Foraging for Meaning: Harvesting Wild Plants as the Basis for an Ecological Worldview

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

Redeveloping a meaningful connection between people and the Earth may serve to heighten our ecological awareness, foster environmental values, and promote a more sustainable cultural worldview. Various environmental literatures, such as Deep Ecology, have suggested this, but seldom provide specific strategies for practical application. The present study seeks to address this gap by providing a concrete strategy for fostering an improved relationship between people and planet. Foraging, the collection and harvest of wild plant foods, was explored as one potential avenue for establishing a meaningful reconnection to nature, which could serve to shift our cultural values toward preservation rather than destruction of the biosphere.

The modern era is characterized not only by ecological disconnection, but social and psychological rifts as well. In our individualistic, deracinated society, we strive to find meaning through wealth, status, and consumer culture; this phenomenon serves to undermine our planetary support system by promoting unsustainable levels of energy and resource throughput. In order to maintain the planet as a suitable home for ourselves, future generations, and other life forms, we must strive to enact a new worldview based upon ecological values which are equally capable of meeting our psychological needs for meaning. However, mainstream environmental messages have failed to promote the necessary paradigmatic societal shifts. Renewable energy and hybrid vehicles, for example, cannot substantially alter the course of our society; instead, we must address the problematic aspects of our core cultural values, particularly the dualistic notion of humans as separate from nature, which is considered a root of modern environmental problems.

Interviews and surveys were conducted with foragers at two wild food weekend events in the United States, in order to characterize this understudied population and to determine how foraging might promote a heightened ecological conscience. The data analysis revealed that foragers experience a sense of connection with the Earth, which is built through deep observation and direct interaction

with surrounding ecosystems; consuming food produced by nature provides the ultimate connection between people and land. An awareness of and connection to the natural world, built upon direct experience, contributes to a sense of ecological belonging; by re-envisioning humanity's role in nature, foragers are able to reject and move beyond the modern dualism which typically prevents a fully embedded conception of people as part of nature. By redefining this relationship, foraging allows for an understanding of the value of land and our complete dependence upon it, encouraging values of care and protection. Foragers also described this connection with the Earth as having spiritual qualities; finding meaning within nature indicates the possibility for meeting psychological needs in an ecologically benign manner, and provides hope for an ecological worldview.

Based on these findings, further research is recommended to determine how involvement in foraging might impact those who are ambivalent toward nature and lack ecological values. If foraging is found to be impactful for the general population, then it seems likely that promoting this activity on a larger scale could contribute to a positive shift toward a collective ecological conscience and should be encouraged, in a sustainable manner, as a new form of environmental message.

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Chapter 1: Introduction

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I struggle to sit inside on these autumn days, in front of a computer monitor, which does not feel or breathe. I struggle even more with the guilt I feel when I do venture out; the nagging, silent voice of our culture whispers in my ear about wasting time and the sin of "unproductive" hours. Today, my overtired mind lets the rush of the wind drown her out. I trot across a busy street, a blue bag slung over my shoulder. I'm heading for a chain link fence that separates people from the forest and field beyond. Luckily, wild grapes don't understand this division, and are sprawling over the fence, coming from the overgrown field into the world of concrete and metal and street noise, offering themselves as a gift to whomever takes notice. I'm entirely alone, other than the cars whizzing by, and I sing snippets of some old hymn as I fill my bag with the deep purple fruits.

We call ourselves environmentalists even while we shut ourselves up inside, perhaps only venturing out for a weekend hike or canoe trip a few times a year. We study, and read, and think, but to what end? Any environmentalist will profess a love for the Earth, but how can we understand what that means when our primary interactions; hiking, gardening or canoeing, barely scratch the surface of what this great planet offers us?

We cannot love what we do not know, and we are seldom driven to protect that which we do not love. To love the earth, we need to experience it in a new way; we need to know the plants and animals that surround us, to appreciate them and know their names.

1.1 Introduction to the Research Objectives

The ebbs and flows of the environmental movement over the past half-century have produced numerous successes; we've shrunk the hole in the ozone layer, reduced air pollution (at least in the first world), and invested in renewable energy technologies (EPA, 2016; NASA, 2000). In spite of these successes, mainstream environmentalism has fundamentally failed. We continue to alter the climate, pollute the oceans and soils, and contribute to overall ecological decline (Rockstrom, 2010). These planetary harms are threatening the existence of many species, including our own, and although we have some understanding of what needs to be done to alter this trajectory, the solutions implemented to date have fallen frighteningly short (Rockstrom, 2010; Suzuki, 2007; Leonard, 2007;

Callicott, 1987). In spite of massive scientific evidence, humans continue to fuel these crises with a seemingly insatiable desire for growth and material consumption (Leonard, 2007). Thus, change is needed in social and environmental realms; however, the typical strategies for coping with these issues are stale. Driving hybrid vehicles, installing solar panels, and taxing carbon are characteristics of the environmental discourse of sustainable development, which is popular due to its appealing promise of "business as usual". The goal of sustainable development is to resolve the conflict between ecological and economic values, by promoting environmentally benign growth (Dryzek, 2005). However, initiatives of this type, by ignoring the underlying issues, act to treat the symptoms while ignoring the disease. We cannot hope to promote a truly sustainable future without seriously questioning the basic tenets of our cultural worldview (Holmgren, 2003). The story which western society seeks to enact is particularly problematic, as Daniel Quinn indicates in his novel, *Ishmael*, by stating that our cultural narrative "puts (us) at odds with the world"; instead, we must seek a new "story to enact that puts (us) in accord with the world" (1992, p. 84). Thus, "(our) task is not to reach back but to reach forward", toward a new way of living which promotes social and ecological sustainability (Quinn, 1992, p. 250). Changing our course to reflect these goals will require drastically new strategies; altering paradigms will be key (Rockstrom, 2010).

The social, economic, political, and cultural changes produced through a long process of modernization and industrialization have transformed our world, creating unique modern social conditions and contributing to the ecological crises we now face (Constanza *et al*., 2007). Individualism, materialism, alienation, disenchantment, and mass society have emerged through these historical processes; the essence of this is that human life has changed drastically since our days as hunter-gatherers, during which we possessed a deep connection to the Earth, to our sources of sustenance, and to other people as part of a community. Due to these critical losses, there is a widespread, mostly subconscious, desire to reject modernity and recover an ecocentric relation to

nature (Suzuki, 2007; Monbiot, 2013; Brody, 2000). This desire is stymied, however, due to modern social conditions which have shaped us as rational, individualized beings, with an understanding of ourselves as separate from nature. This anthropocentric perspective precludes a clear understanding and appreciation of our absolute dependence on the biosphere. We no longer find existential meaning in nature, instead we tie our self-esteem predominantly to an ecologically destructive worldview in which our identities are bound up as consumers in the global marketplace. The primary failure of mainstream environmentalism is its inability, or unwillingness, to motivate paradigmatic shifts away from the modern consumerist worldview toward something more ecologically and psychologically sustainable (Leonard, 2007). Therefore, environmentalism must reconsider its approach; scientific appeals to logic and reason alone do not work. Instead, we must consider what motivates human behavior change and alter our strategy accordingly, by appealing to people on a personal, meaningful level (Dickinson, 2009). Ecological sustainability depends on a new cultural framework, independent from consumption, within which individuals can fulfill psychological needs for existential meaning and self-esteem (Dickinson, 2009; Holmgren, 2003; Zweers, 2000; Kowalewski, 2000). This may require a more enchanted, spiritual view of nature, through which ancestral cultures found meaning (Dickinson, 2009).

An ecological worldview requires new values, norms and beliefs which prioritize the health of the planet; such values can be facilitated by rediscovering a connection between ourselves and the Earth. This approach, in which we can strive to remedy our environmental problems by once again viewing our species as an interconnected part of the web of life, is perhaps seemingly radical and abstract. However, a number of environmental literatures have suggested that connecting to nature is a critical strategy for the formation of ecological values (Leopold, 1949; Louv, 2008; Taylor, 2001; Suzuki, 2012). Participation and interaction with the natural world is key: "Letting go of control ideologies (egocentrism) and embracing participation ideologies (ecocentrism) is the essential paradigm shift

needed to heal the earth and humans" (Haines, 2015, back cover). In order to preserve and protect nature, we must respect it and view ourselves as part of it; this requires us to experience and directly interact with it.

Foraging, the harvest and consumption of wild plant foods, is a unique and concrete strategy for regaining a connection to the natural world. Promoting foraging as an avenue for the development of ecological values may at first seem strange, particularly to those who have no experience with it. However, the continued failure of the environmental movement necessitates new solutions and creative action. As stated by Franklin Roosevelt (1932), "It is common sense to take a method and try it: If it fails, admit it frankly and try another. But above all, try something". Thus, although building ecological values through foraging may initially appear unusual, it is worth trying, particularly since mainstream environmental approaches have failed to gain traction (Suzuki, 2012; Callicott, 1987; Kowalewski, 2000). This study will explore the possibility for foraging to act as a project to reject the modern dualistic view of humans as outside of nature, while fostering ecological values through a meaningful reintegration of people into the natural world. Foraging may be a uniquely powerful activity in the development of an ecological ethic of care and concern for the Earth. The specific ways in which foraging creates a connection to nature will also be explored.

1.2 Research Purpose and Objectives

The purpose of this thesis is to demonstrate the need for an ecological worldview and to examine how the activity of foraging may be a useful, concrete starting point for a paradigmatic change in values, in support of such a worldview. The three specific objectives of this research are as follows:

1. Examine foraging as a project which seeks to reject modernity by reconnecting people with the Earth in a way which provides a source of wonder, enchantment, and meaning whilst fostering a heightened ecological conscience that promotes environmental action and

concern.

2. Explore how foraging may be a unique strategy for fostering the connection between humans and nature, as opposed to other outdoor activities.

Due to the fact that modern day foraging in the United States has received little research attention, this study also incorporates an exploratory aspect which seeks to address a third research objective, which is to understand:

3. Who are foragers and what are the general characteristics of this relatively unstudied population?

Thus, this study endeavors to begin filling two gaps in the academic literature. Firstly, no studies have been conducted, to date, which consider the ability for foraging to foster a connection to the Earth, or the possibility for this activity to produce or strengthen an ecological conscience. In this way, the present study seeks to extend what other environmental literatures have proposed, by offering a concrete, rather than abstract, suggestion for how one might reintegrate and connect with the natural world. Secondly, very little research has been conducted with regard to the attitudes, values, and behaviors of foragers as a population. This study begins to fill this gap by offering a brief characterization.

These objectives were addressed as part of an exploratory case study (see Chapter 3: Methods), which included conducting surveys and interviews with foragers at two wild food events in the United States. These two major foraging events provide a boundary for this study; it is not possible to generalize the findings to all foragers in the United States based upon this sample. However, the surveys and interviews revealed the attitudes and beliefs of numerous foragers, providing insight for addressing the research objectives. Survey responses, of which there were ninety-four, offered the breadth necessary to create an initial characterization of this population.

1.3 Study Limitations

As with many research studies, there are a number of limitations within this work which must be made obvious up front. First of all, this study was limited in that the participant pool contained foragers from only two wild food events. Thus, the generalizations made within this study, including the characterization of foragers, cannot be considered to describe the entire foraging population within the United States. However, pulling participants from these events was the most time and cost effective strategy for obtaining a relatively large sample size (ninety-four surveys and fifteen interviews). Sampling a wider array of foragers, for example, those in different regions of the country, or those who are unable to attend foraging events, would provide a more complete picture and may be considered an interesting future direction.

Secondly, there are likely many ways to develop ecological values within an individual and within our society. Foraging is just one suggestion, however, the work presented here seeks to demonstrate that foraging is an excellent and unique way to do so. However, since this study focused on foragers, the results cannot be extended to the general population, many of whom have no interest in nature or the environment. While it would be nice to think that introducing others to foraging would serve to heighten their ecological awareness as well, no claims can be made to this effect without conducting a follow-up study with those specific aims. Finally, as an exploratory study, this work generates as many questions as answers and reveals numerous avenues for further research (see Chapter 6: Recommendations and Future Directions).

1.4 Structure of the Thesis

The review of relevant literature in chapter two seeks to clarify the necessity of an ecological worldview through which we can find meaning and value in nature, and how foraging may serve as a concrete starting point in the development of ecocentric values. These literatures include a brief

history of the emergence of modern society, as well as the implications of these changes in environmental and social realms, as revealed by the sociology literature, which includes concepts from Marx, Weber, and Marcuse, amongst others. The importance of strong, meaningful worldviews is articulated by a consideration of terror management theory, a branch within social psychology literatures which seeks to explain a primary motivation for human behavior. Several concepts in support of an ecological worldview are reviewed in the environmental literature, including topics such as Deep Ecology, biophilia, and the land ethic. The chapter concludes by reviewing literature on foraging, including the status of the activity in the United States. Chapter three outlines the methods which were utilized, from research design, to data collection, to analysis of results. Chapter four presents the findings; a selection of these findings are interpreted and analyzed further in chapter five, based upon the literatures reviewed in chapter two. Chapter six provides recommendations for further research, and chapter seven offers concluding remarks.

Chapter 2: Literature Review

Grappling with complex modern social-ecological issues necessitates a transdisciplinary approach (Brandt, *et al*., 2013). The following literature review will draw from an array of disciplines, including history, sociology, psychology, and environmental studies. Literature on foraging will also be reviewed, from a variety of sources. The overarching goals of this review are to demonstrate why mainstream environmental messages have failed, to gain an understanding of the history and implications of a worldview in which humans are split from nature, and to suggest why re-embedding ourselves in the natural world may be a useful strategy for strengthening our individual and collective ecological consciences. Appreciation and respect for the Earth may serve as a starting point for much needed paradigmatic shifts in our cultural worldview, which could facilitate the development of a socially and ecologically sustainable world. Cultivating a respectful relationship with the natural world will enable our society to once again view the Earth as that which is worthy of our care and protection. The literature on foraging examines the potential for this activity to act as a concrete and meaningful strategy for closing the divide between humans and nature, as one step toward an ecologicalization of our worldview.

To begin, a historical look at the hunter-gatherer lifestyle reveals our own origins in a world prior to this split. Tracing history further, through the Enlightenment and Industrial Revolution, key events are pinpointed through which the modern era unfolded. An understanding of this historical unfolding provides a useful context for the sociology literature, which offers commentary on the emergence of new forms of social life in the modern era, exposing the roots of modern environmental problems. Drawing from Marx, Weber, Durkheim, and Marcuse, amongst others, the sociology literature rests upon a widely accepted framework, and reveals the implications of modernity; specifically, the altered relationships between individuals and community, nature, food, and self, as well as the emergence of capitalism and environmentally damaging consumer culture. A romantic rejection of

modernity is evident in back-to-the-land movements, which indicate a desire to find meaningful reconnection to land and community. This desire is stymied, however, by modern social conditions which have shaped us into rational, individualized beings. These conditions also prevent the success of modern environmental messages, which hope to motivate societal change through appeals to reason and rationality, typically by citing scientific facts and figures. This approach ignores the psychological drivers for human behavior, and we remain dependent upon our consumerist worldview, in which we utilize consumption as a strategy for seeking meaning and self-esteem. These concepts will be explored through terror management theory (TMT), a branch of social psychology established by more than 400 empirical studies (Greenberg and Arndt, 2011). TMT suggests that the pursuit of meaning and self-esteem, through a socially sanctioned cultural worldview, is a primary driver of behavior; therefore, appeals to science and reason are unlikely to motivate meaningful change (Dickinson, 2009).

