging with nature. The senses are called to action, indirect attention takes over, and people become present internally and externally, personally and environmentally. Interestingly, the benefits of nature continue to increase when individuals engage with it in a social capacity.

Social Wellbeing

In the interviews gathered for this research, staff members repeatedly commented on how the garden space and activities fostered relationships, cohesive groups, team work, social interactions, support systems, community, inclusion, and more. Care farming can be healing and gratifying through individual time and work, but a large component of this healing is through social wellbeing. Self-esteem, trust, development and more can come with interaction with other people. When people feel connected and valued by others there is a sense of belonging and wholeness that those who are isolated or shut out of society lack. They miss being acknowledged and loved – which is foundation for living a high-quality life. Working in a garden with others

allows for direct or indirect conversations that can ease tension for people with social anxiety. It can foster teambuilding as people learn to work together and trust the work of others. It is accessible and judgement free and people sense that their work matters and that they cannot accomplish it all alone.

It is gratifying to work next to someone and rhythmically work towards a goal together. In looking at research, Florence Williams, in her study done in Finland, comments that “to the Finnish, being outdoors in nature isn’t about paying homage to nature or to ourselves, the way it tends to be for Americans...for the Finnish, though, nature is about expressing a close-knit collective identity” (134). This sense of community, connection, and collectivity is vital for good quality of life. Additionally, Strayer, a Utah researcher working with college students, commented after a nature trip: “the students have gelled...it just shows you how starved they were for social interaction, for connection” (Williams 191). Williams summarizes her nature-based research from Finland, Sweden and Scotland by stating: “encourage people – especially distressed populations – to walk, often together, and provide safe, attractive and naturalistic places to go” (166). Similarly, Robert Louv quotes Rick Pool, professor in the School of Environment and Sustainability, as saying “simply getting people together, outside, working in a caring capacity with nature, perhaps even intergenerationally, may be as important as the healing of nature itself” (113). Simultaneously forming relationships with people and place – learning to reciprocally care for others and the environment. Louv states that “building human/nature social capital offers multiple benefits, among them: productive work for people of all ages; new or deepened relationships with neighbors or networks of people who share an interest in urban wildlife or urban agriculture; social relationship with other species that enriches daily life” (114).

All of these researchers are discovering the importance of socializing while farming and gardening and how it aids in personal and social well-being.

Intertwined with social and natural capital is the link people of various cultures have to nature. The many cultures that make up the United States all have different relationships and social connections to nature as a result of their cultural heritage. This paper has already highlighted Japanese, Korean, and Finish culture in relation to the natural environment and research that is being conducted in those places. The following paragraphs will briefly examine two distinct cultures within the United States and how they relate to the land. This cultural connection is foundational for applying care farming practices and principles with various populations of people. Care farms can be molded by culture for community development but only when practitioners are competent enough to do so effectively.

African Americans and the Land

Dianne Glave, author of *Rooted in the Earth: Reclaiming the African American Environmental Heritage*, states that there is a misperception regarding African Americans detached relationship to the land and that “this stereotype is embraced even by African Americans themselves” (3 & 5). She comments that “African Americans actively sought healing, kinship, resources, escape, refuge, and salvation in the land. The environments held social meaning for enslaved people” (8). She states that “long before the birth of the modern environmental movement, African Americans practiced environmentalism through the lenses of religion, agriculture, gardening, and nature study” (10). Throughout her book, Glave tells the story of African American history with the land beginning with African heritage and culture. Glave states that “Africans believed in the interconnectedness of the human, spiritual, and environmental realms and felt that harm towards or care for one necessarily affected the others”

(44). She tells of the good and the bad, of captivity and salvation, how slaves were beaten and forced to work the land and how slaves then used the land to escape through the wilderness.

Glave talks of the resistance of African Americans and the preservation and conservation practices they have engaged in for centuries. She comments that “Africans in America were forced and coerced to cultivate the land...as a result, many eschewed agricultural labor. Yet they still understood nature, more than whites, because they had their hands in the soil, their eyes on the sky, and their ears attuned to the flutter of the butterflies. African Americans were immersed in nature” (113). She goes on to address environmental racism, which is the “inequitable exposure of people of color to air, water, and noise pollution,” and how environmental justice seeks equity for all people (129). Glave highlights the history of African Americans being involved in environmental justice (the term itself being coined by an African American) and how they continue to persist and resist against overexposure to harmful pollutants.

A great example of this is Leah Penniman, author of *Farming While Black: Soul Fire Farm's Practical Guide to Liberation on the Land*. When she was young, she “incorrectly believed that choosing a life on land would be a betrayal to [her] ancestors and of [her] Black community” (9). She is now a farmer and an activist in New York and states that “our Black ancestors and contemporaries have always been leaders in the sustainable agriculture and food justice movements (10).” She actively creates space on her farm and in her book to empower others to be involved as well.

Indigenous/First Nations and the Land

Robin Wall Kimmerer, author of *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants*, is a botanist and member of the Citizen Potawatomi Nation. Her book melds together the science of plants with cultural wisdom past down by her

ancestors. She states that “gifts from the earth or from each other establish a particular relationship, an obligation of sorts to give, to receive, and to reciprocate” (25). Her book emphasizes the culture around gratitude and reciprocity, the interconnection between people, animals, and land. She speaks of mother earth and states that “she provides for us and teaches us to provide for ourselves. That’s what good mothers do...the ultimate reciprocity, loving and being loved in return” (123). She adds to this by stating: “I wonder if much that ails our society stems from the fact that we have allowed ourselves to be cut off from that love of, and from, the land” (126). This fading reciprocity between people and land has negative impacts on both sides. The loss of gratitude, interconnection, and generosity results in broken relationships between people and between people and the earth.

Kimmerer goes on to write that when people ask her how to restore their relationship between themselves and the land, she responds with: “plant a garden” (126). She does not see caring for the land as an individual act, but as founded in community, the birthplace of gratitude and reciprocity. She states: “the most important thing each of us can know is our unique gift and how to use it in the world. Individuality is cherished and nurtured, because, in order for the whole to flourish, each of us has to be strong in who we are ... so they can be shared with others” (134). Personal strengths should allow not only the individual to thrive, but also the community and the land, because both are interconnected to the person.

Kimmerer weaves together narratives of Potawatomi tradition with current preservation and conservation principles. She calls for respect and reciprocity and responsibility through gratitude, by never taking more than is needed, by leaving enough for the land to replenish itself and share with others. She not only tells of the cultural traditions, beliefs, and ways of life for her people but gives a charge to others to follow in their footsteps. Being in community with others

and the land, being interconnected and interdependent in such a way that both are cared for, loved, and preserved.

Every culture has a different relationship to the earth, whether it is through a different creation story, how people honor (or dishonor) plants, or how they view people's connection to it. There is a diversity of thought and practice. To use care farm principles ethically and effectively, these cultural differences must be taken into consideration or the farm will not be sustainable. Louv states that "our relationship with nature is not only about preserving land and water, but about preserving and growing the bonds between us" (139). The gratitude and reciprocity shown by the earth, by a Creator, by people, connects everyone to a social system that is vital for life. This interdependence on the land and on others connects us. It gives us a sense of belonging, and grounds us holistically.

Environmental Wellbeing

Environmental wellbeing was addressed throughout the interviews as a central tenet of care farms. Magdalen and Gorgie Farms both focused on education and saw it as vital to their work. This educational component spanned from learning to reconnect to the earth, to learning where different food comes from, to learning about the impacts of climate change and how to make more sustainable decisions. It focused on the personal relationship first and then expanded to personal responsibility. Learning to enjoy nature, to respect it, and to care for it. Melding fascination with conservation. Discovering new plants and animals while also discovering how personal choices impact them. In the interviews, staff talked about the importance of understanding food chains and ecosystems, why nature is important, that farming is more than just feeding animals, how to grow your own food, how to care for animals, the cyclical nature of

things, and so forth. Recognizing how we inadvertently treat others by how we treat the earth. A collapse in ecosystems comes out this mistreatment.

Julie Clawson, author of *Everyday Justice*, states that justice “involves restoring broken relationships between people, and putting right all the ways sin and injustice harm ourselves, each other and the world” (23). To live justly we must not only restore and reconcile relationships with others but also with the land. We have become disconnected to the earth through industrialization and this has led to unfair and unjust practices that have become normalized within our culture. Daniel Groody, priest and professor of theology at Notre Dame, states that “when we forget our fundamental connection to the earth, we lose something of ourselves. Extended periods of time in the outdoors help renew our relationship with the earth” (256). If we do not restore our relationship to the earth, we will continue practicing injustice without any thought to the consequences.

One consequence of environmental injustice is, of course, environmental degradation. Climate change is an outpouring of this injustice. Climate change is the rising of the earth’s average temperature due to greenhouses gases which is produced by burning fossil fuels like oil (Clawson 78). This rising of the earth’s temperature has severe costs for our planet. One such result is the extension of dry seasons which can lead to infertile land – if nothing is growing in the land, if no roots are not digging into the earth and holding the soil in place it can lead to flooding, landslides, soil erosion, and so forth. So not only is the land infertile for a season, causing drought and famine, but it is destroying the land and community for future harvests.

Clawson gives another example by stating that climate change “will also diminish natural resources like glaciers...ecologists predict that by 2030 there will be no more glaciers in Glacier National park. Glaciers provide much of the earth’s fresh water” (78). As these resources become

limited it will exacerbate other problems such as national security and conflict as people and countries begin to fight over the remaining resources left. This is not exaggerated; it is already happening in countries where climate change is having the most impact. Environmental justice “suggests that all people have rights to a fair share in the goods and services that Earth provides to humankind” (Moe-Lobeda 40). We must ask ourselves if we are taking more than our fair share and exploiting others as we do so.

The events of flooding, soil erosion, and declining crops famine are not solely located in Global South countries living in poverty as many believe. These events happen worldwide, but the difference is that Global North countries have the wealth and infrastructure in place to keep them stable. Thus, people living in Global North countries have the privilege of tuning out these catastrophes, unless they are being directly impacted. They have enough safety nets in place to keep them from extreme hardship and starvation. Though these natural events happen globally, climate change is having the most impact on poor nations and people already vulnerable due to a plethora of other issues. When the North sends barges of trash to other countries, takes and uses extraordinary amounts of oil, and buys products that use dangerous chemicals and child labor, they do not only degrade the earth, they also oppress its people. The Global North, due to industrialization, is contributing to climate change far more than Global South countries, and yet countries in the South are being impacted significantly worse. Leah Kostamo comments that “because they live in total dependence on their local environments, the poorest of the world are most affected by environmental degradation, whether in the form of toxic pollution or climate change – environmental degradation that we in the West have caused. They are, in fact, innocent bystanders, paying the price for our extravagance” (114). We are practicing environmental

injustice that has very real social injustice implications that can result in life-or-death consequences.

The 2016 documentary on Wendell Berry, “Look and See,” discusses the change in farming from an art to an industry – increasing farms sizes was the only way to compete with large agro-businesses and using machines and chemicals was the only way to do so (Dunn). In the documentary, Wendell Berry comments that “when we mistake small places for nowhere, there is a penalty – soil erosion, toxicity, polluted air and water” (Dunn). “Look and See” also addresses that rural areas are treated like third world spaces and designated as sacrificial areas with people profiting from its destruction and feeling entitled to it. Vandana Shiva, an Indian environmental activist, provides a unique perspective, stating that “globalization has in a deep sense been a globalization of apartheid. This apartheid is especially glaring in the context of the environment. Globalization is restructuring the control over resources in such a way that the natural resources of the poor are systematically taken over by the rich and the pollution of the rich is systematically dumped on the poor” (Lechner & Boli 569). Daniel Groody adds to this when he states: “care of the earth is also connected to concern for the poor, not only because the earth is ‘mother’ but also because the poor, in the places they are forced to live, more often suffer the effects of contamination, toxic wastes, and even ecological disasters” (117).

Those living in industrialized nations have lost respect for the land and those who farm and care for it. They are consumed with production and consumption on an industrial scale that has removed them from nature. Because of this they are now seeking space for nature therapy practices to encourage people to once again find appreciation in the land - and personal, social, and environmental restoration. Facets of globalization have created the need for nature therapy to begin with, but thankfully it is also providing the opportunity to shape a global culture around

stewardship and sustainability and there have been great strides in this field over the past few decades.