TMT also provides another lens through which to critique modernity, as our strivings for self-esteem are now based heavily upon environmentally destructive consumer culture. This suggests a need for a new way of finding meaning and purpose for our lives, which necessitates a paradigmatic shift in our worldview, with ecologically sound guidelines for acceptable conduct. Thus, in order to be successful, the environmental movement must consider radically different approaches; namely, those with the capability of motivating change by addressing the human need for meaning, spirituality, and self-esteem (Dickinson, 2009).

The literatures on history, sociology, and psychology draw from well-accepted sources and theories in their respective fields of study. This review also includes a number of sources and concepts within environmental studies, which depart, to an extent, from what might be considered the mainstream environmental discourse. A discourse can be defined as "a shared way of apprehending the world. Embedded in language, it enables those who subscribe to it to interpret bits of information and put

them together into coherent stories" (Dryzek, 2005, p.9). Dryzek has suggested four primary environmental discourses, summarized in table 2.1. Each discourse rejects industrialism differently, and may take approaches that are reformist or radical, prosaic or imaginative. Prosaic approaches take the political-economic structure of industrial society as a given, while imaginative approaches seek a redefinition of societal structures. The discourse of sustainability, within which the concept of sustainable development fits, has been popularized as a response to ecological limits over the past 30 years (Dryzek, 2005). Sustainable development seeks to "dissolve conflicts between environmental and economic values", indicating that we can maintain a business as usual approach by reconciling capitalism and ecology (Dryzek, 2005, p. 16). The literature examined in this review departs from this mainstream approach, perhaps fitting more closely with what Dryzek would term "green radicalism", in which the "basic structure of industrial society" is rejected, with "alternative interpretations of humans, their society, and their place in the world" (Dryzek, 2005, p. 16). The literatures fitting within this description may include Deep Ecology, biophilia, and the Gaia hypothesis, which will be explored in greater depth later in this chapter.

The remaining two discourses fall somewhere in between; the "problem solving" discourse seeks to deal with environmental problems by adjusting the political-economic status quo, especially via public policy. Survivalism, on the other hand, respects limits and desires a re-orientation away from growth, but sees solutions in terms of industrialism (Dryzek, 2005)

	Reformist	**Radical**
Prosaic	Problem solving	Survivalism
Imaginative	Sustainability	Green radicalism

Table 2.1 Dryzek's (2005) environmental discourses

The discourse of green radicalism fits with the aims of this thesis, part of which is to critique modern industrial society while exploring the possibility for a worldview based upon a more harmonious

relationship between people and land. An endeavor of this kind does not fit within mainstream environmental discourses; however, their continued failure indicates a need for novel approaches. The novel approach suggested here is to seek a changed relationship with nature by rejecting the modern, dualistic view in which humans are outside and above nature, in favor of an embedded view, in which humans are seen as part of the natural world. The reviewed environmental literature, on topics such as the land ethic, Deep Ecology, and biophilia, encourage a new view of the human relationship to land. Foraging literature is also added to this review, to extend what the aforementioned literatures offer, by suggesting a concrete action for shifting our values and achieving the improved relationship which they envision. There is already evidence that many people are attracted to nature and wish to return to the land as a means of turning away from the negative aspects of modern society (Wilson, 1993; Suzuki, 2007). However, this endeavor presents a challenge, as we are tightly bound up in our modern worldview; we struggle to find a new way of living, in which values must shift from individual to communitarian, from consumer capitalist to systems of reciprocity and sharing, and from nature as other to being embedded within it. Foraging, and perhaps hunting and fishing as well, may be unique in that these activities seek to reject modernity while endeavoring to recover a more authentic relationship to nature, land, and our source of food. As a universal agent within human societies, food has the ability to connect us to the land in an ultimate way, on a visceral, somatic level. "Eating is the most fundamental form of Self/Other relationship, the incorporation of the body of another into your own body" (Berman, 1989, p.69).

In summary, this literature review will offer a short history of modern society from agriculture through the Industrial Revolution, an overview of relevant sociological concepts, an introduction to terror management theory and how it may inform our approach to a new ecological worldview, suggestions from environmental literature on a changed relation to nature, and an overview of modern foraging as a strategy for achieving this.

2.1 On the Rise of Modern Society

2.1.1 From Hunter-Gatherers to Agriculturalists

Prior to the agricultural revolution, which occurred approximately 10,000 years ago, humans existed primarily as bands or tribes of hunter-gatherers, many of which were mobile to optimize food procurement (Kumar, 1988). Today, less than a quarter of a million people support themselves with a lifestyle of hunting and gathering, constituting only 0.004% of the world's population. This number is constantly shrinking due to the encroachment of western civilization (Giddens, 2008). Behaviorally modern humans emerged between 60,000 and 100,000 years ago (Diamond, 2012); in geologic terms, the 10,000 years separating the advent of agriculture from the modern day is equated to the blink of an eye. How is it possible that the human condition has changed so drastically in this relatively short period of time?

The Neolithic Revolution was characterized by the advent of agriculture, which is thought to have originated independently in areas such as the Middle East, Asia, and Mesoamerica. However, the reasons for this development remain unclear and contested (Barker, 2009). It has been suggested that environmental or climatic changes, overexploitation of local environments, increasing population, and shifts in resource availability may have contributed (Grier *et al*., 2002; Diamond, 2012). Domestication of plants and animals arose gradually, and societies existed on a continuum between hunting and gathering and agriculture (Crowther, 2013; Goudsblom, 1992). Farming lifestyles necessitated more permanent settlements in order to protect and tend crops; this increased sedentism enabled storage of food surpluses, leading to a shift from typically egalitarian cultures to those based upon social stratification and hierarchy (Diamond, 2012; Crowther, 2013). It is not clear as to whether an agrarian lifestyle was less labor intensive or provided a more reliable source of food; in fact, farming led to diminished dietary diversity, and did not initially support improved health (Crowther, 2013). For these reasons, it seems unlikely that populations dependent upon hunting and gathering would readily change their lifestyles in favor of settled agriculture exclusively, particularly

since many foraging groups can reliably supply for their needs with only a few hours of work per day (Sahlins, 1972; Stokes-Brown, n.d; Barker, 2009). More likely, hunter-gatherers were overwhelmed by agriculturalists through dispossession, destruction, absorption, or displacement (Brody, 2000). Regardless of what drove prehistoric groups from foraging to farming, this change from immediate-return (eating harvested food almost immediately) to delayed return societies (storage of food for months or years) had major implications for social organization and culture (Lee, 2004). In general, nomadic foraging bands of 20-50 people are thought to have been egalitarian, autonomous, dependent upon sharing and reciprocity, possessing minimal food storage capabilities, and with less formal leadership than modern humans typically experience (Lee, 2004)[1].

Storage of food changed its availability to group members from being environmentally dependent to being socio-culturally dependent, bringing obligatory resource sharing, a common characteristic of hunter-gatherer societies, to a halt (Grier *et al*., 2002). Essentially, agriculture created food surpluses which necessitated storage; once food was stored, its availability could be restricted. Food surpluses and new technologies allowed for population expansion and an increased ability to support roles outside of food production, leading to the development of specialized skills and division of labor (Kumar, 1988). The result was a new system of social stratification, and the eventual emergence of hierarchy and class systems (Grier *et al*., 2002). For these reasons, the advent of farming is largely seen as a turning point in the history of humanity, although some may argue the march toward modernity began as early as the development of language and fire (McNeill and McNeill, 2003;

[1] Although the generalizations made about the egalitarian nature of hunter-gatherer lifestyles may make their lives seem ideal, we must be careful not to romanticize their societies, as they too suffered from violence and inequality (Brody, 2000). It is also important to consider that these generalizations do not apply to all prehistoric or modern foraging societies. A high degree of variability existed in hunter-gatherer communities, and "affluent foragers", particularly those living in temperate, resource rich coastal areas, were able to lead more sedentary lives and develop higher levels of organization in social structure without a high level of engagement in agriculture (Grier *et al*., 2002). Sedentary foraging tribes (as distinct from nomadic bands of foragers) had already developed high levels of social organization, including elaborate ceremonies, positions of authority, and social stratification as evidenced by burial rituals (Barker, 2009).

Goudsblom, 1992). The shift from a hunter-gatherer to an agrarian lifestyle was the first step in altering the human relation to nature, and produced change which was both concrete (modified modes of food and energy production) and ideational (emergence of hierarchy and a shift away from animism).

2.1.2 From Agriculturalists to Early Capitalists

The development of urban centers in the twelfth century resulted in increased exchange of commodities and the use of money. The feudal, land-based peasant lifestyle was disrupted as individuals came to depend increasingly upon their new roles in the proletariat class, being forced to sell their labor due to dispossession of land (Giddens, 1971). The alienation of individuals from the means of production, as well as the influx of capital and resources from the Americas, were key conditions for the rise of a capitalist market society (Giddens, 1971) Although markets had been fairly common since the late Stone Age, their "role was no more than incidental to economic life" (Polanyi, 1944, p. 43), nor were they expected to be self-regulating. As markets transformed, so too did society; "instead of the economy being embedded in social relations, social relations (became) embedded in the economic system" (Polanyi, 1944, p. 57).

2.1.3 From Early Capitalists to the Industrial Revolution

A major turning point in support of the process of modernization of markets and society occurred due to new ways of thinking, which were attributed to the literary and humanistic authors of the late Renaissance, as well as the rise of science and abstract philosophy. Increased trade and a heightened standard of living likely played roles in the emergence of these new modes of thinking (Toulmin, 1992). The French, British and American Enlightenments furthered the rise of modernity, and were associated with the strengthening of ideas such as reason, science, liberty, virtue, and progress (Himmelfarb, 2004). Protestantism permitted a distinction between the church and the world, paving the way for secularism and individualism, principles which contributed to the French and American political revolutions and established the constitutional and democratic nature of modern political

character (Kumar, 1988). The rise of science and reason, coupled with a long process of secularization and disenchantment, gradually led to a shift away from superstition and traditional beliefs (Toulmin, 1992; Weber, 1948). The Industrial Revolution of the seventeenth and eighteenth centuries was dependent upon these new modes of thinking, as well as an expansion of capitalism, which necessitated efficiency and mechanization (Giddens, 1971). As a third turning point, the Industrial Revolution established the modern economic pattern of capitalism and growth (Kumar, 1988; Steffen *et al*., 2011). A new way of life emerged, characterized by movement to cities, resulting in a mass of workers congregating around factories and industry, as well as a new division between different spheres of life: work, family, and leisure (Kumar, 1988).

2.1.4 Implications of Modern Society

> "There is a mode of vital experience – experience of space and time, of the self and others, of life's possibilities and perils – that is shared by men and women all over the world today. I will call this body of experience 'modernity'. To be modern is to find ourselves in an environment that promises us adventure, power, joy, growth, transformations of ourselves and the world – and at the same time, that threatens to destroy everything that we have, everything that we know, everything that we are. Modern environments cut across all boundaries of geography, ethnicity, or class and nationality, of religion and ideology: in this sense, modernity can be said to unite all of man kind. But it is a paradoxical unity, a unity of disunity: it pours us all into a maelstrom of perpetual disintegration and renewal, of struggle and contradiction, of ambiguity and anguish. To be modern is to be part of a universe in which, as Marx said 'all that is solid melts to air" (Berman, 1988, p.15)

Political, social, and cultural changes were intrinsically connected to the rise of modern society, for better or worse, inciting deep changes in human thought and behavior (Kumar, 1988). Economic values changed to favor more efficient, market-based behavior of supply and demand, as opposed to earlier types of economy, which were tied to social relationships and based upon reciprocity or redistribution (Polanyi, 1944; Giddens, 1971). "Instead of the economy being embedded in social relations, social relations (became) embedded in the economic system" (Polanyi, 1944, p. 57). All transactions became monetized; land (nature) and labor (man) could now be sold at prices determined

by the market (Polanyi, 1944). Putting a price tag on nature furthered the modern, dualistic view of man as being outside of and above nature, rather than being embedded within it.

The Industrial Revolution ushered in a new way of life, characterized by shifting divisions between work, leisure, and family life, which had not existed in the pre-modern era. Self-reliant family units became dependent upon an external system, with a greater distinction between the spheres of home and work, as the family became increasingly private and work-related identities strengthened. Economic position and relationship to the means of production emerged as new determinants of social class, alongside more traditional determinants such as age and race (Giddens, 1971; Kumar, 1988).

The global population, which had been steadily increasing since the advent of agriculture, exploded once again during the Industrial Revolution. Masses of people moved from rural areas to cities as workers sought jobs in the newly formed industrial sector. Mechanization, the rising use of fossil fuels (coal and oil), and technological advancements defined this era and enabled the ideals of growth and progress to dominate. Urbanism became a new way of life, characterized by diversity and creativity. The bright side of the new era included newfound individual mobility, freedom, and wealth (Kumar, 1988).

2.1.5 Critique of Modernity

The purpose of tracing history from hunter-gatherers to the Industrial Revolution was an attempt to expose the key turning points which shaped the modern era, and the implications, both good and bad, for human life during this age. This section will expand upon these implications, utilizing a sociological lens to critique modernity while providing a context for understanding our changed relation to nature and community, the emergence of consumer culture, and the environmental, social, and psychological costs of our modern worldview.

Despite generating enormous opportunities, benefits, and possibilities, modernity also has a darker side. People do not benefit equally from the expansion of global wealth, creating deep inequalities which persist today (Gibson *et al*., 2005). Increased freedom necessitated dependence on a highly interconnected society; in today's world, almost no one has the knowledge required to be self-reliant (Mulgan, 1998). It is an era of discontinuity, of dis-embedding of economic activity from all other spheres of life; social, cultural, religious, and political institutions have become separate and are organized around individual incentives for economic gain. The improvements in tools and mechanization of the Industrial Revolution were catastrophic for the common man, inciting drastic change and the "dislocation of the lives of the common people" (Polanyi, 1944, p. 33). Previously, economies were embedded within community and culture, ensuring livelihoods and protection as basic moral rights (Polanyi, 1944; Quilley, 2012). The emergence of new markets shifted this dynamic as "social relations (became) embedded in the economic system" (Polanyi, 1944, p. 57); as Polanyi stated, "not blood tie, legal compulsion, religious obligation, fealty or magic compel participation in economic life, but specifically economic institutions such as private enterprise and the wage system" (1971, p. 81). In the modern age, hunger forces the worker to labor, as they can no longer rely upon the pre-modern model of community-based support. The destruction of traditional forms of welfare created a need for new social structures and charitable organizations in order to look after the needs of the poor (Quilley, 2012). Polanyi contends that the market-based economy is destructive of human nature, ultimately rendering it unsustainable. The failure of the free market idea is evidenced by unemployment, widening inequality, and recurrent financial crises; the fragile market-based system is maintained through poverty and violence (Polanyi, 1944).

2.1.6 Sociological Concepts

Six sociological concepts (alienation, deskilling, individualization, gemeinschaft and gesellschaft, anomie, and disenchantment) will be introduced here, as they provide a more detailed critique of

modernity with regard to changed relationships in social, psychological, and ecological dimensions. Namely, these sociological concepts will highlight modern shifts in relationships between people and nature, self, others, place and community. An examination of these concepts reveals a romantic ambivalence or rejection of modernity, which has been expressed, in one form, as a desire to return to a simpler, communitarian, land-based lifestyle.

2.1.6.1 Alienation

Karl Marx, in reaction to the changes brought about by the Industrial Revolution, viewed capitalism as a form of control and exploitation in which the worker becomes a commodity and human life is devalued through economics (Marx and Engels, 1848). Capitalist ownership of the means of production (machines, raw materials, factories) enabled the control of the proletariat class through necessitated wage labor (Ritzer, 1999; Giddens, 1971; Ollman, 1971; Marx and Engels, 1848). Workers became alienated from the products they worked to produce, with no input on how the item ought to be manufactured or to whom the final product would be sold. Ollman defined alienation as "the intellectual construct in which Marx displays the devastating effect of capitalist production on human beings, on their physical and mental states and on the social processes of which they are a part" (1971, p. 131). This "devastating effect" is evidenced by a new sense of competition between workers, a distancing between individuals and community, and a decline in the creative processes formerly associated with craftsmanship (Ollman, 1971). According to Marx, alienation is a consequence of the modern system of social stratification, in which workers lose their identity as individuals and come to be viewed as mechanistic parts of their social class. As the actions of workers are increasingly dictated and controlled, they experience a loss of ability to determine the course of their own life and destiny (Marx and Engels, 1848). Alienation is not only experienced as a distancing of workers from the product of their labor and the act of production, but also an estrangement of individuals from culture, nature, community, and one's own humanity (Marx, 1932*;*

Olllman, 1971*)*. In Marx's view, this era is characterized by alienation of man "from his biological characteristics as a species" (Giddens, 1971, p. 15). Berman (1989) elaborates on this sense of alienation, suggesting a detrimental split between cognitive and bodily experiences, in which preference is given for abstraction as opposed to somatic intelligence. A lack of consciousness of our bodies, and a devaluation of somatic experience and intelligence is a source of psychological conflict and longing (Berman, 1989).

2.1.6.2 Deskilling

The fragmentation of work, with de-skilled workers being responsible only for a handful of tasks, further allowed capitalists to control the working class. Work of this type is routine and psychologically unhealthy (Braverman, 1974). Medieval (and earlier) working conditions, in contrast to the efficiency and utility of industrial production, allowed enough time to do a job well from start to finish, providing the craftsman with the satisfaction inherent in producing a well-made item. Master craftsmen could spend years perfecting their art, but modern working conditions, in which laborers work on bits and pieces of a larger project, discourage pride in craftsmanship (Sennett, 2008). Separating life and labor into different spheres creates what Polanyi refers to as "soulless institutions" which have the primary purpose of increasing material welfare, rather than promoting the good of the people (1944). Marx shared this perspective, as stated by Giddens, the "expansion of division of labor is synonymous with the growth of alienation and private property" (1971, p. 23). Members of the Frankfurt School studied the ideas of earlier thinkers such as Marx, Freud, and Weber, and concerned themselves with the conditions allowing for social change. Herbert Marcuse, a member of the Frankfurt School, expanded on Marx's ideas of dehumanization, stating that workers were pushed to the point of seeing themselves as extensions of the objects they produced. As they became integrated into the system of production and consumption, the working class lost its capacity to act as a subversive force for change. Marcuse argued that this limited humans to "one-dimension",

creating individuals who no longer thought critically or acted in opposition (Marcuse, 1964). The false set of needs generated by industrial society caused individuals to behave irrationally; by working more than is required to meet needs, ignoring the detriments to psychological and environmental wellbeing, and by seeking social satisfaction through material items (Marcuse, 1964).

2.1.6.3 Individualization/Individuation

The changing social structures of the modern era gave rise to a cultural phenomenon of individualism, as the I/We balance shifted toward the 'I' (Elias, 1991). As traditional modes of life and livelihood collapsed, individuals have been left to fend for themselves and determine the course of their own lives. The state has provided new rules and guidelines, "outside the old bonds of family, tribe, religion, origin, and class" (Beck and Beck-Gernsheim, 2002, p. 11). Social relationships have been de-emphasized, as individuals seek better lives for themselves. In today's world, everything has become an option, a decision to be made for oneself (Beck and Beck-Gernsheim, 2002). The development of individualism is linked to the formation of consumer society (Schor, 2000).

2.1.6.4 Gemeinschaft and Gesellschaft

Increases in individual freedom came at the expense of community connection, relationships, and a sense of belonging (Bauman, 2000; Tönnies, 1887). Tönnies described this shift in social relations in terms of gemeinschaft and gesellschaft, in which gemeinschaft describes relationships and roles as being direct, personal, and embedded within a community, while gesellschaft values are based in society with relationships being indirect and impersonal. Modern trade and capitalism forced the secondary, indirect relationships of gesellschaft to take precedence over primary, gemeinschaft relations (Tönnies and Loomis, 1887).

2.1.6.5 Anomie

As defined by Durkheim, anomie is "a rule that is a lack of rule" (1897, p. 257) and is characterized by "derangement" and an "insatiable will", as well as stress, social unrest, unhappiness, and a sense of purposelessness (1897, p. 247). These psychological struggles are a result of a changed relation to

self and others. “Anomie” is created by a mismatch between individual and societal standards due to a lack of guidance about what is socially and morally desirable. This mismatch is connected to rapid social change, which weakened individuals’ identification with community and caused a loosening and weakening of social bonds and moral guidance, creating room for personal interpretations of morality (Durkheim, 1893; Durkheim, 1897). Societies dictate the appropriate norms, rules, values, and beliefs which guide proper conduct; however, the growth of individualism and disenchantment associated with the modern era allowed individuals to have unique roles and experiences, enabling divergent values, morals, and beliefs. Within traditional societies, in contrast, groups were homogenous with overwhelmingly consistent experiences and norms, offering the individual little reason to question them (Berman, 1988; Durkheim, 1893; Giddens, 2008).

2.1.6.6 Disenchantment

“The fate of our times is characterized by rationalization and intellectualization and, above all, by the disenchantment of the world” – Max Weber

The devaluation of myth and spirituality, giving preference to reason and scientific rationality, was referred to by Max Weber as “the disenchantment of the world”, in which magic, mystery, and meaning were eliminated (Kumar, 1988; Ritzer, 1999; Berman, 1988; Landy and Saler, 2009). Human immersion in animistic nature has gradually been eliminated since 2000 BC (Berman, 1988). With science and reason, it was believed that everything could come to be understood, and by the seventeenth and eighteenth century, enchantment had come to be associated with children, primitives, and the lower class. New, secular strategies for enchantment such as art, science, and philosophy attempted to fill the void without resorting to naiveté or irrationalism (Landy and Saler, 2009). These new strategies for seeking meaning are referred to by Ernest Becker as “hero projects”, which attempt to fill the void created by the removal of spirituality and wonder (Becker, 1973). The concept of hero projects will be expanded upon in section 2.2, which details terror management theory.

Disenchantment leads to feelings of stress and purposeless (anomie) due to the excision of wonder and meaning. Non-rationality still exists in the form of religion, but that which remains has become far less central to people's lives (Kumar, 1988). It has been argued that modern life has the capacity for enchantment as well, with some forms of enchantment being compatible with modernity. Science, for example, has the ability to both remove and restore mystery and wonder (Landy and Saler, 2009). Material consumption is yet another source of enchantment, as the "cathedrals of consumption", such as shopping malls, fast food, and casinos seek to enchant and enthrall the consumer (Ritzer, 1999). Nature can also be viewed as "a source of the wonder formerly found in the divine" (Landy and Saler, 2009, p.8). The potential for nature to serve as a source of enchantment indicates the promise for an ecological worldview to restore meaning and move beyond the constraints of modern rationality.

2.1.6.7 Summary of Sociological Concepts

The foregoing concepts make evident the desire to move beyond modernity, in order to restore psychological, social, and ecological health, necessitating a recovery of more authentic relationships between self, others, community, place, and nature. These concepts provide context for the changed relation to nature and food, emergence of consumer culture, and the associated environmental costs; these will be explored in further depth in the following sections (2.1.7, 2.1.8, 2.1.9). In particular, disenchantment and alienation point to the changed relation between people and nature, while the emergence of consumer culture is tied to individualization and shifts in economic and community structure (deskilling, gemeinschaft and gesellschaft, anomie, and alienation).

2.1.7 Changing Relation to Nature

As livelihoods shifted from being land-based (as hunter-gatherers, herders, and peasants) to being oriented around urban industry, the relationship between humans and the natural world changed. Science and reason made nature into that which could be studied, understood, and manipulated. The reductionist worldview, prevalent since the time of Descartes, Newton, and Galileo, indicates that nature, through science, is imminently knowable (Dobson, 1995; Kaufmann, 2008). The narratives of

Francis Bacon and John Locke legitimized European development, asserting that man's role is to dominate and control nature, in spite of an emerging counternarrative of wilderness appreciation in the late seventeenth century (Dobson, 1995; Merchant, 2013). The scientific revolution secularized this anthropocentric perspective, which is based upon the Christian understanding that God made Earth for man (Merchant, 2013; Dobson, 1995). The dualistic view separates man from non-human nature, placing humans outside and above the natural world, which was seen as threatening, wild, and in need of taming in order to facilitate human progress. This view enabled nature to be seen as a rich repository of resources, which could be utilized to drive economic growth (Sutton, 2004; Merchant, 2013).

The human/nature dualism is distinctly different from earlier beliefs in which the land fulfilled human needs not only for physical resources, but was also viewed as sacred, with man as an integral part of his surroundings (Merchant, 2013; Callicott, 1987). In contrast, modern reductionism, with its ability to reduce reality to particles, contributes to disenchantment and indicates a world devoid of meaning. An alternative view suggests the creativity of a universe with properties of emergence, chaos, and self-organization allows for a sacred world, in which meaning has not been lost (Kaufmann, 2008). However, mainstream values retain a generally positive perception of scientific advances, believing we will be more able to control and manipulate our condition on earth (Suzuki, 2007).

The artificial environment created through urbanization normalizes alienation from nature (Callicott, 1987). In the city, the importance of the biosphere is not apparent, as the economy seems capable of providing ecosystem services (Suzuki, 2007). The progressive distancing of man from nature is a uniquely modern phenomenon, referred to by Friedrich Schiller as the "de-godding of nature" (Hannum, 2007). Frankfurt School philosophers, Horkheimer and Adorno, were likewise critical, particularly of the Baconian view of dominion over nature, as well as Marx and Engel's optimism that progress would come through controlling nature, finding fault with the reduction of nature to science

and capitalism (Merchant, 2013). The dualism between nature and society is emphasized in the modern era, and has been seen as a critical source of environmental problems (Sutton, 2004).

2.1.8 Changed Relation to Food

Part of our changed relation to nature has been in the form of a changed relation to food and food procurement. As hunter-gatherers, we were connected viscerally to the sources of our food, and "the hunt was seen as a sacred activity, an act of communion and reciprocity with the animal kingdom" (Berman, 1989, p.69). Food procurement as a hunter-gatherer required all members of the group to participate, and created an intimate connection to the source of sustenance, whether plant or animal. Agricultural practices caused a shift from nearly immediate-use of gathered food to a system of delayed return in which food might be stored for months or years; storage capabilities and increased yields meant progressively fewer individuals were directly involved in food production (Lee, 2004). In the mid-eighteenth century, values began shifting with regard to animal welfare, and many people began to feel sympathetic toward animals. As a result, the origin of meat and slaughter became concealed (Thomas, 1984). This, along with agricultural practices, permitted the development of a modern, abstract relationship between people and their food, in which its source has become invisible and untraceable. In the age of grocery stores, we lack an intimate connection to our food, and to the land from which it came. This distancing makes it difficult to comprehend the impact of our food choices, particularly in an ecological sense. A reaction to the severed tie between society and food is evident in the back-to-the land, or homesteader movements, which seek to produce food within a specific local context as a way of seeking a more intimate and connected relationship between self, land, food, and community.

2.1.9 The Consumerist Worldview

The social and cultural changes implicit with modernity have resulted in widespread disenchantment and alienation from nature, community, and spirituality, causing us to lose "our place in the scheme of things, our specialness, even our gods, [and] has left us with a great ache, a loss, a loneliness, a

terrible emptiness. One way we have attempted to fill the void is with a new sacrament: the ritual exchange of money for goods in the temples of the marketplace" (Suzuki, 2007, p.37). This way of relating to material goods is new, in fact, "as an *influential* memetic construct, the growth imperative is actually just two generations old" (Rees, 2010, p.199); consumer demand exploded in the early twentieth century, and by the 1950s, economic growth had become a primary policy objective (Suzuki, 2007).

"During the seventeenth century, the Christian narrative of dominion over nature was combined with science, technology, and capitalist development to reinforce the possibility of remaking the earth as a controlled, managed Garden of Eden" (Merchant, 2013, p. 66). Today, the heart of our western worldview has become an all-consuming desire for ever-increasing material wealth, regardless of the ecological, social, or psychological costs. Our identities, including social standing and sense of belonging, have become bound up with consumption, as a means of deriving meaning and purpose for our lives, with some even choosing to go into debt to support their chosen identity (Schor, 2000; Ritzer, 1999; Sutton, 2004). "Our notions of what is adequate, necessary, or luxurious are shaped by the larger social context" (Schor, 2000, p.14). The meaning we place on material goods helps us maintain our social position, attain employment, and bolster self-esteem. Competitive consumption drives this desire even further, as individuals compare themselves and their lifestyles to that of their neighbors, colloquially referred to as "keeping up with the Joneses", or using the lifestyles of colleagues in the workplace as reference points (Ackerman, *et al*., 2012; Schor, 2000). Income inequality and bombardment with media messages and advertisements compel us, as individuals, to work harder and seek to achieve more (Schor, 2000). The media spreads the idea of capitalism as a social norm and creates an avenue for social comparison, leading to feelings of inferiority while making wealth disparities clear to those living in positions of disadvantage (Kasser *et al*., 2004). Capitalism and the global economy rely on discontent, which entices people to spend more, thereby

driving economic growth (Homer-Dixon, 2006).

Modern capitalism, while still dependent upon the exploitation of laborers, also works to exploit the consumer, although we may not realize it, as we argue that consumption is our *choice* (Ritzer, 1999). However, even if we determined a desire to value quality of life over quantity of stuff, and therefore work fewer hours, this option is typically blocked by employer policies. For the typical westerner, consuming takes up massive chunks of our lives; we spend our time working to earn money, deciding what to buy, and then shopping for those items (Schor, 2000). Do we really have as much control as we think we do?

Despite the belief that income is a key to wellbeing, and is a widely held goal for improving one's standard of living, it has been shown the accumulation of material wealth, beyond what we need, cannot make us happier (Schor, 2000; Ackerman, *et al*., 2012). In fact, consumption has been described as a "self-defeating route to happiness" (Schor, 2000, xv). Paradoxically, increases in freedom of choice and material prosperity associated with modernity are linked to decreases in health and personal satisfaction (Whybrow, 2010). This is due, perhaps, to the fact that the things we accumulate are not fulfilling of that which we are actually seeking: security, respect, and happiness; instead, we are insulated by economics, technology, and social hierarchy (Flora, 2010). Although increased incomes in poorer countries are associated with improvements in life satisfaction, the same does not hold true for those living in developed countries, in which life satisfaction has plateaued or even declined over time (Proto and Rustichini, 2014).