Richard Foster, author of *Celebration of Discipline*, compels people to “reject anything that breeds the oppression of others” and poses the question “in a world of limited resources, does our lust for wealth mean the poverty of others?” (94). Similarly, Clawson states that “living justly means understanding the impact of our decisions... an important aspect of acting justly is to first stop being complicit in injustice” (26). The Ecological Footprints of Nations states that humans would need five planets to survive if every country maintained the same lifestyle as those in North America” (Kostamo 111). As a species, humans are entirely interdependent on one another, and their actions and decisions can either have positive or negative impacts, but people can only manage those impacts if they stay aware of the consequences that are personally in their control. How much we drive, the clothes we wear, the food we eat, it all has implications. People can oppress others in their daily life without even realizing it – or they can create spaces that empower people.

Future of Sustainability

For land stewardship and conservation, it crucial to keep the momentum going through education, advocacy, and sustainable practices. If we continue adding to the research and modeling best practices, we can shape culture to once again hold the land in high esteem – and those who farm it. Lasting positive change will only occur within the confines of mutual, trusting relationships. Care farming leaders, such as Magdalen and Gorgie Farms, see the deep connection and dependence between social and environmental capital and they attempt to create space for both within their structures. These leaders take their cues from the natural world and appreciate diversity and collaboration. Care farmers practice collaborative work by connecting

with the various systems in their communities – it is the principle of such farms and organizations. They work with schools, group homes, nursing homes, social services, caretakers, hospitals, mental health facilities, and more. There is richness in diversity and these farms see the importance of working across sectors. They invest in their communities, both socially and environmentally, and seek to provide a space for growth and development.

Care farms are dependent on the wisdom and strengths of a wide variety of skills. They need people who can practice gardening, animal husbandry, conservation, education, management, therapy, maintenance, and more. David and Tom Kelley state that “collaboration works especially well when members bring different backgrounds or perspectives to the team...by working in diverse multidisciplinary teams, we can get to a place that would have been impossible for one of us to reach alone” (186). Each role is important and thus each voice is listened to and given weight.

There is a sense that each person alone cannot manage the scope of the mission and thus they must share responsibility with others. Parker Palmer states that “[w]e learn that we need not carry the whole load but can share it with others, liberating us and empowering them...The great community asks us to do only what we are able and trust the rest to other hands” (89). Care farms are dependent on the larger community, but they also focus on the communities within their scope and they must trust that other care farms will serve other communities. They seek to design creative solutions to social and environmental problems and they need a group of people working towards similar goals to create change. Leadership, in any sector, should mimic the diversity and symbiotic relationships found in ecosystems. There is a beautiful interdependence and balance found in nature that should guide leadership styles and change-making initiatives.

Everyone brings unique skills, values, and experiences, and organizations and communities which utilize these differences will reduce their chances of stagnation and failure.

Where collaborative leadership fails and disconnection flourishes, there is a danger of, what Brian McLaren refers to as, excessive confidence. McLaren highlights the impact this has had on the environment: “modern Industrial-era people had an industrial-strength confidence that motivated them to dam any river, fill any wetland, catch and can any school of fish, strip -mine any mountain, pollute any breeze, pave any meadow, and otherwise exercise and express their dominance – with confidence” (38). David and Tom Kelley present another form of confidence which provokes creativity and innovation, instead of exploitation and dominance. Creative confidence, as opposed to excessive confidence, is rooted in human-centered design and empathy. Kelley and Kelley state that “being human centered is at the core of our innovation process. Deep empathy for people makes our observations powerful sources of inspiration” (21). Effective leaders see the strength in collaborative, creative, human-centered initiatives.

For leaders in the care farming and conservation sector, excessive confidence has detrimental impacts to people and places and thus they must seek a creative confidence approach to solving problems and sustainable change. The central aspect of this, and all collaborative work, is focused on relationships, including relationships with colleagues, stakeholders (including board members, donors, and participants), partner organizations, communities, government entities, and, of course, the earth. Petra Kuenkal states that “the entry point for the trust-based co-creation strategy is humanity: mindfulness of difference and dynamics, balance between task and human encounter, empathy for the story that exists behind each person” (166). Creating an ecosystem of support, trust, and interdependence begins with relationships between people and land and leads to social and ecological sustainability.

Conclusion

Care farms are connected to communities of people and contribute to their health by practicing environmental stewardship, granting opportunities for educational and therapeutic activities, and providing space for social engagement. They promote personal, relational, and environmental well-being, and help to sustain communities cross culturally. Care farms practice environmental justice and ecological responsibility and function to teach others to care for the earth. They provide space to improve personal and social relationships as they connect people in life-giving environments. They promote community, inclusion, and healing; and help restore and reconcile right relationship between people and the land for a just and fair future. Magdalen and Gorgie Farms provide excellent models of care farms and what is needed for moving forward. They are well connected, their communities feel ownership, they engage diverse populations by making their spaces accessible and inclusive, and they show that it can be done in both rural and urban environments. They meet the needs of their communities while teaching them environmental needs that must also be met.

Work Cited

About. (n.d.). Retrieved from Milligan College: <https://www.milligan.edu/about/>

Amber. Personal Interview. 19 July 2018.

Anna. Personal Interview. 19 July 2018.

Arvay, Clemens G. *The Biophilia Effect: A Scientific and Spiritual Exploration of the Healing Bond Between Humans and Nature*. Boulder: Sounds True, 2018.

Clawson, Julie. *Everyday Justice: The Global Impact of Our Daily Choices*. Downers Grove: IVP Books, 2009.

Dunn, Laura. *Look and See: A Portrait of Wendell Berry*. Two Birds Film, 2016.

Emma. Personal Interview. 2 July 2019.

Foster, Richard. "The Discipline of Simplicity." *Celebration of Discipline: the Path to Spiritual Growth*, HarperCollins, 1998, pp. 79-95.

Francis. Personal Interview. 24 July 2018.

Gail. Personal Interview. 24 July 2018.

Groody, Daniel G. *Globalization, Spirituality, and Justice: Navigating the Path to Peace*. Orbis, 2013.

Iona. Personal Interview. 26 June 2018.

Jack. Personal Interview. 26 July 2018.

Kaplan, Rachel and Kaplan Stephen. "Bringing out the Best in People: A Psychological Perspective." *Conservation Biology* (2008): 826-829.

Kelley, Tom and David Kelley. *Creative Confidence: Unleashing the Creative Potential Within Us All*. New York: Crown Business, 2013.

Kirsty. Personal Interview. 16 July 2018.

Kuenkel, Petra. *The Art of Leading Collectively: Co-Creating a Sustainable, Socially Just Future*. Chelsea Green Publishing, 2016.

Leah at Gorgie. Personal Interview. 26 July 2018.

Leah at Magdalen. Personal Interview. 2 July 2018.

Linzi. Personal Interview. 2 July 2018.

Louv, Richard. *The Nature Principle: Reconnecting with Life in a Virtual Age*. Chapel Hill: Algonquin Books, 2012.

McLaren, Brian. (2007). *Everything Must Change: When the World's Biggest Problems and Jesus' Good News Collide*. Nashville: T. Nelson.

McMinn, Lisa Graham. *To the Table: A Spirituality of Food, Farming, and Community*. Grand Rapids: Brazos Press, 2016.

Miyazaki, Yoshifumi. *Shinrin-yoku: The Japanese Way of Forest Bathing for Health and Relaxation*. London: Aster, 2018.

Moe-Lobeda, Cynthia D. *Resisting Structural Evil: Love as Ecological-Economic Vocation*.

Minneapolis: Fortress Press, 2013.

Palmer, Parker J. *Let Your Life Speak: Listening for the Voice of Vocation*. Jossey-Bass

Publisher, 2009.

Rebecca. Personal Interview. 26 June 2018.

Rose. Personal Interview. 3 July 2018.

Shiva, Vandana. "Ecological Balance in an Era of Globalization." *The Globalization Reader*

(5th ed.), edited by Lechner F. and Boli J., Wiley Blackwell, 2015, 566-574.

Sullivan, William C. and Kaplan Rachel . "Nature! Small Steps that can Make a Big Difference."

Health Environments Research & Design Journal (2016): 6-10.

Williams, Florence. *The Nature Fix: Why Nature Makes Us Happier, Healthier, and More*

Creative. New York: W.W. Norton & Company, 2017.

Northwest University

Care Garden Program Proposal

Rachel Jones

Practicum II: Thesis

Dr. Forrest Inslee

22 April 2019

This thesis is submitted in partial fulfillment of the requirements for the degree of Master of Arts, International Community Development. Northwest University, Kirkland WA, USA.

Table of Contents

Introduction

Care Farms & Gardens: An Overview

Milligan Mission and Values

Program Overview

- Program vision
- Goals and objectives
- Rooted in Research
- Goal 1: Faith
- Goal 2: Scholarship
- Goal 3: Community

Garden Development Stages

- Stage 1 Development
- Stage 2 Development
- Stage 3 Development

Sample Budget

Sustainable Impact

- Monitoring & Evaluation
- Support Systems

- Internal
- External
- Farm manager

Enterprise Opportunities

Conclusion

Appendix

Introduction

This project proposal focuses on a necessary addition to Milligan College's campus to promote its academic departments and student health and wellness programs. This proposal will provide background information on care gardening and how such a program embodies Milligan's mission and values. An overview of the program and its goals will be presented, and each program goal will be expanded to include research and practical implementations. Information on program sustainability and social enterprise will follow. The proposal will close by presenting faculty support letters showing how the garden will provide activities and programs for various academic departments and student health services (see Appendix A).

Care Farms & Gardens

Nature based therapeutic practices have been utilized for centuries. Healing and restorative gardens have foundations in monastic cloister gardens of the 12th century, in Japanese Zen gardens, in American psychiatry of the 18th and 19th century, and in veterans' hospitals of the 1940s and 1950s (Horowitz 78). A general definition for nature therapy is the use of natural elements to assist in and promote physical, mental, spiritual, and emotional healing. In the past few decades the practice of nature therapy has been revitalized in the Netherlands, United

Kingdom, Finland, Japan, and Korea (among others) with the development of forest therapy, care farms, and healing gardens.

Care farms are connected to local institutions and social services (such as schools, assisted living facilities, group homes, and drug rehabilitation centers) giving community members the opportunity to cultivate, plant, grow, and harvest in pursuit of personal goals. Richard Louv, author of *The Nature Principle*, comments that “care farming, a partnership among farmers, health care providers, and health care consumers to care for people and land, are taking root in several countries” (86). These farms are a community development resource; they are molded by culture and accommodate people of various ages, needs, and abilities. Care farms contribute to the health of communities by practicing environmental stewardship, leading educational and therapeutic activities, and providing space for social engagement. The impact of these practices will be explored in the sections below.

Milligan College Mission and Values

The core values of Milligan College are faith, scholarship, and community. Faith is central to Milligan’s mission and is a core value held by its faculty, staff, and students. The Christian faith calls its followers to be stewards of the earth and as a Christian college, Milligan ought to seek opportunities that not only care for the campus but model ways for our students to engage in creation care practices. Scholarship, the second core value, goes deeper than what can be taught in a classroom setting. Milligan encourages hands-on experiences through internships and fieldwork and should extend this by teaching students about land stewardship through firsthand engagement. The care garden has the potential to partner with multiple academic programs to give students the opportunity to learn outside for deeper understanding and appreciation of the content being studied.

Community, the third core value, includes both Milligan's community, as well as the broader global community. Milligan's commitment to community holds us accountable to creating and developing programs that enhance students' success and well-being, and that of the broader external community. Students need to understand the full impact of their decisions and how they affect their neighbors through daily choices. There is not a better way to do this than modeling sustainable practices and engaging them in practical experience.

Milligan's values are reflected throughout care farming principles, which promote mental health, educational opportunities, and sustainable systems. According to Care Farming UK, "care farms provide health, social, or specialist educational care services for individuals from one or a range of vulnerable groups." As college students seek mental health services more and students from historically marginalized groups now have access to college, mental health resources are become increasingly needed on college campuses in the US. A care farm will provide a much-needed space for students to engage in healthy practices and activities.