2.1.10 The Costs of Consumption

Our cultural obsession with consumption comes at a cost, both in psychological impacts, and for the natural environment in which we, and our economy and culture, are embedded (Jackson, 2009). Callicott suggests the environmental crisis is "rooted in our whole way of doing things--modern technology—and our basic values—humanism and the summum bonum of human happiness, defined

as pleasure and measured by money and material accumulation" (1987, viii). We live on a planet with finite abilities to supply resources and absorb wastes (Leonard, 2007; Steffen *et al*., 2011) To fuel our consumer lifestyle, we are pulling resources from the Earth more quickly than they can regenerate. Currently, we are using the equivalent of one and a half Earths to meet demands; if everyone lived like an American, we'd require four Earths (GFN, 2015). In the early 1970s, renewed attention was placed on the environmental costs of exponential economic growth in the Club of Rome's *Limits to Growth* report (Meadows *et al*., 1972). Rather than respecting these limits, we maintain the high levels of complexity associated with modernity, capitalism, and consumption through massive inputs of high quality energy, typically fossil fuels (Homer-Dixon, 2006). The dependence on fossil fuel energy to drive our culture and economy results in the release of enormous amounts of carbon dioxide, which is strongly implicated with anthropogenic climate change (IPCC, 2014; Steffen, *et al*., 2011). The impacts of industry, agriculture, and the extraction of resources create additional interconnected pressures, such as land use changes, diminished ecosystem services, biodiversity loss, changes in nutrient cycling, chemical pollution, and water insecurities (Rockstrom, 2009; MEA, 2005). Additionally, resource extraction in developing countries has impoverished those landscapes and the people living there, deepening inequality (Shiva, 2005). "The privilege of monetary wealth [is] never having to think about the environmental and social cost of the food we consume or the materials and tools we use" (Turner, 2005, p.26).

"Providing for people's needs within ecological limits requires a cultural revolution" (Holmgren, 2003, p.7). The expansionist myth indicates that technology will help us find our way out of resource limitations; materialistic modes of thinking assume that our problems can be solved with more growth, rather than recognizing growth as a driver for them (Rees, 2010). Instead, we must revise our economic model to reflect our true goals rather than promoting material throughput and growth at all costs. Essentially, we need to discover how modern people can be satisfied and content with owning

less, requiring a major shift in social norms (Jackson, 2009). Callicott agrees, stating: "anything short of a philosophical overhaul of prevailing attitudes and values toward nature seem[s] … to treat the symptoms of the maladaptation of global civilization to the planet—not the disease itself" (1987, ix). The desire for increased material wealth is, to most of us raised in the western world, second nature (despite whether we like it or not). However, there are other, less destructive worldviews available to us. For example, the careful treatment of the earth is typically a strong component of indigenous worldviews, and wealth is viewed as knowing, respecting, and being embedded in the local biotic community (Turner, 2005). Every culture has their own way of striving to meet basic human needs such as subsistence, protection, affection, participation, leisure, and creation (Meadows, 1998, p. 66). Our greatest hope for living within limits is to provide for non-material needs such as these (Holmgren, 2003). Materialistic strivings and a consumerist worldview are not required for genuine happiness, and may even be at odds with it (Eckersley, 2005). Section 2.2 will delve into how cultural worldviews drive behavior, by providing for psychological needs for meaning, purpose, and self-esteem.

2.1.11 Conclusions on Modernity

Understanding the rise of modern society, as well as its implications for human lives, is key to understanding the root causes of linked social-ecological issues such as disenchantment and alienation, rampant consumerism, the environmental crisis, and global inequality. Modernity has incited vast changes, particularly with regard to the human condition in relation to other people, self, and nature. In order to recover these relationships, we must address social, psychological, and ecological divides, requiring a paradigmatic shift in cultural values. In order to seek lasting solutions, we must address the root of these problems, especially the split between humans and nature, and the rational, highly individualized nature of modern social character, which has allowed for the emergence of environmentally destructive, mass consumer society. The challenge for envisioning an

idealized future is that in spite of its negative aspects, modernity has produced many positives. How can we create a future in which we maintain the positive aspects while divorcing ourselves from that which is undesirable, particularly given the fact that our capacity for growth must be limited to a level sustainable for the biosphere? One possibility is by re-acquainting ourselves with the natural world, in order to shape a new worldview with a lesser emphasis on consumption. In that light, the following section will explore the importance of worldviews for providing purpose, meaning, and self-esteem, and the potential for an ecocentric worldview to meet psychological needs while promoting a less destructive relationship between humans and the natural world.

2.2 Terror Management Theory

An examination of modern social character reveals a critical negative aspect of this era: the emphasis on highly individualized consumer culture is environmentally harmful, as well as socially and psychologically unfulfilling. In order to move beyond this paradigm, we must first understand why it has become so entrenched, and why environmental messages have failed to gain traction. The literature on terror management theory offers compelling evidence of the psychological need for perceiving one's life as meaningful, as well as for adherence to a cultural system (Dickinson, 2009; Arndt *et al*., 2004; Solomon, *et al*., 2004). Our modern cultural values may play a significant role in distancing us from the earth and each other, while creating a situation in which "business as usual" is devastatingly destructive for our planetary home.

The human need to create meaning or purpose for one's life stems from the subconscious fear of death, an idea articulated by Ernest Becker who stated, "the idea of death, the fear of it, haunts the human animal like nothing else; it is a mainspring of human activity- activity largely designed to avoid the fatality of death, to overcome it by denying in some way that it is the final destiny for man" (Becker, 1973, ix). Due to this typically subconscious fear of death, and the need to minimize the

anxiety surrounding it, humans subconsciously engage in culturally relevant hero projects, which "serve as the basis for self esteem and meaning" (Dickinson, 2009, p. 34). The need to create meaning and significance in order to manage the fear of death is the core proposition made by terror management theory (TMT), a branch of social psychology based upon the ideas presented by Becker in *The Denial of Death*.

2.2.1 History of TMT

TMT is a relatively new (1980s) area of social psychology within the discipline of Experimental Existential Psychology; it indicates that much of human behavior may be driven by the awareness and anxiety surrounding the inevitability of our own death (Pyszczynski *et al*., 2010). Although a new addition to the field of psychology, the roots of TMT reach far back into human history. Similar themes are present in the Sumerian epic of Gilgamesh in 3000 BC; his fictional search for immortality influenced the development of world religions (Greenberg and Arndt, 2011). Thucydides in 400 BC sought to understand how death related fears drove human behavior, including conflict and the pursuit of immortality (Greenberg and Arndt, 2011). The importance of death as a theme in human society is also evident throughout history and into the modern day in the form of poetry, art, music, and film (Greenberg and Arndt, 2011).

2.2.2 Background on TMT

TMT assumes that all life forms follow the basic Darwinian principle of self-preservation. The animal, and thus human, fight or flight instinct is an evolutionary mechanism intended to protect us from danger and keep us alive. The awakening of human consciousness allowed us to consider the past, present and future; bringing with it the realization of personal mortality, coupled with fear and anxiety surrounding our inevitable demise (Pyszczynski *et al*., 2010; Greenberg and Arndt, 2011; Solomon, *et al*., 2004). In order to manage this fear (as it might otherwise become overwhelming), people subconsciously seek immortality either literally or symbolically. **Symbolic immortality** projects allow people to attach themselves to that which will endure after death; having children and

cultural achievements are ways of extending oneself into the future. Symbolic immortality may also take the form of art, science, wealth, nationalism, construction of monuments, attachment to a charismatic leader, and so on. **Literal immortality** is based upon religion or spirituality and faith in a literal afterlife (Solomon, *et al*., 2004; Dickinson, 2009). Faith is the belief that despite one's "insignificance, weakness, death, one's existence has meaning in some ultimate sense because it exists within an eternal and infinite scheme of things brought about and maintained to some kind of design by some creative force" (Becker, 1973; p. 90-91). There is no standard definition for "spirituality"; it is a multidimensional term related to seeking personal meaning or purpose, or experiencing a sense of awe or wonder. Spirituality may or may not include religious involvement (Reinert and Koenig, 2013). Literal immorality is employed less commonly in the modern era, as logic and reason are valued over spirituality and enchantment. One exception may be through the field of cryogenics, in which science is entrusted with the task of eventually providing eternal life.

2.2.3 Cultural Worldviews and Meaning Making

The construction of meaning for one's life through the pursuit of symbolic immortality, or "hero projects", is a key driver of human behavior. As Becker stated, "society itself is a codified hero system, which means that society everywhere is a living myth of the significance of human life, a defiant creation of meaning" (1973, p. 7). Meaning is created predominantly through adherence to a cultural worldview held in common with others, which aids in answering existential questions and helps make sense of life (Arndt *et al*., 2004). Cultural worldviews, in the context of TMT, are "commonly held beliefs about reality that serve to reduce the potentially overwhelming terror resulting from the awareness of death" (Solomon, *et al*., 2004, p. 131). Every culture provides an account of the universe and creation, guidelines for acceptable behavior, and avenues for pursuing symbolic or literal immortality. Earlier cultures had well-defined roles which "provided a consistent context for self-esteem" striving (Dickinson, 2009, p. 35). In the modern era, individuals are

presented with a staggering array of choice with regard to the formation of their identity and pathways for pursuing self-esteem (Dickinson, 2009).

A culture's role in serving as an "anxiety buffer consists of two components: (a) belief in the validity of a cultural worldview and the standards and values associated with that worldview and (b) belief that one is meeting or exceeding those standards and values, that is, self-esteem" (Burke et al., 2010, p. 155). A satisfactory society and culture will allow individuals to both create identities for themselves while also blending into the larger group (Solomon, *et al*., 2004). Validation from others is critical for maintaining cultural worldviews; frameworks for meaning are communicated and perpetuated through interaction with others, myths, historical and religious teachings, and entertainment media (Pyszczynski *et al*., 2010). Social ostracism has been utilized as a metaphor for death; belonging to a group provides a source of identity and self esteem, as well as a way to create shared meaning and value, all of which are beneficial for managing death anxieties (Pyszczynski *et al*., 2010). The disembedding of individuals from community in the modern era therefore necessitates the formation of different types of groups through which to seek belonging.

2.2.4 Distancing from Nature

The cultural distancing of humans from nature corresponds with modern society, and serves as a way of rejecting the creatureliness (and therefore death) of the human body (Pyszczynski *et al*., 2010). The repression and devaluing of bodily experience began in the 1500s, when the body came to be viewed as animal and "other" (Berman, 1989). Cultural constructs, such as manners and clothing, provide a means of denying the biology of our bodies and creates a distance between ourselves and the rest of the animal world; in so doing, we see ourselves as somehow above the rest of creation, with a greater ability to transcend death (Arndt *et al*., 2004). Some cultures are free from this problem, and see the natural world as being a spiritual place of which they are part, feeling no need to separate themselves from it (Pyszczynski *et al*., 2010).

2.2.5 TMT and Consumerism

"Silly heroics of the acquisition and display of consumer goods, the piling up of money and privileges … now characterize whole ways of life" (Becker, 1973, p. 7)

Materialism and consumption in the western world are values which have become deeply embedded into our cultural worldview; such behaviors are viewed as acceptable modes of bolstering self-esteem. This often manifests as a desire to increase one's possessions and wealth as related to others, colloquially referred to as "keeping up with the Joneses", indicating the importance of social comparison. The valuation of status, possessions and image develops through exposure to social models that encourage this behavior, and by experiencing feelings of insecurity (Kasser *et al*, 2004). Wealth also serves as an immortality project by being accumulated and passed on after death, extending the influence of the original owner (Solomon, *et al*., 2004). Adherence to a cultural worldview which utilizes material possessions and wealth as a means of buffering anxiety regarding existential threats is, unfortunately, both socially and environmentally destructive (Dickinson, 2009; Du Nann Winter, 2004; Kasser, 2004). The level of wastefulness and the value placed on material consumption in the western world has far surpassed practices in any other culture throughout history; money has become a measure of self-worth (Arndt *et al*., 2004). Hero projects based upon material consumption are inherently unsustainable. Luckily, spiritual beliefs and a reverence for nature can fulfill psychological needs without dependence on consumer culture; these beliefs may facilitate a sustainable worldview (Dickinson, 2009).

Although death thoughts are universally threatening, it is possible that individuals raised with different cultural worldviews respond to mortality salience differently. One such study investigated the difference in response in East Asians versus individuals of European descent, and pointed out that most TMT research has been conducted on populations which adhere to a western worldview. It was discovered that the Asian group, when primed with death thoughts, was more likely to think holistically, being reminded of life and the importance of enjoying it. The European population was

found to have a more linear way of thinking; thus, it is believed coping mechanisms for death fears are culturally derived (Ma-Kellams and Blascovich, 2012). If this is the case, perhaps our ecologically damaging coping mechanisms can be altered by fostering a cultural paradigm shift which emphasizes more holistic values and a re-embedding of people as part of the landscape.

Cultural norms and expectations vary, thus, human behavior is correspondingly diverse; for example, some cultures value individualism while others emphasize communal values (Pyszczynski *et al*., 2010). In the dominant cultural framework, it is typical for people to create meaning through aspirations of increased material wealth (owning a larger home, buying the newest tech gadgets, etc.). This cultural practice of bolstering self-esteem and creating identity through material consumption is inherently unsustainable, due to the finite nature of the planet's natural resources (Leonard, 2007; Solomon *et al*., 2004; Dickinson, 2009; Kasser and Sheldon, 2000). There is an assumption within the environmental movement that scientific evidence and facts should be sufficient to incite behavioral change, however, attempts to appeal to human rationality have largely failed (Dickinson, 2009). Instead, we need to reinvent our modern cultural worldview by finding new sources of meaning which satisfy needs for individuality and belonging whilst promoting environmental and societal sustainability. Addressing non-rational drivers for behavior is a unique approach for dealing with the complex, modern social and ecological issues discussed previously, and perhaps will allow for the initiation of changes in the behavior, beliefs, and ultimately, culture and values, of individuals and society.

2.2.6 Criticisms for TMT

TMT is a broad, overarching theory which seeks to explain human behavior based upon a single motivational factor: a fear of death. Due to this lofty aim, it is unsurprising that TMT has received criticism. The first criticism is that "TMT fails to adequately rule out or subsume other theories of human motivation" (Rindfleish and Burroughs, 2013, p. 199). The implication is that death cannot be

considered the sole driver of behavior; for example, a fear of suffering or the unknown might also come into play (Lerner, 1997). However, these other drivers for behavior are closely related to the idea of death; besides, the aim of TMT is to take a macroscopic view and provide an overarching understanding of human motivation. A second criticism is that the assumptions made by TMT run counter to evolutionary theory. Particularly, the evolution of anxiety and death fears do not appear to confer any advantages which would enhance survival. In fact, by buffering anxiety during stressful or dangerous situations, this mechanism might cause an under-reaction to threat, which could negatively influence survival. TMT theorists respond that this criticism fails to account for the difference between immediate fear related to threats and anxiety surrounding possible future events (Rindfleish and Burroughs, 2013; Leary and Schreindorfer, 1997). Thus, the criticisms of TMT, to date, have been unable to shake the core premises of the theory.

2.2.7 Conclusions on Terror Management Theory

TMT argues that successful worldviews must offer strategies for seeking meaning and purpose through culturally accepted hero projects. In the pursuit of an ecological worldview, we must consider how these needs can be met without dependence upon environmentally damaging mechanisms for immortality striving. Likely, an ecological hero project would involve finding meaning through nature, perhaps with some element of spirituality. These types of values additionally serve to reject the modern concepts of disenchantment and alienation from nature. By engaging with non-rational drivers of behavior, we may find greater success in motivating paradigmatic change in ecological values.