Servant leadership, the foundation of Milligan's mission, is connected to each of these values. Servant leaders care for and give back to individuals, families, and communities. Servant leaders are also responsible to care for the land out of gratitude and appreciation for its blessings, and so it will continue to care for the people we serve. If Milligan expects students to be servant leaders, we as a college should begin serving the land intentionally and being a leader among other colleges and universities. A number of affiliates with the Council of Christian Colleges and Universities have gardens as part of their programing. A list of these school and programs can be found in Appendix B.

Program Overview

The vision of this program is to create a care garden at Milligan that contributes to faithful land stewardship, promotes academic excellence, and addresses the community's mental health needs. The garden will provide a variety of resources and activities to attract a wide population of students, including classroom engagement, sustainability and gardening workshops, internship opportunities, and space for personal reflection, prayer, etc. The garden seeks to provide a space for any and all students - an accessible environment for anyone to engage no matter their ability status.

The goals and objectives of the care garden are consistent with Milligan's values, as highlighted in the previous section. Each value corresponds to a goal and each goal has two objectives. Milligan desires for the care garden to be holistically connected to its campus and for the garden's sustainability there is benefit in it serving multiple purposes. The garden has great potential to create synergy between faith, scholarship, and community, and between the various departments on campus. See the chart below for the referenced goals and objectives.

Goal 1: Faith		
Promote a sustainable environment by engaging in faith-based land stewardship (or creation care).	<i>Objective 1</i>	Adhere to sustainable farming principles that will be monitored by farm manager.
	<i>Objective 2</i>	Design sustainable systems with ethically sourced materials.
Goal 2: Scholarship		
Promote academic excellence by providing an educational space for hands-on learning activities.	<i>Objective 1</i>	Recruit instructors and classes to use the space and manage on online scheduling system.
	<i>Objective 2</i>	Lead 1-2 educational workshops a month during the academic year.
Goal 3: Community		
Promote positive community mental health by creating environmentally therapeutic spaces.	<i>Objective 1</i>	Lead workshops and campus for community members during the summer and academic year.
	<i>Objective 2</i>	Lead 1-2 therapeutic activities a week for students during the academic year.

Milligan has the capacity to manage such a program, should they choose to invest their resources in this manner. We have land, wisdom, desire, resources, and support for such an endeavor to flourish. The benefits far outweigh the time and costs of establishing such a space. The garden has the potential to be incredibly successful, but only if it is seen as a priority, as an important contribution to campus, not relegated and hidden away. The college needs to take ownership in its implementation and development – backing the project with support and sustainable measures. The next sections will detail the research and strategic plan involved in the fruition of the care garden.

Rooted in Research

Goal 1: Faith

Creation care is land stewardship rooted in Christian faith. It views the earth as created by God and believes that people have been mandated to care for it. Creation care is often on the fringe of Christian thought and conversation and rarely takes front and center for Sunday morning teachings and Bible studies. The first mandate for Christians in scripture is to be stewards of the earth, caretakers of the land, and yet it is not a central tenet for many mainstream Christian churches. Christians should be at the forefront of environmental justice and stewardship, teaching on creation care, practicing sustainable techniques, and advocating for structural change. One way Christians, and the Church, can be involved in such activities is through care farms and gardens. Care farms are attached to communities of people and provide space for people to care for the land - which will in turn care for them. Care farms practice conservation principles, educate and train others to do the same, and create a place for healing – environmental, personal, and social.

Micah 6:8 states: “What does the Lord require of you but to do justice, and to love kindness, and to walk humbly with your God?” (NRSV). We are each called to be just – to have just and right relationships with God, others, and the earth. Injustice is the result of broken relationships with one (or all) of these. Julie Clawson, author of *Everyday Justice*, states that justice “involves restoring broken relationships between people, and putting right all the ways sin and injustice harm ourselves, each other and the world” (23). To live justly we must not only restore and reconcile relationships with others but also with the land. We have become disconnected from the earth through industrialization and this has led to unfair and unjust practices that have become normalized within our culture. Daniel Groody, priest and professor of theology at Notre Dame, states that “when we forget our fundamental connection to the earth, we lose something of ourselves. Extended periods of time in the outdoors help renew our relationship with the earth” (256). If we do not restore our relationship to the earth, we will continue practicing injustice without any thought to the consequences.

Care farms promote community, inclusion, and healing. They can help restore and reconcile right relationship between people and the land for a just and fair future. By implementing a care garden at Milligan, we can more fully live out our Christian values by modeling stewardship and providing a space for hands-on learning. As Christians, we should be leading environmental stewardship and ecological equality because we have been called to be caretakers of the land and to love our neighbors, which are interconnected and dependent on each other. To love our neighbors means living a just lifestyle that recognizes our impact on others – often an impact of oppression and discrimination. Many Christian Americans lead harmful lifestyles as they make environmental choices that limit the well-being of others. To be effective stewards and neighbors we must be aware of the impact our decisions have and make changes to

our lifestyles that cease unjust and oppressive practices. As a Christian college, Milligan has a responsibility to be at the forefront of creating just and right relationships between people and the rest of creation. Creating a care garden is a perfect and meaningful way to do so.

Goal 2: Scholarship

Innovation and social change. Two terms that define Generation Z. The book *Gen Z Goes to College*, written by Corey Seemiller and Meghan Grace, provides colleges and universities a better understanding of the new generation entering college so they can strategize and prepare for meeting their needs and expectations. The authors state that “institutions need to consider offering programs that connect students to experiences that help them address social change” (212). The book highlights studies and surveys with hundreds of Gen Z students to determine their interests, goals, and what will help them succeed.

Gen Z, they found, is more socially minded. The authors state that “nearly 40 percent of Generation Z intend to change the world by developing an invention” (135). Interestingly, while “IQ has steadily increased with each generation, the creativity quotient of America’s youth has decreased since 1990” (177). So, they want to change the world, and while they have the motivation and the knowledge, they lack the creative confidence. Bessel van der Kolk, a leading expert on trauma and the brain, comments that imagination is connected to our sense of hope and vision for the future – “it fires our creativity, relieves our boredom, alleviates our pain, [and] enhances our pleasure” (17). Innovative programs at Milligan will not only empower our current students but will attract the ones seeking to make a difference – seeking to be servant leaders. Professor Strayer, at the University of Utah, indicates that:

Our brains aren’t tireless three-pound machines; they’re easily fatigued. When we slow down, stop the busywork, and take in beautiful natural surroundings, not only do we feel

restored, but our mental performance improves too. Strayer has demonstrated as much with a group of Outward Bound participants, who performed 50 percent better on creative problem-solving tasks after three days of wilderness backpacking. (Williams 2016)

Students, according to Seemiller and Grace, “described their ideal learning environment as one that incorporates independent and hands-on work with engaging instructors and supportive peers” (183). A care garden program will facilitate active learning and promote creativity through the inherent benefits of being in nature. The role of colleges and universities is shifting. Students can access a world of information at their fingertips and it is our responsibility to teach them how interact with that information and how to use it to serve God. We teach them not only technical skills, but how to use those skills to impact positive change. Christian colleges have the opportunity to be leaders in this academic, spiritual, and mental shift for our emerging adults.

If our mission is to train servant leaders, we must embrace innovative ideas that will inspire them to do the same. If we want our students to be agents of change, living in right relationship with God, others, and the land, then we must model it on campus in visual and tangible ways – ways that involve the students and encourage their support, interaction, and leadership. Seemiller and Grace state that “generation Z students are concerned about equity, access, inclusion, and oppression” and Milligan has a social responsibility to educate them and prepare them for tackling these issues by teaching about environmental degradation and how it is impacting vulnerable populations around the world (196). They suggest that if we “give them the tools and experiences in a context that matters to them and they will likely do big things” (203). Generation Z students want to change the world and they are going to attend colleges that are already doing so.

Milligan needs to provide a platform and a space for students to maximize their strengths, skills, and interests. A strategic and innovative way to do so is by connecting the garden to various academic programs and courses. Milligan faculty are seeking ways to reach this new generation of students and they see practical implications for connecting their teachings with nature-based activities. The natural sciences are not the only programs who can benefit, there are ample opportunities to connect any major to this outdoor space. Below is a list of several majors with corresponding activities they can employ in the care garden:

Art	Teach about Impressionist art in the gardens. Have students sketch/paint the natural space.
Bible/Seminary	Teach on the theology of food and creation care.
Biology	Teach botany and plant life. Conduct labs and scientific research in the gardens
Business	Work with farm manager to establish social enterprise using farm products.
Counseling	Teach about nature therapy and how to use the space when working with clients.
Digital media	Help design farm logo, marketing campaigns, and website.
Education	Teach about alternative schools taking place outdoors and the benefits it is having on childhood development. Develop curriculum for summer camps.
Engineering	Set up solar panels, irrigation, and rain water catchment system for green energy and sustainability. Use for senior projects and test trials for Global South countries.
English	Read environmental literature or the Romantic poets in a natural setting. Engage in creative writing assignments in the gardens.
History	Teach on the environmental history of the local area or the Appalachian region.
Psychology/Social Work	Teach on the relationship between people and nature and the new studies on why people show reduced stress and blood pressure when in a natural environment. (The syllabus for the course Healing Effects of Nature is in the Appendix).

Occupational therapy	Show students how to work with patients using gardens and raised beds.
Theater	Hold a “Shakespeare in the Garden” event.

Goal 3: Community

Mental health issues are on the rise across campus communities in the US, impacting students’ ability to lead healthy lives. Milligan, as a community of students, is not excluded from this rising problem. Mental health problems are experienced by college students across and regardless of religious and spiritual backgrounds and Milligan has a unique opportunity to address these concerns while integrating faith. Students face a variety of pressures and stressors from themselves, family, friends, and society as they seek direction and success in college. According to Miyazaki, “stress-related illnesses include: the common cold; back, neck and shoulder pain; slower healing; weight gain and loss; sleep dysfunction; depression; heart disease; cancer risk” (33). Students who experience stress are vulnerable to these subsequent issues and colleges have a responsibility for keeping their students physically and mentally healthy. According to the American College Health Association’s 2017 National College Health Assessment, 51.1% of students felt things were hopeless at some point in the last twelve months, 87% felt overwhelmed by responsibilities, 84% felt exhausted, 62.2% felt very lonely, 67.3% felt very sad, 60.8% felt overwhelming anxiety, 10.3% considered suicide, 39% felt so depressed it was difficult to function, 39.8% felt overwhelming anger, and 1.5% attempted suicide.

Gregg Henriques, in *Psychology Today*, states that “one of the most dangerous aspects of depression and mental health concerns in general is suicide. According to the American College Health Association (ACHA) the suicide rate among young adults, ages 15-24, has tripled since the 1950s and suicide is currently the second most common cause of death among college

students.” In March 2018, *Time* magazine released an article titled “Record Numbers of College Students Are Seeking Treatment for Depression and Anxiety — But Schools Can't Keep Up.”

The article states that “between 2009 and 2015, the number of students visiting counselling centers increased by about 30% on average, while enrollment grew by less than 6%.” Due to this growing crisis, campuses are seeking innovative solutions to address these problems and provide the best care possible for vulnerable students. The need is greater than can be handled by counseling centers alone - campuses need additional therapeutic methods that are easily accessible to all students.

Researchers have found multiple and significant benefits of nature-based activities and therapeutic approaches. Following is a list of several of these studies and their results, though this list is not exhaustive.

- “In a study of more than 1,850 participants, these researchers reported three broad health outcomes from green exercise: improvement of psychological well-being (by enhancing mood and self-esteem, while reducing feelings of anger, confusion, depression, and tension); generation of physical health benefits (by reducing blood pressure and burning calories); and the building of social networks” (Louv 59).
- “Humans living in landscapes that lack trees or other natural features undergo patterns of social, psychological, and physical breakdown that are strikingly similar to those observed in animals that have been deprived of their natural habitat” such as “increased aggression, disrupted parenting patterns, and disrupted social hierarchies” (Louv 63).
- “The more exercise someone does, the more the cell releases antioxidants to protect it...so a child who plays outside in a natural space will reduce the chance of developing chronic diseases later in life” (Louv 81).
- “The basic concept behind nature therapy is to increase physiological relaxation and act as a preventative medicine by improving the body’s natural resistance to disease, which is suppressed under conditions of stress” (Miyazaki 24).
- “Direct benefits of forest therapy [an aspect of nature therapy]: improvement of weakened immunity, increased relaxation, reduced stress, reduction in blood pressure” (Miyazaki 34).
- “So called at-risk students, who have not had as much experience in nature show a marked improvement of 27 percent in test scores, related to mastery in science, when they learn in weeklong residential outdoor education programs. They also showed

enhanced cooperation and conflict-resolution skills; gains in self-esteem; gains in positive environmental behavior; and improvements in problem solving, motivation to learn, and classroom behavior” (Louv 30).

- “The Kaplans’ work suggests that nature simultaneously calms and focuses the mind, and at the same time offers a state that transcends relaxation, allowing the mind to detect patterns that it would otherwise miss” (Louv 28).
- “At the Human-Environment Research Laboratory at the University of Illinois, researchers have discovered that children show a significant reduction in the symptoms of attention-deficit disorder when they engage with nature... But nature-smart education appears to work for everyone involved, including the teachers” (Louv 29).
- “We found that, compared to walking in the urban area around Shinjuku station, walking in Shinjuku Gyoen park resulted in: an increase in parasympathetic nerve activity (known to increase during relaxation), a lower pulse rate, an increased feeling of comfort, calm, and accord with nature” (Miyazaki 163).
- “Forest therapy has been shown to improve immunity by increasing level of natural killer (NK) cells. As we have seen, NK cells form a crucial part of the body’s defence system, helping to fight infection and tumors” (160).

The intended outcome of a care garden is for Milligan’s students to experience a reduction in stress, anxiety, depression, and loneliness – and an increase in healthy behaviors and lifestyle choices (such as meditation and physical exercise) – through the therapeutic care garden environment and programming. It is not suggested that a care garden will completely eliminate stress, anxiety, depression, or loneliness among students; rather, it intends to provide a preventative resource for some students and a management tool for others. Mental health issues vary for each student, some experiencing them for the first time when they come to college and others coming with long-term struggles.

Seemiller and Grace comment that “students may not receive the counseling they need for any number of reasons: limited accessibility for counseling due to high fees, limited hours, or even the lack of a counseling center on campus, as well as the stigma associated with receiving counseling” (197). Milligan has done a wonderful job with addressing mental health issues on campus through the development of the counseling center but there is still much to do. A care garden would provide students with a stigma-free setting that is therapeutic without advertising it

as so. The garden will be a resource that counselors can refer students to and incorporate into their treatment plan. It will provide a safe, stress free environment for students to go and engage in hands-on work and even personal reflection. The director of Milligan’s counseling center, Dr. Rebecca Sapp, stated that the number one coping skill mentioned by students receiving counseling is being in nature. Students are naming and acknowledging the importance of nature, and it is likewise important for faculty and staff to recognize this and respond to it. Kolk states that “restoring relationships and community is central to restoring well-being” (38). The communal aspect of the garden is crucial, healing comes not only from personal therapeutic activities, but also from social practices. We are created to be in relationship and forming these in the garden can contribute to health and hope. See chart below for sample therapeutic activities.

Therapeutic Activities	
Yoga in the garden	Labyrinth walk
Meditation	Nature-based projects/crafts:
Journaling	Using produce to make a meal
Breathing exercises	Create something with friends
Sensory activities	Have conversations while working
Gardening activities: <ul style="list-style-type: none"> • Weeding a raised bed • Planting vegetables or flowers • Harvesting produce 	Caring for the space: <ul style="list-style-type: none"> • Cutting grass • Pruning • Weed-eating

Garden Development Stages

This care garden proposal is divided into three stages to take place over a three- to five-year time frame. These stages are broken into short, intermediate, and long-term goals that will slowly build the infrastructure needed for full potential.

Stage 1

The first stage (approximately one year) of developing the garden space will focus on basic infrastructure, such as clearing the land, providing a convenient water source, building a tool shed, setting up tables and chairs, creating a simple wash station, and designing and creating a circular healing garden with a simple labyrinth in the center. In addition, several raised beds will be built for student or classroom gardening. Students will be able to grow their own flowers, herbs, or vegetables – for students with diverse cultural backgrounds growing familiar produce will be an asset. The raised beds will be painted white to distinguish between the soil for those who are vision impaired. This stage will focus on needed elements such as land and water, self-care and therapeutic spaces like the healing garden and labyrinth, and educational opportunities with the picnic tables and raised beds. It seeks to address each goal within a realistic budget and timeframe. To build excitement, ownership, and motivation this stage cannot be dragged out, it must be done within a year at most in order to build momentum of student/faculty engagement. If it takes too long people will lose sight of the vision and enthusiasm for its completion. This first phase also includes hiring a garden manager to oversee the gardens, programs, and revenue generating projects. See below for sample pictures of possible aspects of the garden.

Stage 2

The second stage of development expands the spaces for flowers and vegetables by building more raised beds, several being waist high to accommodate people of different ability and mobility statuses. Expansion of growing space will also include a small polytunnel (pictured below) to begin a year-round growing season to keep students active during the cold months. Winter can be especially difficult for people with depression and seasonal affective disorder and maintaining this space year-round will be important for the mental health component of the garden. Lastly, a simple covered pavilion will be built for various functions such as outdoor

classes, summer camps, trainings and workshops, and even small weddings. This key for revenue generating enterprises. The chart below gives estimates for pavilion sizes and capacities.

Pavilion size (sq. ft)	Church style seating	60" round tables	8' banquet tables
10x10 (100)	15 people	8-10 people	8-10 people
15x15 (225)	34	16-20	22-24
10x20 (200)	35	16-20	16-20
20x20 (400)	68	26-28	38-40
20x30 (600)	90	32-34	64-66
20x40 (800)	100	48-50	80-85

Stage 3

The third stage of development will determine if more garden beds need to be added for students, faculty, or community members and if they are needed outdoors or in an additional polytunnel. This last stage also seeks to build an indoor classroom with attached kitchenette for prepping the flowers and vegetables and holding workshops and trainings. A cool space for storing produce and flowers would also be helpful. Like the polytunnel, this can be an intimate space with small tables for solo studies, where the tables can be pushed together for larger functions. The kitchen can have a sliding panel which can be used to separate it from the classroom/function area or slid away for workshops or student classes. This building can also double as a small greenhouse if built with plenty of windows. This will also help to keep it warm during the cold months with shades during the summer.

Though these stages signify larger projects, there will be smaller projects intermingled throughout, such as building a compost area, developing a small water feature (which will double for hand washing), building several outdoor seating options, and installing fencing for certain areas. The pavilion and classroom are the biggest projects, but also the most revenue generating, which will help pay for other aspects of the garden and its management.

Sample Budget

Below is a sample budget outlining Phase 1 expenditures. This budget is based on the garden being located on Milligan's campus and does not include costs of purchasing land elsewhere. This budget is also based on the possibility of Milligan's engineering department supplying and fitting the irrigation system. This budget does not include labor or possible monetary or in-kind donations from local community members and organizations.

Care Garden Phase 1 Budget		
Area: 90' x 60' = 5400 Sq ft. (1/8 acre) – Circumference = 300'		
Landscape fabric	Raised Beds	Infrastructure
12x300' (3600 sq ft) = \$183	1 bed requires: 2 – 2"x12"x12' 15 Beds = 30 - 2x12s @ \$21 ea = \$630	Tool Shed (depending on size= approx. \$500
1800 sq ft more for totl 5400 sq ft = \$117	Inner posts/metal/ large box of 2 ½" wood screws Total Approx. = \$150	Tools = approx. \$750
Fencing	Wheel Chair Accessible Beds 4 beds = 16 - 2x12s @ \$21 = \$350	Tables and chairs = \$500
300' fencing (90x60') = approx. \$900	Herb Garden Space 4 - 2"x12"x12' = \$100	
30 4x4x8 posts = \$350	Compost and wood chips = approx. \$1000	
\$1,550	\$2,230	\$1,750
Total: \$5,530		

Sustainable Impact

Monitoring & Evaluation

Given that care farming and nature therapy for college students is a new endeavor worldwide, the garden manager will conduct a thorough research study in its first five years to determine impact and identify needed adjustments. To begin, Milligan needs to conduct a campus mental health assessment to determine priority issues and target activities to promote. This assessment will also provide a baseline for future research and will be sent to all students each academic year to track mental health problems and the resources Milligan is providing. The care garden will then conduct pre and post-tests after activities (pre/posttests will gauge feelings of happiness, self-esteem, sadness, stress, loneliness, and so forth), hold student focus groups for monitoring farm goals, and conduct a yearly survey of all students, staff, and faculty to evaluate strengths, weaknesses, interest level, ways to improve, and more.

The care garden manager will also evaluate the number of individuals and groups that use the farm for personal or academic purposes, the number of students who attend educational workshops, and the number of students who attend therapeutic activities. These research tools will be accumulated into a yearly evaluation to determine the overall effects of the garden and make any needed adjustments. Program monitoring and evaluation is the foundation for sustainable programs, and it must be built into the program from the very beginning. With these steps Milligan will then be able to document findings and help other school create their own programs.

Internal Support Systems

Milligan has strong internal and external support systems and potential partners that can be, and should be, utilized for this project. The care garden needs to have strong partnerships and connections with Milligan and its various academic departments and campus clubs for the garden

to succeed. This can best be accomplished through a care garden committee represented by various faculty and staff who have experience and/or interest in such a project. The committee will endeavor to include at least one faculty member from each academic area to include their department's interests and needs. Milligan has several faculty and staff who farm and garden and they will be valuable assets to the committee, not just for their academic position, but also for their agricultural knowledge and experience. Each academic area will be presented with ideas on how to utilize the garden within their department to maximize the resource. Areas will also be able to arrange for the garden manager to come and discuss ways for them to get involved. Milligan can create an online garden calendar which will allow professors to reserve space in the garden for their classes. Maintaining a healthy connection to the faculty and staff will be paramount for the garden's success. The course Healing Effects of Nature within the social work department is an example of how courses can connect to the garden. The syllabus for this course is provided in Appendix C.

To keep the campus engaged, the care garden will have weekly activities to bring students and faculty to the garden as a campus community. The garden will have work days and workshops to engage the Milligan community in learning about and maintaining the space. A partnership between the students and the garden is crucial for sustainability. A student club will be developed to create and maintain this partnership. At the beginning of construction Milligan will hold several focus group sessions with students to determine initial needs and goals from their perspective. These focus groups will also have open discussions around the design of the farm to ascertain conducive features. When students are given responsibility and opportunity they will engage and invest in the process and the product. The care garden will be a space for students to learn, grow, rest, meditate, and engage with nature and one another, and this will only

work if students' needs and desires are listened to intentionally. It will also be helpful for the garden to receive one or two work-study students each year to assist the garden manager.

External Support Systems

Milligan has a variety of potential external partners that they can collaborate with, including current donors, churches and alumni, and local businesses and nonprofits. Local and regional organizations dedicated to gardening and farming are Evergreen (a family run plant nursery), Build it Up East TN (a non-profit which supports community gardening efforts), Appalachia Resource Conservation and Development Council (a non-profit working to improve natural resources), and Grow Appalachia (a regional funding organization for food-sustainability). Each of these will be important partnerships for both financial and technical assistance. The local community also has a Lowes and Home Depot, which are corporate hardware stores offering grant opportunities for community-based projects and programs.

Additionally, the garden can look to the local community for in-kind donations and volunteer support to maintain the garden. Historically, Milligan is located within a farming community; thus, there is a plethora of local wisdom that Milligan's garden (and its students) will benefit from. Milligan can have one or two days a week set aside for community members who are interested in volunteering in the garden space and working alongside students and faculty. Between students, faculty, and community volunteers, Milligan can build a thriving support system for the garden which will contribute to its physical and fiscal needs.

Farm Manager

An important component of the garden's sustainability is the hiring of a garden manager. The scope of the project is outside of student leadership and initiative alone. Students are at the

center of this endeavor, but they cannot sustain the entirety of this project and the various programs it involves. The scope of the project is also outside the limits of faculty time and responsibility. Agricultural projects at Milligan have struggled because they have lacked this consist, key staff member. If Milligan is ready to take creation care seriously, this role is mandatory for sustainable action. The garden manager needs to have a year-round contract, taking into consideration that there will be more work during the summer and less work during the winter to balance a yearly schedule. Some of the manager's role will include the following responsibilities:

Garden design	Workshops & trainings	Facilitate planting, maintaining, etc.	Community & partner liaison
Plant rotation and planning	Work with student volunteers/interns	Monitoring and evaluation	Manage volunteers & visitors
Event coordination for enterprises	Summer camps	Grant writing	Classroom schedule

Enterprise Opportunities

A key piece of sustainability is the garden's ability to bring in funding to support its programming and staff member. This section will highlight three revenue generating projects: summer camps, trainings and workshops, and weddings. A sample social enterprise business plan expounding on the camps and workshops can be found in Appendix D.