2.3 Tying it together: Ecological Connection as New Worldview

The preceding explanation of terror management theory clarifies the psychological necessity of strong worldviews with the ability to provide structure and meaning for our lives. The disagreeable aspects of modern society (pathological materialism, alienation, disenchantment, inequality) are tightly

coupled with those aspects (modern healthcare, education, technology) we wish to preserve. Thus, we are unable to simply excise the disagreeable parts of our worldview; however, we may be able to replace this worldview with a different set of values. In the following section, I will consider how a reconnection to the natural world may be a starting point for a cultural paradigm shift, in which we can seek re-enchantment and create meaning for our lives in a manner that is both old and new.

2.3.1 Nature-Human Relation

There are two predominant views of the relationship between humans and nature; the first is a view of nature as intrinsically valuable, the other sees nature as a commodity meant to be utilized to fulfill human needs and desires (Sutton, 2004; Kidner, 2012). This dualism was described by Worster (1985) as "a struggle between rival views of the relationship between humans and nature: one view devoted to the discovery of intrinsic value and its preservation, the other to the creation of an instrumentalized world and its exploitation" (xi).

The first view often takes the stance that humans are inherently bad for nature, and that any landscape with human intervention is somehow less than it could have been, irrespective of any indicators to the contrary (Daggett, 2005). We seek to minimize our presence in natural areas and to reclaim damaged land by leaving it alone (Daggett, 2005). Some even go so far as to refer to humans as "invasive, self-centered, and arrogant mammals" who do more harm than good and would not be missed if we were to disappear entirely (Bekoff, 2013). Without a doubt, human action in the past few hundred years has caused immense damage, causing us to cross and threaten thresholds in biodiversity loss, climate, land use changes, and pollution (Rockstrom, 2009). Thus, it may be the case that the world would be better off without *modern* human action; however, this view ignores the fact that humans at one time played a positive role in maintaining their local ecosystems for biodiversity as well as food and material production. It has been suggested that native peoples were capable of shaping the environment to suit their needs, using fire to create vast grasslands and open

forests, managing food plants through coppicing and pruning, transplantation, selective harvesting, and so on (Anderson and Barbour, 2003; Turner, 2005; Mann, 2002). It has even been suggested that the Amazon rainforest is, at least in part, a human creation, through selective planting of useful tree species (Mann, 2002). In this light, the role of pre-industrial humans becomes one of a keystone species, critical for maintaining ecosystem relationships and webs that serve to support countless other species. The enormous outbreak in populations of deer, elk, and passenger pigeons after the widespread extermination of native people in North America demonstrates the disturbance created by their sudden absence (Mann, 2002). "Plant and animal populations have been more stable, and more diverse, where human populations have been stable and resident" (Daggett, 2005, p. 29). In order to maintain an optimal state with high levels of biodiversity, some ecosystems require periodic disturbance; in the absence of informed human management, certain landscapes are undergoing change. Humans, at one time, played a role in maintaining biodiversity and ecosystems; today, we have forgotten how to fulfill this role (Anderson and Barbour, 2003; Mann, 2002).

The latter view, of man as dominant over nature, has been the primary narrative in the western world since the time of Bacon and Descartes, who viewed nature as important primarily for its instrumental value in serving man (Zweers, 2000; Kaufmann, 2008). The nature-society dualism has been traced back to monotheistic beliefs, which view God as separate from nature, as opposed to earlier traditions in which gods had been nature-based. God's presence outside of nature justified a similar behavior for humans (Merchant, 2013). The rise of science and reason associated with modern times furthered the split, as nature became reduced to knowable bits, thereby losing its magic and wonder. The reductionist view, which has come to permeate our ways of thinking, makes us forget the broader picture and its meanings, as we focus on the minutiae of everyday life. Our new world is one of control and mastery, of abstractions and ideas, and an active march forward in an ever changing world, one in which discontinuity characterizes the relationship between the industrial human and

nature beyond. This conceptual epistemology must be replaced by a new view, that which is embodied (Kidner, 2012). A worldview in which the human is embedded in the universe, with an attachment to and satisfaction with things as they are, one in which empathy trumps control, is one in which the intelligence of the world takes priority over the presumptuous intelligence of the individual (Kidner, 2012).

2.3.2 Business as Usual or a New Approach?

The mainstream environmental discourse of sustainable development allows us to move forward with the belief that we can continue living in the same destructive ways; that capitalism and ecology may be reconciled through technology and ingenuity, allowing us to live the same lifestyle through different means (Dryzek, 2005; Sutton, 2004; Kidner, 2012; Kunstler, 2012). Although this idea is comforting, it is unrealistic. Numerous threats place pressure on our highly complex society: global inequality, a prospective end to the era of cheap energy, and thresholds that threaten the integrity of the biosphere (Homer-Dixon, 2006; Rockstrom, 2009). Systems cannot grow and complexify indefinitely, rather, they follow adaptive cycles (see Figure 2.1) of growth (exploitation), collapse (release) and reorganization, followed by growth again (Holling, 2001; Homer-Dixon, 2006). If humans were immune to the laws of nature, as we like to believe, then perhaps this process would not apply to us. We are, however, very much subject to these same rules, indicating the inevitably of contraction. With a growth-at-all-costs mindset, we do not permit small releases or contractions to take place, using our ingenuity and technology to bypass this stage, enabling continued growth and complexity. As a system grows, it also becomes less resilient to external shocks; by engineering our world and unnaturally extending the growth phase of the cycle, we have created a system which is highly interconnected, brittle, and non-resilient; making the inevitable collapse phase of the cycle likely to be much more extreme and destructive as our society is forced back toward equilibrium (Homer-Dixon, 2006). Clearly, we cannot continue living in this way, continually seeking to expand

and grow with no regard to limits or adaptive cycles. We must find a way to manage the contraction of society as we either seek or are forced to transition to a new worldview and way of life (Kunstler, 2012).

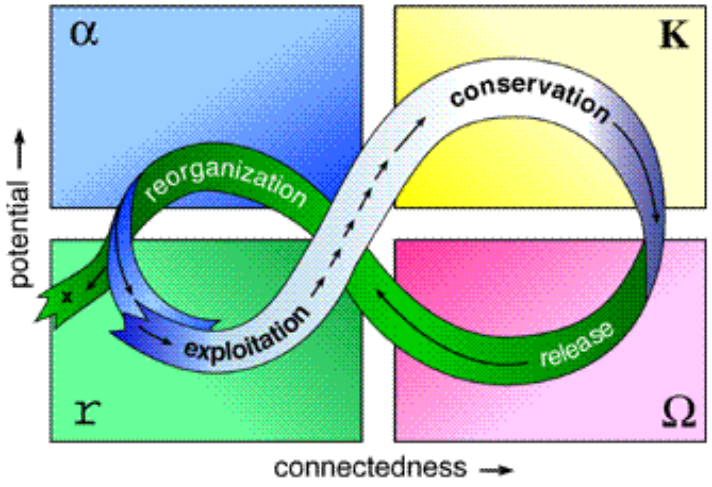

Figure 2.1 Phases of the adaptive cycle (Gunderson and Holling, 2001).

Any movement toward a true sustainability will require paradigmatic shifts in our cultural worldview, away from the pathological growth-oriented mindset that places humans above and outside of nature, capable of controlling and engineering the world to suit our preferences. "In short, what will crucially determine the survival (or not) of homo *sapiens industrialiensi*s is whether the society that has 'grown out of our brains' is terminally alienated from the natural order, or whether it can rediscover its foundations in the natural world" (Kidner, 2012, p. 221). A new cultural narrative must be developed in which the relationship between humans and nature is redefined as a partnership with mutual obligations (Merchant, 2013), necessitating the extension of rights from humans to animals to land (Leopold, 1949). This revolution of culture will require participation in nature, not reducing it to facts and figures, but finding meaning in the landscape around us, and incorporating that meaning into our worldview for the future (Zweers, 2000). Nature connectedness can perhaps work to heal the fissures that modernity has opened up; its therapeutic effects may offer an antidote to anomie,

disenchantment, and the rampant alienation from our world. Re-embedding ourselves in nature could provide a foundation for renewing the sorts of literal and symbolic meaning making strategies which were common to pre-industrial societies.

2.3.3 Nature as Therapy

Spending time outdoors in natural settings has been shown to have positive impacts on body and mind. Perhaps this can be attributed, in part, to a deep remembering which is still present in our genes, little changed from our days as hunter-gatherers of the Pleistocene (Shepard, 1998). Today, living far from green space has been associated with negative impacts on health, stress level, and general wellbeing (Selhub and Logan, 2012). Nature based therapy has been successful in reducing depression, which, along with anxiety and schizophrenia, occurs at a higher rate amongst urban dwellers. Not only is time outdoors beneficial on an individual level, but there is also reason to believe that spending time in nature fosters a stronger environmental ethic as well (Selhub and Logan, 2012; Louv, 2008). Children who grew up with an active engagement in outdoor activities, such as gardening, were more likely to report natural elements, such as trees, as being personally meaningful to them (Lohr and Pearson-Mims, 2005). Growing up without access to natural areas for play has even been termed "nature deficit disorder", implying the negative psychological impacts of this disconnection from the outdoors (Louv, 2008).

2.3.4 Nature as Enchantment

As detailed previously, the emergence of the rational, reductionist view has created a world largely devoid of wonder, magic and meaning (Berman, 1988). As Weber (1958) stated, "increasing rationalization and intellectualization . . . means that principally there are no mysterious incalculable forces that come into play, but rather that one can, in principle, master all things by calculation. This means that the world is disenchanted" (p. 139). Civilization's role in separating humans from that which is natural and wild has also been attributed to the removal of magic from the world, a magic

which is deeply needed (Kowalewski, 2000, p.75). Nature as a source of enchantment and wonder is evident in George Monbiot's description of time spent outdoors:

> "my reasons arise from my delight in the marvels of nature, its richness and its limitless capacity to surprise; from the sense of freedom, of the thrill that comes from roaming in a landscape or seascape without knowing what I might see next, what might loom from the woods or water, what might be watching me without my knowledge. It is the sense that without these animals the ecosystem is lopsided, abridged, dysfunctional. I can produce reasons scientific, economic, historic, and hygienic, but none of those describe my motivation" (2013, p. 106).

There has been, in recent decades, a re-awakening of interest and engagement with land (Monbiot, 2013). A newfound connectedness can offer a source of enchantment as we immerse ourselves in the world in which our ancestors found wonder and meaning (Sutton, 2004; Holmgren, 1999). We too can seek a worldview of this type, anchoring ourselves into our surroundings.

2.3.5 A New Environmental Worldview

Becker suggests that cultural worldviews can be analyzed based upon their ability to fulfill psychological needs while minimizing costs to others and future generations (1971). Assessing our own culture in this way reveals significant shortcomings; "strong valuing of wealth and possessions is associated with lower well-being, worse interpersonal relationships, and a lower quality of life" (Kasser and Sheldon, 2000, p. 351). Materialism does not adequately meet human needs for security, relatedness, and autonomy (Arndt *et al*., 2004). Clearly, wealth and status cannot fulfill psychological needs; materialistic values are associated with lower quality of life with regard to relationship quality, self-esteem and life satisfaction. This worldview is associated with being manipulative, competitive, anti-social, and narcissistic; in addition to creating issues such as anxiety, depression, and substance abuse. The development of therapies to shift values away from materialism has been proposed; this

would require new values to replace old ones (Kasser *et al*., 2004). If appropriate cultural norms are in place, then striving to bolster self-esteem through cultural adherence may lead to non-materialistic, pro-environmental behavior (Arndt *et al*., 2004). Thus, it may be possible to create a more sustainable world by consciously and creatively developing new cultural norms and shifting the mindsets of individuals to strive to enact such a culture. Cultural memes must be spread by people; they will not successfully take hold and perpetuate themselves if forced upon citizens through laws, rules, and regulations (Csikszentmihalyi, 1993; Dawkins, 1976). As Quinn stated in his novel, *Ishmael*, "You can't change these things with *laws*. You must change people's *minds*. And you can't just root out a harmful complex of ideas and leave a void behind; you have to give people something that is as meaningful as what they've lost" (Quinn, 1992, p. 249).

New norms ought to fulfill psychological needs for meaning, belonging and purpose, while creating a world which prioritizes and extends equality to people, animals, and land, both in the present and future. A new environmentalism based upon a deep embeddedness with land and nature may fit the bill here; changing our perceptions of our place in the world has the potential to encourage a positive environmentalism (Monbiot, 2013). "If we do not see ourselves as part of the natural world and become further detached, we risk a greater sense of loneliness, a lack of meaning, purpose and sense of belonging. Without experiences in nature, we develop ignorance and apathy" (Suzuki, 2007, p. 261).

It has been suggested that the environmental crises we face today are the result of alienation from nature; we are no longer able to directly witness the connection our actions have on the environment, a phenomenon which may be attributable, in part, to life in modern, industrial society (Zweers, 2000). For example, the origin of our food and water are no longer immediately obvious, and industrial food production necessitates the emissions of climate-altering greenhouse gases for production, storage, and shipment. Additionally, the habitat destruction and use of toxic chemicals, which are

commonplace in commercial agriculture operations, remain blissfully out of sight for most of us. Many people do understand theoretically that our actions are environmentally detrimental, but utilize defense mechanisms such as rationalization, denial, displacement, and emotional distancing from the problem. For example, one may rationalize that everyone has to eat something, and that purchasing conventional food is no worse than what anyone else is doing. Keeping the focus on short-term thinking prevents some of the anxiety associated with considering the impacts of our actions on the longer-term future (Dickinson, 2009). The disembedding of humans from the natural world has been viewed as the root of the environmental crisis, due to the fact that people are no longer able to relate to, understand, or participate with their surroundings on a more personal level (Zweers, 2000). Obtaining food through foraging, fishing, or hunting allows us to physically assimilate the natural world; in so doing, we are able to "identify with nature and the land in the deepest way possible" (Kowlewski, 2010, p. 146). Thus, renewing a visceral connection to our food may be the ground zero for re-embedding ourselves into the natural world. Food is a universal aspect of human life; regaining an intimate, hands-on connection to nature as a source of sustenance allows us to better understand our total dependence, resulting in a heightened environmental ethic (Kowalewski, 2010, p. 146). "Severing a deep connection with nature enables its exploitation --it is easy to hurt what is not a part of you. Humans stopped belonging to the earth as the earth started belonging to humans--it became real estate" (Kowaleski, 2000, p.9). However, when we come to know, experience, and ingest a particular place, we begin to identify with it, seeing the linkages between healthy land and our own wellbeing. Once we can view things in this way, we naturally come to care for and protect them (Kidner, 2012). "Perhaps one key to sustainable living is for all of us to become rooted to a place and, if we don't have them at first, to evolve our own stories about our relationships to our special places and to the trees and other life forms that live there" (Turner, 2005, p.67).

2.3.6 In Support of an Ecological Worldview

The status of nature as "other" is problematic for ecological and psychological reasons, and necessitates the consideration of alternative worldviews in which humans can sustainably coexist as a functioning part of the Earth. Several concepts support the idea of an ecological worldview, including that of the land ethic (Aldo Leopold), the Gaia hypothesis (James Lovelock), Deep Ecology (Arne Naess), biophilia (E.O. Wilson), and bioregionalism. These offer some possibilities for re-envisioning a new set of memes which would allow for the development of an ecologically-sound worldview which is more in keeping with Becker's suggestions for a psychologically healthy culture.