Summer Day Camps

There are several garden enterprises that can supplement funding needs and create opportunities for individuals and families from the community to be involved. The first option is facilitating summer day camps for children and youth. Day camps will keep the garden space functioning and cared for during the summer months when college students are less often on

campus. If Milligan offers six weeks of summer camps for various ages of either half or full days, it can help support the manager's salary and ongoing garden needs. The chart below illustrates the number of kids, fees, and weeks to show the total potential revenue. The camps can be small in number while still bringing in a modest profit.

5 kids x \$150 (half days) x 6 weeks	\$4,500
5 kids x \$250 (full days) x 6 weeks	\$7,500
Total	\$12,000

If Milligan enrolls 5-10 kids a week, it could potentially make up to \$12,000 – more if it takes additional full-day children and youth. If the camps enroll 10 kids for only half-days they could still make \$9,000. The camp fees use a \$10 an hour base for accessibility, but the average wage for a babysitter in this region is \$10-\$14 so this could increase a bit while having a discount for multiple children from the same family. The program could also ask local churches to give student scholarships for camp. The camps do not have to be six consecutive weeks, they could be in two- or three-week blocks to give breaks in between. These camps could partner with other Milligan summer camps such as engineering and science. There could additionally be a camp for children of varying ability statuses, which could require a parent/guardian to attend with their child. Such opportunities are needed in all communities. Milligan can advertise for a garden/camp summer intern and include a stipend from the camp revenue. Half-day camps could run Monday-Friday 8:30-12:00 and full-day camps could run Monday-Friday 9-3:30. Summer camps are a perfect way to engage the local community while utilizing the garden during its peak time. See below for photos of youth garden camps.

Workshops & Trainings

A second income generating project is leading various workshops and trainings for students, faculty, staff, and community members – each having a different fee scale. For accessibility purposes, the costs will be moderate, but a small revenue could be earned if they are being offered regularly, such as twice a month. They could focus on gardening tips, botany lessons, master gardener classes, how to cook different vegetables, how to compost, and so forth. This enterprise will extend the educational component of the garden and open it up beyond the Milligan community. If 20 workshops and trainings are offered through the year with an average income of \$200 for each there could be a revenue of \$4,000. If the workshops are using products from the garden (such as herbs, vegetables, and flowers) the workshops can charge more, and the funds can be fed directly back into the garden.

Sample Educational Trainings & Workshops	
How to preserve vegetables	How to build sustainable structures
How to compost and make organic fertilizer	How to make natural medicines and tonics from herbs
How to make value added products	How to design gardens and use companion plants

Weddings

Weddings, the third income-generating project, will be a more infrequent source of income given seasonal limitations. If Milligan charged \$1,500 for the garden as a venue and target three to four weddings a year, this could bring in \$4,500-\$6,000 for several one-day events. The garden could even provide bouquets and flower decorations for an extra fee. Current students could receive a discount, especially if they have worked or volunteered in the space. Wedding venues in this region range from \$750-\$12,000. Milligan could provide seating but

other services (such as catering, photography, etc.) will be the responsibility of those renting the venue. The garden manager would be responsible for coordinating the space.

Additional Enterprise Opportunities

There are several other enterprise opportunities for funding, but continued opportunities will be dependent on capacity and resources. We do not want to heavily mimic what other farms are doing locally but rather diversify offerings that are unique to the garden's location and goals. Other possible areas of funding are presented in the chart below.

Plant-based	Value-Added Products	Events
Community member plot	Jams & jellies	Tours for school children
Food for campus	Soap	Cooking classes
Flower CSAs	Essential oils	Community Dinners
Herbs & medicinal plants	Organic fertilizer	Shakespeare in the Garden

Conclusion

A care garden on Milligan's campus will contribute to faithful land stewardship, promote academic excellence, and address the community's mental health needs. The garden will provide a safe space for the Milligan community, including students, faculty, staff, and partners, to engage in a healing and educational environment. The garden will be an accessible resource to encourage personal, relational, and environmental health. As the needs of students shift Milligan must incorporate programs that address their needs and expectations. The following Appendix includes faculty letters of support, a list of CCCU schools with gardening programs, the syllabus for Healing Effects of Nature, and a business plan for a social enterprise which expounds on the summer camps and gardening workshops.

Appendix

Appendix A

Faculty Letters

To Whom It May Concern,

As a social worker, I see the direct correlation between the health of people and the health of the environment. To advocate for social justice and the welfare of vulnerable populations means I must be in tune with and advocate for environmental justice as well. They are interconnected - to help either I must focus on both. I cannot help people suffering from drought, landslides, depleted topsoil and the conflict that comes from limited resources without addressing the environmental degradation and the human implication.

I became aware of environmental degradation and its horrifying impacts when I was serving in the Philippines with the U.S. Peace Corps. We visited Smoky Mountain, outside of Manila, during my training and I was stunned to see thousands of people living on a literal mountain of garbage. During my twenty-seven months in the country I saw the impacts that single-use plastics have in countries with little sanitation infrastructure. Plastic littered the urban and rural areas alike, being strewn into the oceans and streets and being burned as fuel. I altered my entire lifestyle while living there because I was visually convicted on the results of my actions.

I grew up loving nature and even studied horticultural therapy during my social work education, but I had little concept of how vulnerable people were being made because of my lifestyle. I now research the connection between people and the land – how do we care for the earth not only so it will continue to care for us, but as a way of showing gratitude for how it already provides for and sustains us. I desire to educate others on the implications of their lifestyles and how their decisions are connected to a larger system beyond their immediate viewpoint.

As a social worker, community and program developer, and an educator I am in a privileged position to inspire the next generation of change-makers and I want to do that to my fullest potential. I do not want my conversations to be limited to the destruction that is occurring

to people and place due to the climate crisis. I want my conversations to be centered on realistic solutions that drive and implement change. I want to show my students how to love their neighbors by being responsible citizens and stewards of the land. I want my life's work to center around the creation of safe and healing spaces for people and the land. I want the school to model creation care and sustainable living so our students will see an alternative lifestyle that conserves the resources we have been given. I want to create change that fosters respect and gratitude for the land and shows practical ways for everyone to be involved.

Rachel Jones, MSW, MA

Social Work Program Director

April 15, 2019

Dear Sir or Madam:

I am so happy to support the Care Garden Proposal that Ms. Rachel Jones has developed for Milligan College. As you know, the proposed Care Garden will provide a variety of resources and activities, including classroom engagement, sustainability and gardening workshops, internship opportunities, and space for personal reflection, prayer, etc. These resources and activities can attract not only a wide spectrum of students across the Milligan Campus, but also serve the broader community where Milligan College is actively engaging.

The core values of Milligan College are faith, scholarship, and community. It is critical that Milligan College demonstrate to our students and to our community that Milligan College is following the Christ and be stewards of the Earth. It is essential that Milligan College provides high-quality educational and scholarly experience to our students, through both in-class learning of theories and hands-on practices. It is crucial that Milligan College provides a learning environment where students are not learning in a "bubble" to solve a clean, well-defined problem, but also taking into consideration of real-life constraints, such as cultural and social-economic challenges as well as their impacts on the wider community.

The Care Garden Proposal provides such a conducive environment for students to learn, practice, and engage with others. It is well-aligned with the Milligan Mission and has great potential to support multiple programs, disciplines, and areas, such as Art, Biology, Counseling, Education, Engineering, Social Work, Occupational Therapy, and many others. As a Professor teaches Sustainability and Engineering, I can see the Care Garden Proposal to be a great place for students to practice their understanding and skills of solar planes, water treatment and distribution, and other green energy and sustainability projects for their Senior Design Projects.

I am excited for this Proposal. I appreciate that Ms. Rachel Jones has put so much effort into designing the proposal and initiating the project with campus faculty and the administration. The

Care Garden will be a great resource for both students and faculty, and it will demonstrate Milligan's strong efforts to fulfill its Mission: "seeks to honor God by educating men and women to be servant-leaders". I fully support this proposal.

Hongyou Lu

Instructor of East Asian Studies & Engineering Program Associate

1 Walker Drive, Emmanuel Hill, Milligan College, Tennessee 37601

Work: 423.461.1517 | Cell: 650.804.6685

HLu@milligan.edu

April 15, 2019

To whom it may concern:

This letter is an expression of support for the Care Garden proposal put forward by Rachel Jones. Her imagination and vision is one that our educational community needs. It connects formation to creation, and creation to education. And it points graduates toward the integrated ethics of holistic care for people and creation as a God honoring activity of servant leaders.

The seminary community would stand to benefit directly from a hands-on and healing-oriented garden on the campus of Milligan College. Last summer we hosted a summer course on food and theology. The course maxed out due to student interest and was rated one of the most important courses we have offered in some time. Students spent part of the day on an off-site garden and cooked together as an exploration of the theological ethics surrounding food in the scriptural tradition. Having a campus garden would enhance our ability to offer similar courses in the future. Other forward thinking seminaries such as Princeton Theology Seminary have provided a model for how theological education and garden practices are mutually enhancing. They have established permanent "Farminary" to cultivate connections between the two.

In addition, in the seminary and broader graduate and undergraduate student populations, mental health issues are on the rise going forward. Milligan College needs good networks for supporting student well-being and whole health that position us well to meet this growing need. The same networks also provide ways in which we might reach out to our community neighbors where whole health issues are a growing concern.

I hope the proposal from Rachel Jones will be considered seriously and with imagination. I believe it can be and become an important part of what makes Milligan College both distinct and competitive in liberal arts and seminary education.

With appreciation,

A handwritten signature in cursive script, appearing to read "Miriam Y. Perkins".

Miriam Y. Perkins, Ph.D.

Associate Professor of Theology & Society

Emmanuel Christian Seminary at Milligan

4-20-19

To Whom It May Concern:

I am writing this letter of enthusiastic support for Rachel Jones's Care Farm Project Proposal for Milligan College. As a professor in the occupational therapy program, I am very excited about the prospect of having such a program on campus available to both under graduate and graduate students alike.

In occupational therapy, gardening is both an intervention and a targeted outcome. The possibilities for using such a garden with our OT students would be unlimited. The primary focus of occupational therapy is using activities that are personally meaningful to our clients (be they individuals, groups or populations) to improve health, enhance overall well-being and promote wellness and quality of life. Gardening has proven to be an excellent modality to provide these positive results. Gardening is also an activity that can fall into all of the Areas of Occupation identified in the OT Practice Framework. I have been to other OT schools that have had small garden-based options for their students to use while learning. I have wanted to have something similar for our program, but space and time have kept that from happening. However, a larger garden, such as the one that Rachel is proposing, would be ideal and offer even more creative, educational opportunities for us.

I can also see it opening the door for increased interdepartmental collaborations. Students from different disciplines could bring their unique insights, questions, innovations and practices into the garden and have collaborative learning experiences that increase student awareness of how each discipline can play a role in this setting. (I was initially going to list some of the disciplines that I thought would be able to participate in the garden in some way. I quickly realized that I was not able to think of any that could not creatively find a way to connect with this project if they were interested in doing so.)