The land ethic, as proposed by Aldo Leopold in the late 1940s, suggests extending moral and ethical consideration to the land and all of its inhabitants by agreeing upon their right to continued existence, effectively extending the boundaries of our community (Leopold, 1949; Nash, 1989). The need for a responsible and harmonious relationship between man and land is emphasized, while realizing land is not meant to be possessed, nor is it appropriate to make the conservation of it an economic decision. The concept of land as a commodity meant to serve humans is incorrect; instead, respect must be extended to the natural world. Leopold identifies a tradeoff between the comforts obtained through modern progress, versus the freedom to be found in wild spaces. Although Leopold's view mandated the respect and preservation of wilderness, he also believed people ought to play a role there, rather than being separated from it, as evidenced by his direct interactions with land and wildlife, particularly through hunting (Leopold, 1949).

Deep Ecology, developed by Arne Naess in the 1970s, furthered this thinking, taking a more spiritual approach to the land, holding Earth and life as sacred and placing intrinsic value upon nature, while being critical of "shallow" environmentalism and the utilitarian view of natural resources (Taylor, 2001). Radical environmentalism can trace its roots to this philosophy. Deep ecologists hold that Earth and all life forms have the right to flourish, irrespective of their utility value to humans, and that

human culture should reflect this belief through population control, policy change, simple living, and finding non-consumerist ways to define quality of life (Zweers, 2000; Sutton, 2004). A spiritual connection to the Earth is emphasized in Deep Ecology (Taylor, 2001).

The concept of bioregionalism emphasizes the importance of "becoming native to a place through becoming aware of the particular ecological relationships that operate within and around it" (Berg and Dasmann, 1977, p. 399). "A bioregion refers both to geographical terrain and a terrain of consciousness -- to a place and the ideas that have developed about how to live in that place" (Berg and Dasmann, 1977, p. 399). Bioregional thinking encourages us to consider the best way to inhabit a specific area, with the realization that different areas have different needs. The underlying goal is to maintain continuity and balance between people, local biota, and planetary cycles, which contributes to ecological and social sustainability. The tenets of bioregionalism indicate that human action should serve to enrich or restore an area, and that humans can see themselves as members of this system (Berg and Dasmann, 1977).

The Gaia Hypothesis is based upon the concept of interconnectivity, providing a scientific interpretation of Earth as a single, interconnected organism which maintains highly anomalous, life-enabling homeostasis through feedback loops (Lovelock, 2000). James Lovelock, the originator of this hypothesis, indicated the complexity of Gaia may be beyond human comprehension, and that even in spite of human damages, Gaia will continue to function, regardless of whether future states are conducive to human life (2000). The Gaia Hypothesis indicates the Earth's ability to transcend human action, thereby demonstrating the vulnerability of our species. This vulnerability necessitates that we seek a partnership with the Earth, in order to promote the comfortable continuity of our species.

Biophilia is defined by E.O. Wilson as "the innately emotional affiliation of human beings to other living organisms" (1993, p. 37). This desire to interact and connect with other life forms is thought to

be a product of biological evolution; however, this urge is suppressed in the modern age, and interaction with non-human life is primarily relegated to gardens, parks, and zoos. The inaccessibility of nature serves to maintain and further the alienation of humans from the environment, contributing to a lessened ecological awareness across our society (Wilson, 1993; Suzuki, 2007). The "separation from nature is the primary alienation, from which all others derive" (Kowalewski, 2000, p. 109); this split might be remedied through experiencing wilderness and rediscovering our ecological selves (Du Nann Winter, 2004; Sutton, 2004). Strumse (2007) describes the concept of an ecological self as a form of identity in which the "environment is no longer something that can easily be detached from the person, because the detachment itself turns the person into something else. Also, changes in the environment would be perceived as changes in the self" (p.13). This ecocentric view, which re-envisions our relationship to the Earth, is a core concept within Deep Ecology (Sutton, 2004). Adopting an ecocentric view, however, is made difficult by modern society's primary understanding of nature as "other". Although difficult, restoring the view of humans as part of the natural world is worth pursuing. When we come to view our identities as being intimately tied to nature, we can begin to "exhibit the same degree of care for the environment as for oneself, thus, a threat towards the environment is perceived as a threat against the self" (Strume, 2007, p. 14). The development of an ecological self enhances an individual's ability to identify with nature, and thereby increases one's desire to act protectively toward it, as they would a family member or friend (Sutton, 2004). A rootedness into ecosystems allows for a reconnection between alienated moderns with the natural world, as well as internal human nature, through a process of de-domestication (Sutton, 2004; Kowaleski, 2000). "To de-domesticate themselves, humans need to reconnect with nature in a deep way" (Kowalewski, 2000, p. 25).

Zweers argues the philosophy of placing intrinsic value on nature and the Earth is too intellectual to be readily applicable for daily life. Instead, the promotion of an intuitive and practical understanding

of nature, gained through direct experience, leads to its valuation, and thereby a sense of responsibility for its protection (Zweers, 2000). Experiencing the natural world through the senses of the body, rather than relying upon rational, intellectual arguments for conservation allows us to regain a pre-cognitive, somatic appreciation for our place within the natural world (Berman, 1989). Transforming our individual and collective ways of thinking about our relation to nature is key for creating a new set of ecological values (Sutton, 2004).

2.3.7 Conclusions on an Ecological Worldview

The modern, individualistic, consumer-based lifestyle is ecologically, socially, and psychologically problematic. We have become disembedded from nature, community, and authentic somatic experiences; we lead deracinated lives. Of particular concern is our alienated, dualistic conception of nature, which is a primary contributor to modern environmental crises (Sutton, 2004). A paradigmatic shift toward an embedded view of our role within nature may be key in developing a cultural worldview which is both psychologically satisfactory as well as ecologically sustainable. Nature can serve as a source of modern enchantment; we can seek meaning and belonging by connecting ourselves to it. The concepts of biophilia, the land ethic, bioregionalism, the Gaia hypothesis, and Deep Ecology offer support for a new cultural narrative based upon an integration of humans into the biosphere, while encouraging values of respect and belonging. Fostering a deep, interactive connection to nature would allow these concepts to become embodied within human society. Such a connection can be achieved in a somatic, pre-cognitive way; foraging offers an accessible and non-abstract way of restoring an authentic relationship between people, food, and nature.

2.4 Foraging as Strategy for Re-embedding?

The concept of re-embedding ourselves into nature and connecting with it on a deeply personal level is a critical element for shifting our worldview to something which will sustain us and the planet well into the future. However, the concept of “re-embedding” or “connecting to nature” is a bit abstract.

While this concept may appear to be an attractive avenue for pursuing a new worldview of social and ecological sustainability, it may not be obvious what exactly needs to be done to work towards it. Therefore, the purpose of this study is to investigate the potential for the activity of foraging for wild edible plants to serve as a concrete action in this direction.

Foraging provides a direct link between people and their local ecosystems; ingestion of wild plants (or animals) is a deep form of connection and empowerment, and encourages full respect for nature (Kowaleski, 2000). Food is a universal aspect of human experience; by obtaining sustenance from nature, we restore relationships with the land that supports us. Assuming a role as an "active and direct player in the ecosystem… can make us sensitive to Earth's needs and dynamics, to the damage we are doing to the planet and its life" (Turner, 2005, p. 27).

2.4.1 The Status of Contemporary Foraging in North America

Foraging for wild plant foods, along with hunting and scavenging, provided sustenance for our ancestors throughout much of the course of human evolution. These practices began shifting approximately 10,000-15,000 years ago, during the Neolithic Revolution, when human societies began to replace the foraging tradition with agricultural practices, including the domestication of plants and animals (Crowther, 2003; Barker, 2009). The reason for a prehistoric shift from foraging to farming, which necessitated a more sedentary lifestyle, is still contested. A more thorough discussion of this shift is detailed in section 2.1.1.

Although foraging has supported human societies for approximately 99% of our existence on planet earth (Kent, 1996), a review of the academic literature reveals a gap in the discussion of foraging as a modern phenomenon in North America. A search of the following databases was conducted: Scopus (Elsevier), Web of Science, GALE, PubMed, Springer Link, JSTOR, Wiley, and ProQuest, amongst others, using search terms such as "wild edible", "foraging", and "wildcraft". The results were predominantly referring to nonhuman animal behaviors, chemical and nutritional composition of wild

plants and fungi, as well as ethnobotanical information detailing indigenous uses of plants (both past and present). Ethnobotanical knowledge for some areas of the United States and Canada is quite rich, particularly for the Pacific Northwest, but other areas are largely neglected. A small handful of articles also exist with regard to the foraging practices of non-indigenous peoples outside of the United States (ex: Sweden, Poland, Italy, Kenya, India, China, etc.). In the United States, data on non-indigenous people who are involved in gathering wild plants is scarce. This suggests foraging is less commonly practiced in the United States than in other countries, although there is evidence of a foraging subculture in specific regions, such as Appalachia (Wigginton, 1999). Foraging remains more acceptable and mainstream in other parts of the world; even in Europe, berry picking and mushroom hunting are practiced more regularly than in the United States. Despite a lack of research specifically pertaining to foragers in the United States, some information can be gleaned by reviewing the literature related to the harvest of non-timber forest products (NTFPs), which encompasses wild edibles along with items utilized for medicinal, decorative, and cultural or religious purposes. These harvesters are variously referred to as "wildcrafters" or "gatherers" and may engage in harvesting professionally, recreationally, or both. The recreational sector appears to be growing, with individuals said to be motivated by reasons of culture, science, leisure/recreation, subsistence/self-sufficiency, economics, nutrition, community building, spiritual wellness, connection to nature, a desire for hyper-local foods, and as a form of political statement (Vaughn *et al*., 2013; Poe *et al*., 2013). Family forest owners are engaged in collection of non-timber forest products as well, with an 18% participation rate (Butler, 2008). In the New England states, it was found that 26.3% of the general population had gathered something from the forest or other wild places within the past five years, and that 17.9% of the population had done so within the past year. A surprisingly high percentage of these gatherers, 61.5%, collected edible species. Over half (55.6%) of all gatherers included in this survey were located in an urban area, rather than a rural one (44.4%) (Robbins, *et al*. 2008). Likewise, interviews

of urban foragers in the city of Seattle demonstrate the importance of access to wild foods for urban dwellers; 95% of NTFP gatherers there are seeking edible plants (Poe *et al*., 2013). Wild foods can also be procured through hunting or fishing; approximately 6% of the United States population hunts and 16% participate in recreational fishing (USFWS, 2011; The Outdoor Foundation, 2014). One hunter, Don Funke, indicates that hunting provides "connections to the earth", "to family", and to a "hunter-gatherer past" (Funke, 2013). An assessment of how hunting and fishing may bridge the gap between humans and nature would certainly be worthwhile; however, it is outside the scope of the present study.

The demographics of foragers, what they are collecting, and their purposes for doing so have not received much research attention (Robbins, *et al*. 2008). Available data, however, suggest that edible species are being collected in sizeable quantities. In 2007, "approximately 1.6 million pounds and an additional 250 bushels of edible fruits, nuts, berries, and sap were permitted for harvest on" National Forest Service lands. An additional 1.3 million gallons of maple syrup were also produced during the same period (USDA Forest Service, 2011).

Forest managers are becoming increasingly concerned about the sustainability impacts and implications of unregulated harvesting. These fears may not be fully founded; the dominant narrative suggests that negative impacts are always associated with harvesting wild plant matter; however, the sustainability of harvesting is context dependent. Some plant species can easily tolerate (and even thrive) with regular harvest, while others require more careful consideration (Shackleton *et al*., 2015; Kowalewski, 2010). Good harvesters are knowledgeable about sustainable and ethical practices, and could provide forest managers with useful information for tracking plant populations (Letchworth, 2001; Vaughn *et al*., 2013).

Although demographic information on foragers is sparse, a large amount of knowledge on the edibility of wild plants is available through books, social media groups, and educational plant hikes.

A resurgent interest in foraging for wild plant foods is evidenced by the growing number of businesses, restaurants, blogs, and events dedicated to the topic. A list of examples can be found in appendix A.

The rate of foraging is thought to have declined after World War II, as United States citizens lost connection to the outdoors and commercial agriculture took hold more strongly. Agribusiness, industrialization and population growth diminished access to nature; in spite of this, edible wild plants still surround us, even in urban areas (McPherson and Clark, 2007). Interest in foraging was renewed with the popularization of the late Euell Gibbon's initial publication on the topic; *Stalking the Wild Asparagus*, in 1962. Books on foraging provide a wealth of information on strategies for proper identification, harvesting, and preparation, as well as guidelines for safe foraging. They also provide a strong case for learning to forage for oneself: unique flavors, exceptional nutrition, food security, the economic value of free food, environmental preservation, and fun (Thayer, 2006; Thayer, 2010; Meredith, 2014; Zachos, 2013).

Social media groups dedicated to wild plants create communities of individuals who share knowledge about identification, edible and medicinal uses, and guidelines for harvesting and preparation. The "Edible Wild Plants" group on Facebook, at the time of writing, had nearly 45,000 members. It is not possible to determine how many of these members are from North America, however, the fact that it caters to English speakers is somewhat telling. In addition, the "Midwest Wild Edibles and Foragers Society" page has more than 5,000 members. Other pages related to foraging also had thousands of members, such as "Foragers Unite!" (9,200+ members), "Foraging and Feasting" (11,500+ members), and "Foraging Wild Edible Plants and Medicinal Herbs" (3,700+ members). This level of interest demonstrates the activity of foraging is alive and well in twenty-first century North America.

2.4.2 Foragers on Magic, Joy, Spirituality, and Place

"It is no wonder that we are taught to close off our senses to Nature. Through these channels, the green paws of Nature enter into us, climb over us, search within us, find all our hiding places, burst us open, and blind the intellectual eye with hanging tendrils of green. The terror is an illusion, of course. For most of our million years on this planet human beings have daily eaten the wild. It's just that the linear mind knows what will happen if you eat it now." -Steven Buhner (The Secret Teachings of Plants)

Foraging guidebooks provide a wealth of information on the "how-to" aspect of identifying and harvesting plants, but the authors also frequently, and perhaps unexpectedly, comment on that which is less tangible. In *Nature's Garden*, Samuel Thayer laments the alienation of people from the environment and the failures of mainstream environmentalism to address this divide. Distance from the natural world is reflected in both its destruction for profit, as well as in its idealization and preservation. Interacting directly with nature in a positive way is a better strategy for environmental protection, as this promotes attachment rather than indifference (Thayer, 2010). Euell Gibbons expressed a similar sentiment, equating the non-use of natural areas with ignorance and indifference toward the natural world, rather than improved conservation outcomes. Living a "too-civilized life" makes encounters with nature feel traumatic (Gibbons, 1966). Rather than taking a "hands-off" approach to nature, our environmental goals would be better served through direct participation, as Thayer indicates, "only participation in Nature can produce the intimate knowledge necessary to guide us in establishing a sustainable lifestyle" (Thayer, 2010, p. 21).

Experienced foragers feel that by eating what the Earth provides, their connection is deepened and enhanced, allowing them to feel more fully human while recognizing their place in the world. Hank Shaw commented,

> "I am not content to merely be a spectator in nature. I feel compelled to play the part humans were born to play. Gathering acorns. Picking berries. Digging Clams. Hunting Birds. These are active pursuits that bring me closer to nature and make me deeply aware that we are all part of the natural world. We cannot live outside nature, as estranged as we may feel

> sometimes, living in cities or subdivisions. The natural world is not a museum, filled with exhibits to be looked at but never touched. It is our home." (2011, viii).