Several of the many ways in which our OT students would be able to participate in this program right from the start would include:

- Research and Graduate projects – We have had several projects in the past that have focused on gardening and creating gardens (both flower and vegetable) with our community partners (Crumley House, Nave Center, Brother’s Keeper). We have also had a team that created a nature based expressive art journal for marginalized individuals. We did this off campus, but we could have (and still can) expand upon what was created if a campus-based garden was accessible to the students. The Care Farm Project will allow the students that come in with an interest in creating garden-based projects for groups and populations to follow through with these interests and ideas.
- Occupational therapy students can help develop adaptive gardening equipment for individuals with disabilities to use in the garden. They can also assist in the planning of the garden and future garden expansions to ensure that it is accessible and supports universal design concepts.
- OT students (and professors) can use the garden as a place for stress and anxiety reduction and relaxation by participating in the overall care of the garden or by simply walking or sitting in the natural setting. Relaxation training is part of our curriculum and we currently have an indoor labyrinth that we can only use on occasion. (If the garden or part of the garden had a meditative labyrinth design it could also be promoted as a travel destination through online programs such as labyrinthlocator.com and bring visitors to Milligan that might not currently know about the college and what it has to offer. I am a big fan of spiritual walking labyrinths and even have one in my own backyard. Thus, I am taking this opportunity to subtly add this idea to the mix.) ☺
- A “Gardening as a Therapeutic Modality” course could be created as both an OT program elective and a community OT continuing education offering if the Care Farm garden was available.
- Pediatric OTs often work with eating concerns of children. Learning about gardens and about where one’s food comes from is often an effective part of the intervention process. Our OT program would be able to use the garden for this type of training.
- OTs are also involved in working with social entrepreneurial projects for underserved populations and a community garden is a great place to get ideas for such ventures. This could be part of a semester long project for our Leading and Management course.
- Anxiety for college and graduate students seems to be an increasingly problematic issue for most colleges. Milligan’s OT program could set up a program for undergraduate student anxiety reduction using the garden and could collaborate with the psychology, social work and/or counseling programs to get it up and running on campus.

These are just a few ideas of the ways we could use the Care Farm Project from an occupational therapy perspective. Any of these ideas once completed would also have the potential to

promote Milligan College through write-ups in both scholarly journals, informative periodicals and online articles.

A project like Care Farm is one that can continue to grow (no pun intended) in so many different ways. I know that when I finish this letter I will come up with many more ways that OT can use the garden with our students and community partners. This is another reason I believe in it and support it so strongly. It will be a distinctive addition to Milligan College and I look forward to collaborating with Rachel and other interested parties to see this project become a reality.

Sincerely,

Jil Smith, OTD, OTR/L

Associate Professor of Occupational Therapy

April 19, 2019

Re: Care Farm Proposal

To Whom It May Concern,

I have had the pleasure of experiencing the excitement from Rachel Jones during the formulation of this proposal for a care farm program at Milligan College. Although I am not well versed on the intricate elements of a care farm, I do know there is student and generational interest in such a program. Discussions with business students the past few years have revealed interested in a program such as this, not only to participate but to be actively involved in its implementation. This semester, a business student approached me seeking internship opportunities. Her interest in environmental sustainability and business would pair exceptionally well with a care farm intended to education and provide a source of revenue for the institution. Given this interest, I believe a program such as this would be added value to an already sustainability focused area such as the business area.

One aspect of the business area we continually strive to enhance is our community impact, allowing our students to connect with the region in new and innovative ways. A care farm would encourage community development, enhancing already established efforts.

Additionally, the business area believes in disciplined stewardship of resources, which is an integral component to any successful care farm. As evidenced by the popularity of the ENACTUS program, our business students care about establishing social enterprises that provide benefits to the local community. I believe the care farm program would be a sought-after program for business student involvement and education.

Sincerely,

Heather Vaccaro, MBA
Assistant Professor of Business Administration
Milligan College

May 3, 2019

Dear Milligan College President's Cabinet and Board of Trustees,

After consideration of the Care Garden Proposal created by Rachel Jones, I wish to add my name to the list of faculty and staff supporters of this campus addition. Ms. Jones cites three specific goals that a Care Garden would accomplish, directly relating to the pillars of scholarship, community, and faith. This Care Garden would accomplish these goals in a way that is meaningful and desired by the generation of student attending and being recruited to attend Milligan. This "Generation Z", with approximate birth years from 1995-2010, have specific learning preferences and values, just as the generations identified before them. Higher education atmospheres must understand and meet some of these preferences and values while at the same time, maintaining the integrity of the educational quality and institutional mission. The Care Garden proposed would allow Milligan to both meet some of these generational desires while also serving the mission of the institution. Ms. Jones has done an excellent job supporting these goals with research, but I will add my own thoughts below.

Generation Z members have a strong desire to be involved in work that is fulfilling and meaningful. Some research reports that three-quarters of those in Generation Z believe that work should have a greater purpose than making money. Another strong value among Gen Z is the desire for their work to contribute to positive societal change and they are motivated to make the world a better place. The first goal of the Care Garden is to promote a sustainable environment by engaging in faith-based land stewardship (or creation care) directly addresses these desires. Practicing conscious, ethical consumerism and sustainable growing practices engages Gen Z members' desire to effect social change. Approaching this goal from the position of "creation care" gives this activism deep roots in the sovereignty and benevolence of God and the human responsibility of creation stewardship.

The second goal of promoting academic excellence by providing an educational space for hands-on learning activities will also prove very attractive to Generation Z as they are engaging in education at Milligan. A recent study on college marketing phrases indicated that Generation Z members are more attracted to “hands-on learning” and “real world experience” than they are “premier institution” or “tight-knit community”. This reflects Gen Z’s desire for educational programs that integrate hands on learning experiences – both in and out of the classroom. As these hands-on experiences are blended with spiritual formation and Kingdom focus, our graduates become well-trained and mission-minded kingdom workers.

Lastly, this incoming Generation Z is a generation of worriers. Anxiety and depression are very common among Gen Z. In 2015, the Center for Collegiate Mental Health reported that counseling centers on college campuses grew by 30 percent over the last 5 years. Fear of failure, financial concerns, and world issues are reported as the primary causes of stress in Gen Z members. The third goal of the Care Garden is to promote positive community mental health by creating environmentally therapeutic spaces. The garden will create another safe space for our students to relieve stress, get involved in greater cause, and form a connection with creation and ultimately the Creator.

Ultimately, achieving the goals set forth in the proposal could aid in both retention and recruitment of Generation Z students. I would provide yet another excellent educational and transformative experience for students at Milligan. Thank you for your careful consideration of this Care Garden Proposal.

Sincerely,

Kristin Wright
Director of Admissions

All statistics and Generation Z information sourced from

Seemiller, C., & Grace, M. (2019). *Generation Z: A century in the making*. London: Routledge.

Appendix B

CCCU Garden & Sustainability Programs

Azusa Pacific University

<https://www.apu.edu/articles/9125/>

- “Four years ago, a small conversation with the Azusa City Manager started a journey toward a community garden. Several local community members, many from the Azusa Women’s club, dreamt of a Community Garden where plants, fruit and vegetables could grow and flourish. This summer, that dream has become a reality, thanks to the efforts of many individuals coming together around a common vision for a safe place to grow food and relationships. In July of 2004, APU generously gave the Community Garden access to the plot of land. Grants and donations from the Rain Bird Co., the San Gabriel Mountains Regional Conservatory, the Lilly Foundation and the Glendora Conservation Society, as well as the financial support and expertise of many individuals, have moved us through the development of the environmentally friendly design you see here. The garden currently has about 10 families who have sponsored plots, and room remains for a few local elementary schools to build plots for ongoing educational use.”

Concordia University Irvine

<https://www.cui.edu/studentlife/student-leadership/index.aspx?id=24935>

- “The Heritage Garden aims to cultivate community by providing students with opportunities to learn, serve, and lead as they apply “ecosystem gardening” techniques to habitat restoration and food production at the campus community garden. Students will learn as they participate in all aspects of ecosystem gardening: building healthy soil, using water wisely, attracting beneficial wildlife (via use of native plants), growing food crops, and recycling green waste. Students will serve by working the land as well as donating food from the garden to local food banks. Students will lead by sharing their knowledge about the benefits of sustainable land use with others.”

Pepperdine University

<https://newsroom.pepperdine.edu/magazine/2012/11/pepperdine-greenteam-plants-organic-community-garden>

- “In 2011 the GreenTeam partnered with the University’s Center for Sustainability, which helped them focus their plans for a community garden to something that would be approved and manageable for community use. The garden currently houses 12 raised redwood boxes available for use by the Pepperdine community to plant and grow edible produce every fall and spring semester. Everyone who commits to a plot is required to attend an informational session at the beginning of each semester discussing the rules of the garden and basic tools to help beginners become fluent in the practices and policies. Godinez describes the GreenTeam as “a group of people interested in nature and sustainability.” But beyond a common interest in the environment, the group thrives on promoting ecological awareness and sustainable practices. Throughout the year they sponsor activities such as tree plantings for Arbor Day, cooking classes, field trips to food festivals, and beach cleanups.”

Bethel College

<https://www.bethelks.edu/community/affiliate-organizations/sand-creek-community-gardens>

- “The Sand Creek Community Gardens is a commons for the community, a gathering place for learning and mentoring, and where food can be produced and shared with others. The mission is to provide peaceful and inviting gardening spaces for the students and neighbors of Bethel College. Over 60 persons are gardening in 2014. Students from Bethel College and families in the community work side by side in the gardens, including seven inter-generational plots involving parents gardening with children, and one adult garden with children from the community. The gardens include 30 plots, each measuring 20 by 20 feet, which are available for individuals and families. In addition common areas are managed by the community of gardeners: perennial and annual flower beds, asparagus, herbs, rose beds, fruit trees and berries, a picnic area around a shed containing equipment for use by the gardeners, and mulch and compost bins.”

Asbury Theological Seminary

<https://asburyseminary.edu/students/community-formation/creation-care/community-garden/>

- “The Community Garden/Eco-Seminary is a fast-growing component of Asbury’s creation care plan. Students and their families, staff, faculty, and Wilmore community members grow fresh, organic food and have opportunities for relationship, recreation, education, and formation. Dr. Tennent says, “The community garden is the perfect complement to the academic work of Asbury Seminary. We have envisioned it as a living laboratory for creation care and community building, and we look forward to the lessons it grows.” There are many ways to be involved in the garden, from pulling a few weeds while on your nightly stroll to lending your artistic talents to make signs to planting your favorite native foods for the community to share.”

Gordon University

<https://www.gordon.edu/sustainability/studentgroups>

- “ASF strives to involve Gordon students in environmental efforts campus-wide. It is an active student-run sustainability group on campus. They promote awareness around

sustainability issues; encourage conscientiousness in lifestyle choices to Gordon's community; they organize outreach events; and get the community involved in various projects. ASF strives to involve itself in a number of sustainability activities, including (but not limited to): weekly meetings to plan events, brainstorm ways to bring more sustainability on campus and discuss current environmental issues.”

Calvin College

<https://calvin.edu/ecosystem-preserve/>

- “The Calvin College Ecosystem Preserve conserves, restores and interprets native ecosystems to inspire people to value and protect the wonder of creation. We envision a sustainable ecosystem preserved for future generations. The Ecosystem Preserve was established in 1985 to restore and maintain this example of a West Michigan ecosystem. It occupies the northern half of Calvin College's east campus.”

Cornerstone University

<https://www.cornerstone.edu/why-cornerstone-university/campus-locations/university-offices/academic-leadership-office/icce/cu-land-project/>

- “The CU Land Project started an onsite garden in the Spring of 2014. The majority of produce grown is prepared by the Food Service Department and served in the CU Dining Commons. We believe that good food comes from good land. Therefore, we keep our soil healthy by amending it with compost, rotating crops, and employing cover crops. Additionally, we keep the garden free of synthetic pesticides and fertilizers as well as avoid the use of GMO seeds or plants. Even more, we agree with Wendell Berry in believing that once too much machinery comes onto the farm (or the garden) people start leaving it. The work at the garden, therefore, is done primarily by hand and with as many people as possible. The garden currently has around 1200 square feet of growing space composed of biointensive beds where we grow a wide array of vegetable, fruits, and herbs. Along with growing fruits and vegetables, the garden incorporates onsite composting of grass clippings, leaves, and plant debris, as well as exploring water conservation techniques through the use of rain barrels and other watering methods.”

Southwest Baptist University

<https://www.sbuniv.edu/give/pt-garden.php>

- “In her nineteen years of service, Judy has diligently attended to the needs of students, faculty and staff while also contributing countless hours of her time to the beautification of the SBU campus. The new garden serves as a tribute to Judy as well as meets a need of SBU Physical Therapy students who benefit from having a place to practice true-to-life therapy experiences. The garden includes a variety of walking surfaces and functional seating areas that aid student learning while also assisting clients of the faculty-led physical therapy clinic. This project included: accessible ramps with tactile strip Concrete walks with various cross and running slope, landing wheelchair turn around, steps and handrails, picnic tables for lunch breaks and study areas.”

Campbell University

<https://www.campbell.edu/life/spiritual-life/community-engagement/mustard-seed-community-garden/>

- “The Mustard Seed Community Garden is a sustainable, growing, and vital bridge between the University and the community. The food that is produced from the garden is donated to the Harnett Food Pantry.”

Ohio Christian University

<https://www.ohiochristian.edu/news/student-development/ocu-receives-60000-community-garden>

- “Ohio Christian University students and the community will benefit in several ways as the project includes locally grown fresh vegetables being sold at roadside stands and the local Farmer’s market to help fund international student mission trips. The community will benefit greatly as excess food will be given to churches, food banks, soup kitchens, and other organizations that help those in need. Additionally, the community gardening project will provide a limited number of small land plots for local community members to raise their own food gardens. In addition to learning how to grow food, students will learn good business practices including logistics, accounting, marketing and food distribution.

Oklahoma Christian

<https://oc.edu/academics/colleges-schools/natural-health-sciences/the-masters-garden.html>

- “The College of Natural and Health Sciences, alongside a number of community partners, is in the process of launching the Master’s Garden, a campus community garden that will serve as learning laboratory for students and as a source of produce for area food banks. The College of Natural and Health Sciences hopes that this program will provide infinite opportunities to educate students and target food insecurity amongst underserved populations as they work to reach a place of economic security.”

George Fox University

<https://www.georgefox.edu/green/stories/comm-garden.html>

- “Through a community garden, students, faculty and community members are demonstrating in a tangible way that not only does George Fox care about sustainable practices, it teaches, implements and enjoys them. The community garden is not only educational, practically involved in acting responsibly for the care of our world, but also a small testimony to the world of how George Fox community members are sustainably caring for the world God has put in our care, he said.”

Messiah College

https://www.messiah.edu/info/22108/grantham_community_garden

- “The Grantham Community Garden is a student-inspired, student-led effort to demonstrate and promote real-life concepts of sustainable agriculture which we believe is a necessary dimension of holistic Christian stewardship. The garden initiative is a means to educate students, faculty, and the broader community about the environmental, social, nutritional, and spiritual benefits of sustainable farming.

King University

<https://www.kings.uwo.ca/about-kings/kings-initiativespartners/environment-and-sustainability/community-garden/>

- “The Community Garden is under the prevue of the Environmental Commissioners. It is run by the Community Garden Manager and the Community Garden Outreach Coordinator with the help of numerous volunteers.
The King’s Community Garden is currently undergoing relocation, revitalization, and expansion efforts. Currently located in the backyard of the International House at King’s University College the garden is volunteer run and operated. The Garden is in the process of being moved to a more central, visible, and accessible location on campus.
Through the garden we strive to cultivate more green space, allow King’s students and community members to pursue their love of gardening, create organic produce, and encourage active student participation in the community.
The goals for the garden are to provide information and access to alternative food source methods, foster a sense of community between students and other members of the North London area, and teach students and others how to create and maintain gardens of their own.”

Trevecca Nazarene

<https://www.trevecca.edu/community-life/urban-farm-and-garden>

- “The Trevecca Urban Farm was inspired as a teaching tool to equip students to help food-insecure neighborhoods around the world. In the heart of Nashville, livestock guardian dogs oversee our heritage goats, pigs, and chickens as they graze Trevecca’s campus and lots nearby. A worm farm, an aquaponics fish farm, campus composting, beekeeping, urban orchard, greenhouse, vegetable garden, and two additional community gardens produce abundantly within view of Nashville’s skyscrapers. The Trevecca Urban Farm is a program of the J.V. Morsch Center for Social Justice. We recognize that nothing impacts the created world and its inhabitants like farming—still the livelihood of half the world’s workers. Good farming can save the planet. We teach and practice community-centered organic agriculture that heals the land and the communities that depend on it. We recognize that the gifts of the land and environmental burdens are not shared equitably. The world’s poorest communities face the greatest threats to chemical exposure, dumping, flooding, displacement, and inadequate food access. Our task is to work as neighbors with neighbors to foster the healing of our place.”

Baylor University

<https://www.baylor.edu/graduate/currentstudents/index.php?id=99432>

- “The Baylor Community Garden provides educational opportunities to the university and local organizations on how to maintain gardens and encourage healthy lifestyles. A special focus is placed on integrating sustainable water-use technologies and organic garden training. The Baylor Community Garden also serves as a location for Campus Kitchen to grow and donate produce to help relieve local hunger. Members of the graduate housing communities have access to individual growing plots, and may enjoy the recreational green space, grill, and host events in the garden.”

Seattle Pacific University

<http://spu.edu/academics/seattle-pacific-seminary/community-programs/space>

“Today, the garden continues to be maintained by the undergraduate S.P.A.C.E (Seattle Pacific Agriculture for the Community and Environment) Club and seeks to continually model sustainable and organic agricultural methods for the SPU community and greater Seattle area. Since 2016, the School of Theology at SPU has partnered with S.P.A.C.E to help raise awareness and promote activism around the topics of eco-theology and food justice. Together, these two groups seek to provide a space for students to learn and also relax in God's beautiful creation and to transform how the SPU community thinks about food, the earth, and our calling to seek justice for the oppressed.”

Appendix C

Healing Effects of Nature Course Syllabus

Rachel Jones, MSW	SOWK 295
MW 1-3, TR 9:30-11	Spring 2019
Office location: PBC 001	Saturday 9-11:30
RLJones@milligan.edu	Derthick 203
(423) 461-8445	Credit Hours: 3

Course Description:

This course will examine contemporary research on the impact nature has on improving mental health, physical wellbeing, and social connections. Students will learn what practices, programs, and research are happening around the world and will learn how to apply the benefits of nature within their own setting and vocational interest. The course is hybrid with both online and in-class assignments and discussions. This is also an interactive course with numerous hands-on activities, including a weekend nature retreat. This course is great for students interested in social work, psychology, biology, occupational therapy, counseling, and more.

Course Objectives:

Upon completion of the course, students will be able to:

- Use practice experience and theory to inform scientific inquiry and research.
- Apply critical thinking to engage in analysis of quantitative and qualitative research.
- Apply knowledge of human behavior and social environment, person-in-environment, and other multidisciplinary theoretical frameworks to engage with clients.

- Develop appropriate intervention strategies based on assessment, research knowledge, and values of clients and constituents.
- Critically choose and implement interventions to achieve practice goals and enhance capacities of clients and constituents.
- Critically analyze, monitor, and evaluate intervention and program processes and outcomes.
- Apply evaluation findings to improve practice effectiveness at the micro, mezzo, and macro levels.

Required Text:

- The Nature Fix by Florence Williams
- Shinrin Yoku: The Japanese Art of Forest Bathing by Yoshifumi Miyazaki
- The Nature Principle: Reconnecting with Life in a Virtual Age by Richard Louv
- Horticultural Therapy Methods: Connecting People and Plants in Health Care, Human Services, and Therapeutic Programs by Rebecca L. Haller (Editor), Christine L. Capra

*Supplemental articles will be added to Canvas in the weekly modules. These articles are required readings along with your main text.

Course Requirements:

Discussion Posts & Responses (5 points x 15)	75
Essays (5 points x 7)	35
Attendance & Participation (10 points x 7 outings)	70
Final Paper	20
Total	200 Points

Course Calendar

Section #	Readings	Week#	Days	Assignment
Section 1	Shinrin-Yoku Intro & Chapter 1 Articles on Canvas	Week 1 January 14	Tues.	Discussion Post
			Thurs.	Discussion Response
			Sat.	Essay #1
		Week 2 January 21	Tues.	Discussion Post
			Thurs.	Discussion Response
			Sat.	Nature Field Day Evergreen
Section 2	Shinrin-Yoku Chapters 3&5 The Nature Fix Intro & Chapters 1-3	Week 3 January 28	Tues.	Discussion Post
			Thurs.	Discussion Response
			Sat.	Essay #2
		Week 4	Tues.	Discussion Post
			Thurs.	Discussion Response

		<i>February 4</i>	<i>Sat.</i>	Nature Field Day Tweetsie Trail
Section 3	Nature Fix Chapters 5-9 Articles on Canvas	Week 5 <i>February 11</i>	<i>Tues.</i>	Discussion Post
			<i>Thurs.</i>	Discussion Response
			<i>Sat.</i>	Essay #3
		Week 6 <i>February 18</i>	<i>Tues.</i>	Discussion Post
			<i>Thurs.</i>	Discussion Response
			<i>Sat.</i>	Nature Field Day Sycamore Shoals
Section 4	Nature Fix Chapters 10-12 Nature Principle Part 1	Week 7 <i>February 25</i>	<i>Tues.</i>	Discussion Post
			<i>Thurs.</i>	Discussion Response
			<i>Sat.</i>	Essay #4
		Week 8 <i>March 4</i>	<i>Tues.</i>	Spring Break!
			<i>Thurs.</i>	
			<i>Sat.</i>	
Section 5	Nature Principle Parts 2-3 Articles on Canvas	Week 9 <i>March 11</i>	<i>Tues.</i>	Discussion Post
			<i>Thurs.</i>	Discussion Response
			<i>Sat.</i>	Nature Field Day Buffalo Mountain
		Week 10 <i>March 18</i>	<i>Tues.</i>	Discussion Post
			<i>Thurs.</i>	Discussion Response
			<i>Sat.</i>	Essay #5
Section 6	Nature Principle Part 4 Articles of your choosing	Week 11 <i>March 25</i>	<i>Tues.</i>	Discussion Post
			<i>Thurs.</i>	Discussion Response
			<i>Sat.</i>	Nature Field Day Garden at Local Home
		Week 12 <i>April 1</i>	<i>Tues.</i>	Discussion Post
			<i>Thurs.</i>	Discussion Response
			<i>Sat.</i>	Essay #6
Section 7	Nature Principle Part 5 Articles of your own choosing	Week 13 <i>April 8</i>	<i>Tues.</i>	Discussion Post
			<i>Thurs.</i>	Discussion Response
			<i>Sat.</i>	Nature Retreat
		Week 14 <i>April 15</i>	<i>Tues.</i>	Discussion Post
			<i>Thurs.</i>	Discussion Response
			<i>Sat.</i>	Easter!
Section 8	Horticultural Therapy Methods Entire Book	Week 15 <i>April 22</i>	<i>Tues.</i>	Discussion Post
			<i>Thurs.</i>	Discussion Response
			<i>Sat.</i>	Essay #7
		Week 16 <i>April 29</i>	<i>Tues.</i>	Discussion Post
			<i>Thurs.</i>	Discussion Response
			<i>Sat.</i>	Nature Field Day Student Led
May 6th – Finals Week Final Paper Due				

Appendix D

Teaching Garden Enterprise: A Business Plan

Executive summary

To help diversify income and connect Milligan's Care Garden to the larger community in an educational capacity, Milligan seeks to establish a social enterprise, an income generating entity that supports the mission of the Care Garden. The social enterprise, the Teaching Garden Enterprise, will consist of the garden's community development initiatives and include educational trainings and workshops, summer camps, and an annual conference on Christian environmental stewardship. The intention of this enterprise is to train local community members on macro issues such as sustainable design, conservation, land stewardship, and soil care; and micro needs such as rainwater collection, organic growing in Appalachia, irrigation, companion planting, and more. Looking at both big picture ecosystem issues and individual and community needs. Teaching people to think about impact, brainstorming creative solutions, and "quickly turning ideas into action" (Kelly & Kelley 115).

This enterprise will correspond to the Care Garden's goal of scholarship which is to: promote academic excellence by providing an educational space for hands-on learning activities. This goal relates to educational garden space for Milligan students and academic courses, along with the educational needs of the community. The enterprise will bridge these groups by providing an opportunity for community engagement. The educational enterprise will be income generating and will operate under the nonprofit status Milligan maintains. The goal of the enterprise is to create environmental stewardship and sustainability in our community. Lynch and Walls describes a social enterprise as a business "whose purpose is to change the world for the common good" (40). They also state: "people really *do* care about their planet and their fellow humans and are just waiting for an opportunity to express this" (36). By providing a space for community members to come and learn to care for and cultivate the land we can create greater change in our region, giving local residents a way to express their commitment to the earth in practical, hands-on ways.