In order to forage successfully, one must be attuned to a place and actively participate with it. The uniqueness of an area is reflected by what wild plants grow there; each location has a different taste (Meredith, 2014). "If you forage in a place for more than one year, you will come to know what is in season when, and where to find it, in a way that intimately ties you to that landscape" (Meredith, 2014, p. 13). Several foraging authors refer to this activity as being joyful, magical, or spiritual, while offering a deep connection and relationship to their surroundings (Shaw, 2011; Thayer, 2010; Gibbons, 1966; Matsuoka Wong and Leroux, 2012; McPherson and Clark, 2007; Kowaleski, 2000). Thayer (2010) suggests, "foraging turns the ordinary woods into something sacred" (p. 12). Such feelings aid in the development of an appreciation for the wild and a stronger desire to care for it (Thayer, 2010; McPherson and Clark, 2007). Conversely, when one does not have knowledge or a relationship to the biota surrounding them, it becomes easy to destroy it through ignorance (Gibbons, 1966).

2.4.3 Conclusions on Foraging

It is for all of these reasons: a heightened sense of place, an understanding of one's role in nature, feelings of joy and magic, and a sense of spirituality or sacredness, that foraging deserves more attention as a possible avenue for re-enchantment and as part of the foundation for an ecological worldview. Euell Gibbons seems to suggest that foraging and other traditional skills provide an escape from struggles of disenchanted modern life, referring to these activities as a "creative protest against the artificiality of our daily lives" (1962, p.2)

The act of acquiring sustenance from the wild may be uniquely powerful in strengthening our ecological conscience. Thayer indicates that foraging is key; "if we are to care for the wild, we must maintain a relationship with it. There is one fundamental way to do this: eating from Nature's

Garden" (2010, p. 12). For this reason, the remainder of this thesis seeks to investigate the attitudes and beliefs of foragers, to better understand their worldviews and perspectives on the environment, as well as to simply characterize foragers as a unique and interesting population.

2.5 Conceptual Framework

The overarching goal of the literature review was to reveal the root of modern environmental issues, comment on the continued failure of the environmental movement, demonstrate the need for an ecological worldview, and introduce one concrete suggestion, foraging, which might serve as a starting point for change.

The brief history on the emergence of modern society, and the associated implications revealed by the sociology literature, provide a context for understanding how modernity has contributed to changes in ecological, psychological, and social dimensions. There is a widespread desire to reject modernity and recover an ecocentric relation to nature in order to restore that which we have lost; however, this is made difficult by the rational, individualized social conditions which promote a disenchanted, consumer-based culture. Additionally, the changed, dualistic relationship between humans and nature is problematic with regard to environmental sustainability. Terror management theory implies that by seeking meaning, purpose, and self-esteem through consumer-based hero projects, we remain entrenched in an ecologically damaging cultural worldview. By ignoring these psychological needs, mainstream environmentalism has failed to gain traction; addressing environmental issues by making personally meaningful appeals is far more likely to succeed in changing behaviors and values. One such strategy is the promotion of reconnection to nature; nature-based meaning making strategies have been successful historically. Concepts in the environmental literature, such as Deep Ecology and biophilia, suggest that changing our conception of the human-nature relationship (from dualistic

to embedded) restores our ability to find meaning and enchantment in the natural world, leading to improved environmental outcomes.

By pulling these three literatures together, it becomes evident that our modern worldview is, in many ways, unsatisfactory and that a paradigmatic shift toward an ecological worldview is needed. Such a worldview would seek to reject and move beyond modernity and restore authentic relationships between nature, self, food, and others, while providing an ecologically benign strategy for seeking meaning and purpose. These three literatures frame an analysis of the data which searches for evidence that foraging is a reaction to modernization and serves as a project for recovering authentic relationships to food and nature by restoring a meaningful, enchanted connection to the Earth. Figure 2.2 offers a visual representation of how the three main areas of literature overlap to indicate a need for an enchanted, postmodern, ecological worldview, and how foraging may generate values in support of this.

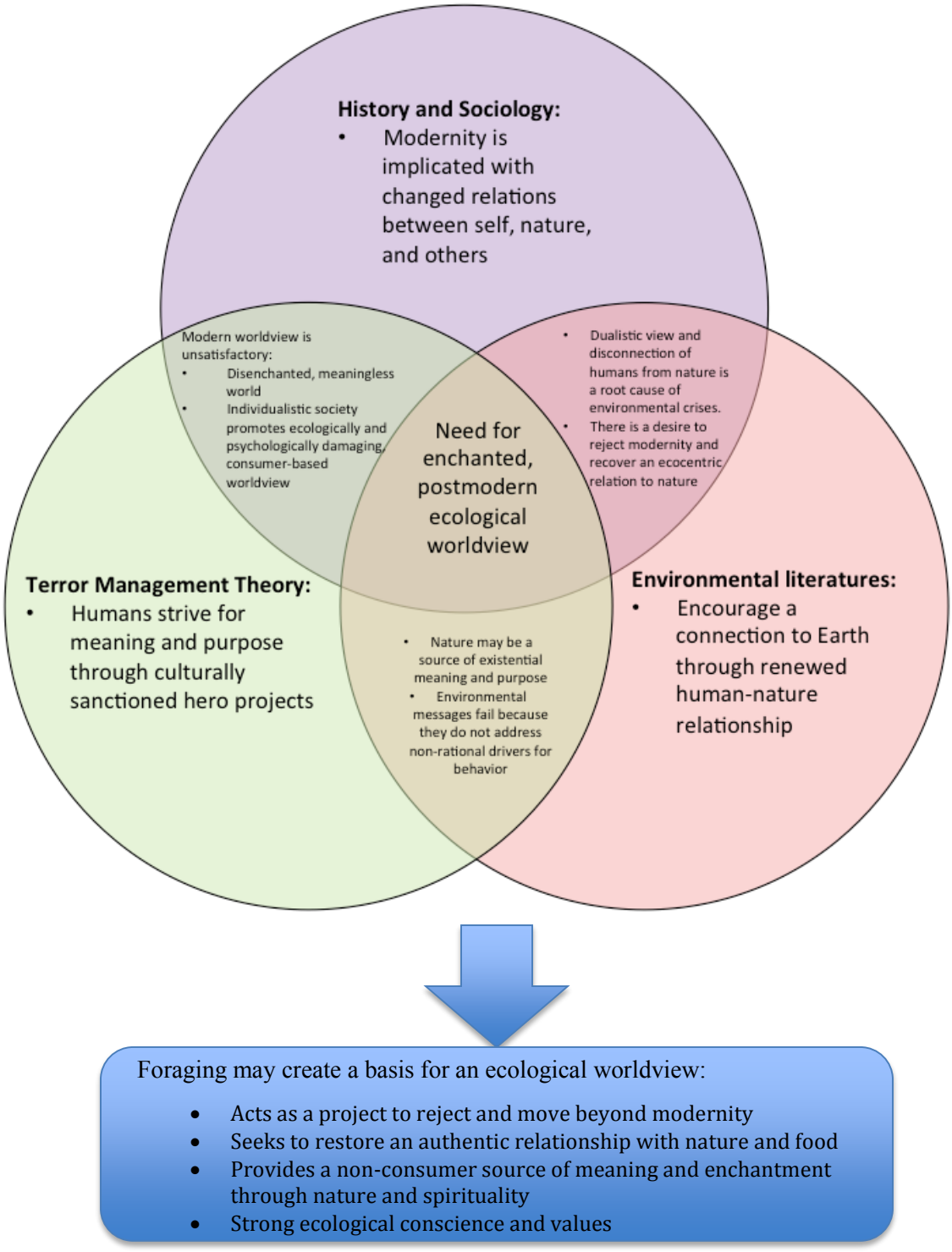

Figure 2.2 Conceptual framework

Chapter 3: Methods

This chapter will address the overall research design, as well as the methods utilized in this study, including semi-structured interviews, autoethnography, and surveys. Utilizing a mixed methods approach makes for a more comprehensive study (Ritchie, 2003). I elected to utilize both qualitative and quantitative approaches in order to explore the thoughts, attitudes, values and beliefs of foragers, while gaining numerical data in order to effectively and concisely describe the surveyed population.

3.1 General Research Approach

The general approach to this research has taken the form of an exploratory case study. Exploratory research is meant to clarify and gain an understanding of a problem, and to generate hypotheses rather than test them (Palys, 2008). This type of work can be contrasted with descriptive and explanatory approaches. Descriptive research works to gain statistically accurate accounts of events, people, or situations (Robson, 1993). Explanatory approaches, on the other hand, examine "the reasons for, or associations between, what exists" (Ritchie, 2003, p. 27).

A case study is defined as "an in-depth exploration of a particular context" which helps to "explain the 'how and why' of a phenomenon" and is driven by a "desire to find out 'what is happening' in that context" (Hammond and Wellington, 2013, p. 17-18). The case study follows an inductive approach, in which theory is built based upon observations (Hammond and Wellington, 2013). Thus, an exploratory case study is intended to explore and gain a new understanding of a phenomenon within a specific context. In this research design, it is important to gather a variety of views by speaking with a broad array of participants. To effectively explore a situation, the researcher must become close to the participants in order to understand their perceptions of the world. This closeness contributes to the validity of the research (Palys, 2008).

This study is guided by a constructivist perspective, which holds that truths cannot be discovered, but rather, are socially constructed, context-dependent, and based upon varying perspectives (Palys, 2008). There are multiple ways of interpreting the world, and the meanings we construct are based upon our own language and history. In a constructivist approach, the researcher must look beyond appearances and that which is taken for granted (Hammond and Wellington, 2013). In this way, the researcher must challenge his or her assumptions about the world. This can be achieved through transparency with regard to one's own background, and how that history has played a role in shaping one's beliefs and assumptions.

3.2 Locating the Researcher

My early aim as a researcher was broad; I wanted to work in an area that would have positive environmental impacts. I found myself, several years later, working in environmental microbiology research; however, in spite of the merits of that work, I possessed a much deeper curiosity. I was puzzled and frustrated with regard to the failures of the environmental movement, in which I had initially, as a younger person, had so much hope. I left microbiology with the intention of discovering why, given so much scientific evidence, our culture remained lodged in a pattern of failure, and what, if anything, could be done about it. Around this same time, I developed an avid interest in foraging, likely as an extension of my prior interest in nature. My understanding of and participation within both the environmental movement and the foraging community have informed my approach to this research.

The assumptions I hold have also shaped my approach to this topic. In particular, I believe that modern human action has negatively impacted the health of the planet, and that a continuation of our present actions may eventually render it inhospitable for human life. Based on these assumptions, this research reflects my attempts to understand how history has shaped our modern experience of the

world and how we might act to positively change our present situation. In keeping with the constructivist research paradigm, I recognize that others may experience the world differently, and have likely drawn different conclusions based on their own assumptions. My aim in this study is to present how I, as a young, environmentally aware Caucasian woman living in North America, view and interpret these issues.

3.3 Evolution of the Research Design

This research grew out of my own interests, observations, and questions about the world with the goal of contributing something to the conversation on how we, as a culture, might achieve deeper sustainability. My recently discovered interest in foraging caused me to question whether this activity might contribute to the formation of an ecological conscience. Could foraging develop a deeper awareness of the natural world, and if so, might that awareness lead to positive environmental action? Based upon the research objectives (as detailed in Chapter 1), I developed a survey questionnaire and interview guide to explore how foragers perceive this activity, and to examine their perspectives and relationship to the natural world. The survey and interview guide, along with consent forms, information letters, and recruitment protocol were submitted to the University of Waterloo Office of Research Ethics (ORE). The ORE provided comments and feedback as part of a review process; the necessary edits were made and all documents and procedures received full ethics clearance prior to undertaking the research.

3.4 Qualitative and Quantitative Research

Qualitative research provides "an in-depth and interpreted understanding of the social world, by learning about people's social and material circumstances, their experiences, perspectives, and histories", and by exploring the "meanings that people attach to their own experiences" (Snape and

Spencer, 2003, p. 22). Qualitative approaches are useful when exploring complex issues, processes that occur over time, and when seeking to understand and explain social phenomena and their contexts (Snape and Spencer, 2003). Semi-structured interviews and autoethnography are two qualitative methods utilized in this research. In contrast to the depth provided by qualitative research methods, quantitative approaches provide breadth (Greener, 2011). Statistical information pertaining to foragers as a population is generally lacking, due to the limited research attention they have historically received. In order to provide a basic characterization, a number of quantitative survey questions were administered.

3.5 Data Collection Methods

The three methods of data collection for this study were semi-structured interviews, surveys, and autoethnography. The following sections describe each of these methods in further detail.

3.5.1 Qualitative Semi-structured Interviews

The semi-structured interview is a qualitative research technique through which a wide variety of research interests can be addressed. This exploratory approach focuses on the viewpoint of each participant, allowing a researcher to gain an understanding of a group or community, an event, a culture, beliefs, values, and attitudes (Bryman, 2001). Semi-structured interviews utilize a list of open-ended questions; each participant is asked the same types of questions although the researcher may improvise by utilizing probes, or follow-up questions, to delve into new topics as they arise. The flexibility of this structure allows researchers to follow potentially important tangents, while allowing participants to speak about what they find most important (Yin, 2009; Bryman, 2001). During the interviews, the researcher must avoid offering unintentional verbal or non-verbal cues, as this could introduce reactive bias, in which an interviewee is led to respond differently than they otherwise would have (Yin, 2009; Bryman, 2001).

The semi-structured interview exists on a spectrum between unstructured and structured interview approaches. The unstructured interview is typically conversational with minimal or no adherence to an interview guide. In contrast, structured interviews are based upon a set of specific questions with no alterations or probes permitted (Gray, 2009; Bryman, 2001; Hammond and Wellington, 2013). For this research endeavor, a semi-structured interview approach was selected as the primary method, as it enables the collection of detailed, participant-driven responses whilst readily enabling comparison of data across participants. It is also appropriate as an exploratory method, which was important in this scenario, given the research's aim of understanding the value and meaning foragers place upon this activity. Thus, an approach in which the participants were allowed enough freedom to speak to topics important to them was key.

A total of 15 interviews were completed. Interviews typically lasted twenty to forty-five minutes and were audio-recorded, with permission of the participant. The semi-structured approach allowed each participant to share their stories while reflecting upon their own reasons for foraging, the impacts foraging has had on their lives, and their perceptions on how involvement in this activity might impact others. Foragers are a diverse group of people; the semi-structured interview enabled these individual perspectives, attitudes, and beliefs to be revealed.

3.5.2 Mixed Methods Survey

While the interview approach provides a deep level of detail, "(t)he point of a survey is to find out 'how many' feel, think, or behave in a particular way" (Hammond and Wellington, 2013, p.138). The ease of gaining a general picture of a population, and the speed at which this can be done, are two of the primary strengths of a survey approach (Hammond and Wellington, 2013; Palys and Atchison, 2008). For these reasons, a survey instrument was also developed, in order to quickly and efficiently gain access to a large number of foragers. Surveys were self-administered and anonymous. Hammond and Wellington (2013) suggest that survey response rates can be improved by offering a

prize drawing to participants. This idea was implemented successfully; ninety-four foragers returned surveys. The prizes included wild grape jelly and a quart of maple syrup.