Bornstein and Davis comment that "global warming is largely a result of consumption, industry, and farming in the West, but it is the poor in the developing world who will suffer most from droughts, floods, and storms that scientists expect it to bring" (12). This educational program would teach members to care for the land around them and put it into a larger context of how their practices and habits impact people around the world. The authors later comment that "each day we all make small decisions that ripple out into the world in unforeseeable ways – everything from how we speak to our children, to what we choose to eat, to how we get around, to what products we opt to buy and how we dispose of them" (78). Teaching others to care for the environment comes down to small daily choices that can have large results. However, these

results will continue to be miniscule if these new daily practices are not adopted by the larger community or region.

Background

The Teaching Garden Enterprise will work in conjunction with the Care Garden at Milligan College, which is an institute of higher learning in northeastern Tennessee. The college's mission is to honor God by educating men and women to be servant-leaders and Milligan promotes the values of scholarship, community, and faith in the implicit and explicit curriculum. Milligan, which started in 1866, currently offers more than 100 majors, minors, pre-professional degrees, and concentrations in a variety of fields, along with graduate and adult degree completion programs. Milligan supports more than 40 social, service, honorary, professional, and campus life organizations and has 24 intercollegiate sports. The college currently has 250 faculty and staff who seek to provide an inspiring, intimate, and safe environment for their students. Milligan is accredited by the Southern Association of Colleges and Schools and is a member of the Council of Christian College and Universities.

The vision of the Care Garden at Milligan is to create a space that contributes to faithful land stewardship, promotes academic excellence, and addresses the community's mental health needs. The Teaching Garden Enterprise is connected to this vision of education and conservation and seeks to incorporate local community members outside of Milligan's campus. Milligan's mission of training servant leaders encompasses the mission of this enterprise for it will train and educate individuals and families to be servants of the land and to care for it as we have all been called to do by God.

The Care Garden will include raised beds, wheel chair accessible paths, a covered pavilion, a classroom with kitchen, fruit trees, several field crops, an herbal garden, and more. It will be an adequate size to accommodate small to medium sized groups for educational purposes. Also, during the summer months, when traditional classes are not being held, the space will be a perfect location for children and youth summer camps. These educational courses and workshops, along with the summer camps, will be a major part of the Teaching Garden Enterprise. These events will not only advocate for community-wide environmental changes but will bring in necessary income to support the Care Garden. This element of community participation, ownership, and funding will provide sustainability to the entire garden program.

Milligan College is a 501(c)(3) organizations and thus the Teaching Garden Enterprise will operate within these parameters. Mission and margin will be equally important. Lynch and Walls states that “without your mission, your commitment to the common good, your desire to cure an ill, you are not social. But it is equally true that without margin, you cannot define your organization as an enterprise” (29). The mission is paramount because without it there will be no program, but so is the margin, because without profit there is no sustainability. The school’s board of trustees will ultimately be over the garden but there will also be a community advisory board to oversee the program and hold it accountable to community needs, interests, and resources. These board members will also help the garden further connect to the community and provide legitimacy.

Products

The main products of this enterprise are training workshops, summer camps, and an annual conference on Christian environmental stewardship. Workshops will be offered twice a month from February to November. Community members can pay for each one separately or receive

discounted rates for buying 5, 10, 15, or 20 workshops at a time. Each workshop is twenty dollars (though sliding scale rates can be negotiated). If these 20 workshops average 5 to 10 people, the gross profit would be \$2,000-\$4,000 for a season.

Sample Educational Trainings & Workshops	
How to preserve vegetables	How to build sustainable structures
How to compost and make organic fertilizer	How to make natural medicines and tonics from herbs
How to make value added products	How to design gardens and use companion plants

The second product is summer day camps for children and youth. For accessibility, the summer camps will charge average rates for babysitters in the area; it can also offer sliding scale fees, scholarships, and discounts for low-income families. Day camps will keep the garden space functioning during the summer months when college students are not on campus. The Teaching Garden Enterprise will offer six weeks of summer camps for various ages and for either half-day or full-day options. Below is a chart showing an example of kids, fees, weeks, and gross profit.

5 kids x \$175 (5 half days) x 6 weeks	\$5,250
5 kids x \$325 (5 full days) x 6 weeks	\$9,750
Total	\$15,000

These fees are using a \$10 an hour base for accessibility for the average wage for a babysitter in this region is \$10-\$14. These camps can even pair with other Milligan summer camps such as engineering and science. There can also be a camp for children with special needs and limited functioning; for these camps they might require a parent/guardian to attend with their child. Milligan can advertise for a garden and camp intern and include a stipend from the camp revenue. For half-day camps these could run Monday-Friday 8:30-12:00 and full-day camps could run Monday-Friday 9-3:30 to stagger start times.

The third product is a conference on Christian land stewardship led by Milligan faculty and local conservationists. It will be promoted within this region and highlight Appalachian culture, storytelling, and land practices. The conference would be held over two days and include lunch on both days. It would target 100-150 people and the lectures and workshops would be held in the Care Garden. The conference would be \$25 for students, \$75 for farmers, and \$125 for others. A sample gross profit chart is below showing two variations of 100 participants.

1 st Variation		2 nd Variation	
15 students x \$25	\$375	50 students x \$25	\$1,250
35 farmers x \$75	\$2,625	35 farmers x \$75	\$2,625
50 other x \$125	\$6,250	15 other x \$125	\$1,875
Total	\$9,250	Total	\$5,750

If done well these products have the potential to bring in a gross profit between \$12,000 and \$30,000 depending on the number of people participating in various events. This margin will feed into the operating costs of the farm, including the farm manager's salary. It will aid in the farm's sustainability significantly and create larger community change.

Market

Milligan College is between two counties and has several medium sized towns within a thirty-minute drive. The two closest towns are Johnson City and Elizabethton, both are roughly a ten-minute drive from campus. According to the US Census Bureau the median income for Elizabethton is \$33,584, Johnson City is \$39,143, and the US median income is \$57,652. The US poverty rate is around 12% but both cities have a poverty rate of 22.3%. Median income is approximately \$20,000 below the national average and the poverty rate is almost twice the national rate. This information is relevant because the products offered through the Teaching Farm Enterprise must reflect what people are willing and able to pay in this region. By keeping

the rates modest and offering sliding scale and discount options the products will be accessible to the surrounding region. Summer camp costs are derived from average child care costs and average summer camp fees from other facilities.

The area around Milligan is historically a farming community, and over the past five years there has been an initiative to restore this heritage. Many of the newer farms are being started and run by young individuals and couples and the Johnson City Farmer's Market became prominent in 2016. There is a reemergence of buying local produce, starting your own backyard garden, subscribing to Community Supported Agriculture shares, and using organic and sustainable practices. There are several local organizations which provide resources and trainings, such as Appalachia Resource Conservation and Development (Appalachia RC&D) and Built it Up East Tennessee. These are the local competition but because this area is growing the resources need to follow suit. These organizations, and others, will be support systems and partners, not necessarily competitors, due to the differing programs being offered.

Carter County, where Elizabethton is located, has a general population of 56,488 and Washington County, where Johnson City is located, has a general population of 127,806 for a total population of 184,294 (not including other nearby counties and towns). Both counties have approximately 18% of their population under the age of 18, or 33,172 children and youth (US Census Bureau). Farming and gardening are intergenerational, and the products offered through the Teaching Farm Enterprise will appeal to all age groups with the intention of intergenerational collaboration and work. This region has good diversity of ages and educational background, along with a small, but growing cultural and ethnic diversity.

Strategy

The Teaching Farm Enterprise will function as a separate entity from the Care Farm and will thus be marketed separately. It will have its own name, logo, mission, etc. The digital media and marketing students at Milligan will design the marketing materials and the program products will be advertised on social media, through schools and churches, and on websites specific to farming, local events, and summer camps. Marketing will be grassroots and done by student interns and the farm manager. It will be advertised through several channels to target various age groups and populations of people. The workshops and trainings will also target and reach out to differing interests across demographics to appeal to a large population within the region.

Management

The management of the Care Garden and Teaching Garden Enterprise will be overseen predominantly by the farm manager, volunteers, and student interns. Some aspects will be overseen by other Milligan staff who already handle similar issues such as the Business Office overseeing salary, expenditures, and revenue. The garden space itself does not need many staff because of the other staff on campus. As mentioned before, the program will also be monitored and held accountable by a community advisory committee made up of local farmers and organizations which hold technical and regional wisdom. Kelley and Kelley states that “being human centered is at the core of our innovation process. Deep empathy for people makes our observations powerful sources of inspiration” (21). This human centered design will be at the core of the garden management, empathy for people and land fuels changes and inspires action.

Financial information

Each product was discussed previously but the Teaching Garden Enterprise seeks to be viable within 5-7 years. Its sustainability is dependent on the development of the Care Garden. As the garden infrastructure grows so will the opportunities for enterprise options, potentially doubling with each new phase. This budget and projection is separate from the actual build of the Care Garden. The enterprise seeks to maintain continuing efforts of the garden.

Care Garden Build	Time Span	Enterprise Options	Revenue
Phase 1	1-2 Years	Half-day camps Outdoor workshops May-September	\$7,250
Phase 2	3-4 Years	Half/full-day camps Outdoor workshops May-September	\$15,000
Phase 3	5-7 Years	Half/full-day camps Full season indoor workshops Annual Conference	\$30,000

Summary

The Teaching Garden Enterprise events will be a place for people to come together and work towards creating a healthy and sustainable future, while contributing financially to the impact of the garden space. Bornstein and Davis state that “the social entrepreneur helps others to envision a new possibility, appreciate its meaning, and recognize how it can be broken down into doable steps that build momentum for change” (25). The authors similarly state that “social entrepreneurs are most effective when they demonstrate ideas that inspire other to go out and create their own social change” (35). This is the goal, to train servant leaders who are equipped to care for the land and influence others to do the same.

Works Cited

- About*. (n.d.). Retrieved from Milligan College: <https://www.milligan.edu/about/>
- Association, A. C. (2017). *National College Health Assessment*. Retrieved from http://www.acha-ncha.org/docs/NCHAI_SPRING_2017_REFERENCE_GROUP_EXECUTIVE_SUMMARY.pdf
- Bornstein, D. and Susan Davis. *Social Entrepreneurship: What Everyone Needs to Know*. Oxford: Oxford UP, 2010.
- Campus Mental Health*. (n.d.). Retrieved from American Psychological Association: <http://www.apa.org/advocacy/higher-education/mental-health/index.aspx>
- Clawson, Julie. *Everyday Justice: The Global Impact of Our Daily Choices*. Downers Grove: IVP Books, 2009.
- Groody, Daniel G. *Globalization, Spirituality, and Justice*. Maryknoll: Orbis Books, 2013.

Henriques, G. (2014). *The College Student Mental Health Crises*. Retrieved from Psychology Home. (n.d.). Retrieved from Care Farming UK: <https://www.carefarminguk.org/home>

Kelley, Tom and David Kelley. *Creative Confidence: Unleashing the Creative Potential Within Us All*. New York: Crown Business, 2013.

Kolk, Bessel van der. *The Body Keeps the score: Brain, Mind, and Body in the Healing of Trauma*. New York: Penguin Book, 2014

Lynch, Kevin, and Julius Walls. Mission, Inc.: A Practitioner's Guide to Social Enterprise. Berrett-Koehler Publishers, 2009.

Reilly, K. (2018, March). *Record Numbers of College Students Are Seeking Treatment for Depression and Anxiety — But Schools Can't Keep Up*. Retrieved from Time: <http://time.com/5190291/anxiety-depression-college-university-students/>

Today: <https://www.psychologytoday.com/gb/blog/theory-knowledge/201402/the-college-student-mental-health-crisis>

U.S Census Bureau. (n.d.). *Quick Facts*. Retrieved from Washington County, Tennessee; Johnson City city, Tennessee; UNITED STATES.

U.S. Census Bureau. (n.d.). *Quick Facts*. Retrieved from Carter County, Tennessee; Elizabethton city, Tennessee; UNITED STATES.

Williams, Florence. *The Nature Fix: Why Nature Makes Us Happier, Healthier, and More Creative*. New York: Norton, 2017.

Williams, F. (n.d.). *This is Your Brain on Nature*. Retrieved from National Geographic: <https://www.nationalgeographic.com/magazine/2016/01/call-to-wild/>