Of the survey questions, seven were qualitative and open-ended; five of these questions overlapped with the interview questions. These open-ended questions allowed participants to respond in their own words, enabling freer expression of their views and priorities (Palys and Atchison, 2008). The remaining ten items were quantitative, categorical-response questions which made use of checkboxes, enabling basic descriptive statistics to be conducted. The survey also collected information on age, gender, and occupation. The length was carefully considered, with enough questions to gain an interesting picture of the population while not placing unnecessary demands on participants' time (Fink, 2013).

3.5.3 Autoethnography and Locating the Researcher

Autoethnography is a fusion of the terms "autobiography" (writing about one's own experiences) and "ethnography" (immersion of a researcher into a culture or group, in order to understand their values, beliefs, and experiences). The ability to undertake an autoethnographic approach depends upon the researcher's identity, as the research is grounded in the experiences had as a member of a specific group or culture (Ellis, Adams, and Bochner, 2011). An ethnographic or autoethnographic approach is benefitted by the researcher's ability to see through the eyes of the participants, allowing for an understanding of the context for their behaviors. Additionally, a shared vocabulary enables the researcher to more readily relate to the participants (Bryman, 2001). In the present study, the researcher identified as a forager for approximately a year and a half prior to designing the study; this prior interest has informed the research approach. She had been actively engaged with other foragers in her hometown in the United States, avidly read foraging guides in her free time, attended several foraging plant hikes, and attended one wild food weekend event prior to planning the present research. The way in which she interprets the foraging community, including observations of herself

and others, will be implicit throughout this document; specific observations will be made more explicit in Chapter 5: Discussion, in which the researcher's own thoughts and experiences are presented in italics.

3.6 Development of Interview and Survey Questions

The interview guide and survey questions were developed in a similar manner. The interview guide contains key research questions and ensures consistency across interviews while still allowing for flexibility, which encourages the participant and researcher to actively reflect on what is being said. It is advisable to begin an interview with simple questions to put the interviewee at ease, while still gaining useful contextual information (Bryman, 2001; McCracken, 1988). As the interview progresses, questions become increasingly specific, asking for information on motivations and attitudes (Arthur and Nazroo, 2003). It is advisable for questions to approach the topic from the side, rather than speaking directly to the research interest, so as not to bias the respondent in a particular direction. Using multiple questions to explore one topic can be beneficial, as different phrasing can cause individuals to respond in different ways (Kennedy, 2006). The survey questions were also developed with the preceding recommendations in mind. An additional consideration for the development of survey questions was to be as clear and unambiguous as possible, due to the fact that survey participants would not have the ability to ask for clarification (Greener, 2011). Of the seven open-ended questions on the survey, five of them overlap with the interview questions. The open-ended survey questions, as well as the interview questions, were designed with the intention that participants would be compelled to speak about how foraging is meaningful to them, the benefits they feel it provides, and how their identity as a forager may (or may not) set them apart from others. The quantitative survey questions were designed to gain a general picture of foragers as a whole.

One pilot interview was conducted with a forager; his feedback and remarks guided the final design of both the survey and the interview questions. A copy of the survey instrument and a list of interview questions can be found in appendices B and C, respectively.

3.7 Participant Selection

The participants for this study were self-identified foragers, recruited at two different wild food weekend events in the United States: The Midwest Wild Harvest Festival in Prairie du Chien, Wisconsin, and the Nature Wonder Wild Foods Weekend at North Bend State Park in Cairo, West Virginia. The location of each event is depicted in Figure 3.1.

Figure 3.1 Locations of wild food events in Wisconsin and West Virginia

These events took place in September of 2015. Both events offered educational plant hikes, keynote lectures, wild edible preparation and feasts. The Wisconsin event drew participants primarily from the Upper Midwest. The West Virginia event drew participants primarily from the Appalachian region, which has a more recent culture of foraging (Wigginton, 1972). Participants varied in age (ranging from teenagers to retirees), experience (new foragers to lifelong devotees), and occupation. Each event attracted well over 100 attendees. Surveys and interviews were completed on-site during each weekend event, except for two interviews which, due to time constraints, were conducted over the phone at a later date.

3.8 Recruiting Procedure

The recruitment procedures were approved by the University of Waterloo Office of Research Ethics (ORE). At the wild food events, the researcher made a brief announcement to the group on the first evening, in order to describe the aims of the project. Attendees were invited to participate in an interview or a paper survey, which could be returned anonymously into a box. By returning the survey, consent to use the data was implied. Information sheets with the contact information of the researcher and further information were available to be picked up in the same location. Individuals interested in an interview approached the researcher and were provided with ethics paperwork and consent forms. Interviewees could opt for their quotes to remain anonymous, or for their names to be revealed. This approach was approved by the Office of Research Ethics (ORE). Contact information was collected from all interviewees as well as all survey participants with an interest in receiving the study results.

Recruiting easily accessible participants is referred to as convenience or opportunistic sampling, and is perhaps one of the more common types of sampling (Bryman, 2001; Ritchie, Lewis, and Elam, 2003). In order to access a population which cannot be readily identified through official statistics or records, it may be useful to work through an organization to reach the appropriate population (Ritchie, Lewis, and Elam, 2003). In the instance of this research, working with the event organizers at the wild food events allowed for the sampling of a population which would otherwise have been difficult to reach.

3.9 Analytical Approach

Grounded theory is the primary approach for analyzing responses to open-ended survey and interview questions. This inductive, iterative approach generates theory by observing the patterns and themes present in collected data. In a classic grounded theory approach, the researcher withholds any

expectations with regard to the findings; this is achieved, in part, by avoiding a literature review prior to data collection and analysis (Hammond and Wellington, 2013; Glaser, 1998). Others, however, are critical of this approach, arguing that beginning with a blank theoretical slate is nearly impossible in practice (Straus, 1987). Modifications of the classic grounded theory approach are seen as acceptable and useful, as long as the basic premises of this style of research are adhered to, which include building theory from data in an iterative and emergent manner (Bertero, 2012; Bulawa, 2014). Regardless of one's approach to grounded theory, it is critical to remain neutral and open-minded throughout the process (Bulawa, 2014). The present study follows a modified grounded theory approach, as the researcher did consult the literature prior to data collection and analysis, as advocated by Strauss and Corbin (1990). Thus, theoretical pieces from the literature review informed the data analysis in this study.

3.9.1 Coding

The main tool in grounded theory is coding, of which there are three main types: open, axial, and selective. Open coding, or first cycle coding, involves reading through the transcripts and splitting the data apart into units to be labeled or coded with a word or phrase that captures the essence of the data. Similar codes are then grouped into larger, overarching categories. Second cycle or axial coding requires the researcher to look for relationships between the previously identified categories. Selective coding is the final step, in which the categories are integrated to produce theory from the observed patterns and relationships (Saldana, 2009). See Figure 3.2 for a visual representation of this process. The goal of coding is to highlight the central phenomenon, or "tell the story" of the research. A process of constant comparison between the developed codes and the data helps prevent the formation of assumptions which are not based on facts (Gray, 2009).

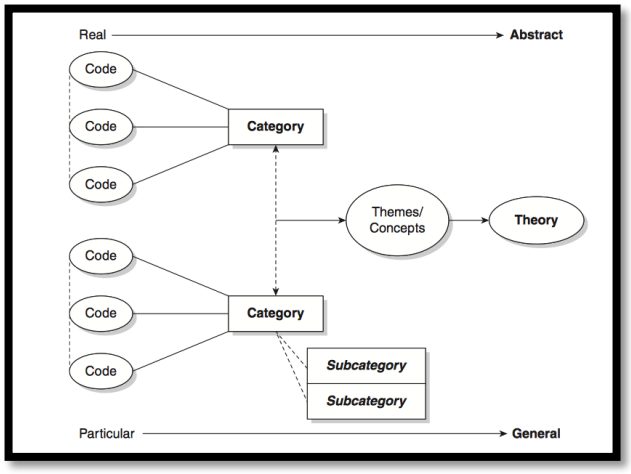

Figure 3.2 Visual depiction of coding process in grounded theory (taken from J. Saldana, 2009)

For the coding process, data from the two events was combined, as the interest for this study is to understand foragers as a whole, rather than treating the two wild food events as independent case studies. Interviews were transcribed verbatim and coded using NVivo for Mac software. Open-ended survey questions were also transcribed and coded similarly. As recurrent ideas appeared in the data, a descriptive node for each theme was created in NVivo. Selections of text from the interviews and surveys were then grouped into the nodes with which they most closely aligned. The survey data was coded by question, while the interviews were coded for overall themes. The results from the coding process can be found in Chapter 4: Findings. Multiple iterations of coding were necessary as new ideas and themes emerged from the data, and as relationships between concepts became evident. The relevant themes which emerged from the coding process were then related back to the literature in order to analyze them further; see Chapter 5: Discussion.

3.9.2 Survey Analysis

The open-ended, qualitative survey questions were coded similarly to the interview responses. The quantitative measures were in the form of checkboxes, which were converted to a numerical scale and inputted into Excel for ease of manipulation. Responses for each checkbox were tallied to obtain

frequencies in the form of percentages, in order to summarize each analytical category (Palys and Atchison, 2008). These frequencies were then graphed, using Excel, for ease of visualization. The quantitative questions fell into three main categories: demographics, environmental inclination (i.e. Do you identify as being environmentally aware?), and forager characteristics (i.e. How long have you been foraging?). The results of the survey are presented in Chapter 4: Findings.

3.10 Validity

The following section discusses the possible sources of bias, measures taken to ensure reliability of findings, and the potential for generalization.

3.10.1 Possible Sources of Bias

Research participants volunteered themselves, which creates some possibility for selection bias. Perhaps those who chose to participate were in some way distinct from those who did not elect to do so. Additionally, the events at which attendees were recruited may not have appealed to all foragers, nor would all foragers be equally able to travel to or afford the events. Thus, the population I worked with represents only those individuals who were able to attend the event, and chose to participate in the study. However, the ability to quickly and easily access a large number of dedicated foragers made this approach the most practical and efficient.

An additional consideration is that, as a novice, the researcher lacked experience with conducting interviews. Conducting effective interviews requires certain skills, such as active and responsive listening, the ability to quickly formulate new questions as novel topics emerge, establishing a good rapport with the interviewee, and effectively guiding the discussion to explore the key research interests. Skills of this kind are built over time, with practice (Legard, Keegan, and Ward, 2003; McCracken, 1988; Yin, 2009). In preparation, the researcher had observed and co-conducted several lengthy interviews on other topics prior to undertaking the interviews with foragers. The pilot interview also provided an opportunity for the researcher to practice and develop effective interviewing skills.

3.10.2 Triangulation

In order to ensure a high level of reliability in the data, both data triangulation and methodological triangulation were utilized. Data triangulation was utilized by collecting data in two different locations (West Virginia and Wisconsin) and by including all levels of foragers in the study, from beginners to experts. Multiple methods were utilized for data collection including surveys, interviews, and autoethnography. This multi-method approach is classified as methodological triangulation (Gray, 2009). Consistency in the fieldwork and a systematic and comprehensive analysis (achieved through effective data coding) also strengthen the reliability of a study (Lewis and Ritchie, 2003). Additionally, the categories and themes which emerged from the coding process were checked by one of the participants for accuracy to build further reliability.

3.10.3 Generalization

Qualitative research approaches are, in general, difficult to generalize (Gray, 2009). Lewis and Ritche (2003) have, however, identified three distinct types of generalization with relevance to qualitative research: representational, inferential, and theoretical. Representational generalization refers to the ability to generalize a sample to the parent population, inferential generalization indicates the ability for study findings to be applied to other settings or contexts, and theoretical generalization refers to the application of a theory to a broader scale (Lewis and Ritchie, 2003).

For this study, any type of generalization will be difficult as it was not possible to select a sample representative of the entire population of foragers. The sample utilized consists of foragers residing in specific areas within the United States, and while it is likely that foragers living elsewhere would express similar thoughts, values, and attitudes, it is not possible, strictly speaking, to generalize the findings to all foragers across the United States. In spite of this limitation, the present study remains groundbreaking and intriguing, particularly since foragers have historically received little research attention.

Chapter 4: Findings

This chapter will provide a broad overview of the findings of this exploratory study, presented in three sections: quantitative survey findings, qualitative survey findings, and interview responses. The quantitative survey data is presented alongside national level data from external sources, where possible, with the intention of creating some ability for comparison of the surveyed foragers to the United States population in general. The qualitative data is presented as categories and overarching themes which emerged from the coding process. The survey questions (both qualitative and quantitative) will be addressed individually, while interview questions were analyzed together, for overall themes. The qualitative survey and interview data were analyzed separately and showed strong similarities, indicating reliability of the results. The findings with specific relevance to this research study will be analyzed in depth, as they relate to the literature, in Chapter 5: Discussion.

4.1 Quantitative Survey Findings

The closed-ended, categorical response questions on the survey, of which there were ten, were intended to address the third research objective: to explore who foragers are and to describe the general characteristics of this relatively unstudied population. This characterization is especially relevant due to underrepresentation of this group in the academic literature. It also provides useful context within which the qualitative survey and interview responses can be situated. Two of the open-ended survey questions will also be discussed in this section, as they were short responses meant to add to the general characterization. These twelve questions fall into three categories, which will be discussed individually: forager demographics, environmental inclination, and characteristics of foragers.

For several of the survey questions in the "environmental inclination" section, attempts have been made to find similar, national-level data describing the United States population. In this way, it may be possible to provide some informed comparisons. Ninety-four foragers returned surveys.

4.1.1 Forager Demographics

The median age for surveyed foragers is 46 years; 58% of respondents were female and 42% were male. This imbalance may however, be explained by the fact that women are more likely to participate in surveys than men (Curtin, 2000). Half of surveyed foragers live in rural areas (see Figure 4.1). Far fewer foragers live in urban areas (23.4%) as compared to the entire United States population, of which 80.7% are urban (USCB, 2010). The relatively high number of rural dwellers is unsurprising; from the researcher's observations and interactions, foragers typically value land ownership, perhaps in part due to the increased ease of access to natural areas.

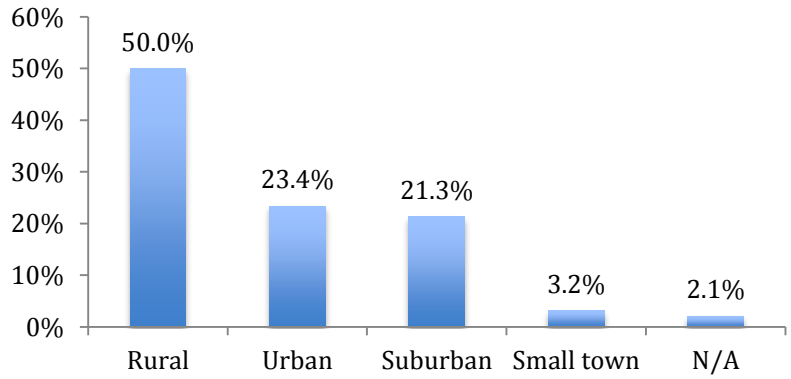

Figure 4.1 Where do foragers live?

Foragers are engaged in a diverse array of occupations. Responses were coded in two ways: blue-collar (26.1%) versus white-collar (62.0%) work, and natural resource related professions (20.7%) versus unrelated professions (68.5%). Of those surveyed, 19 were retired (20.7%); ten of them did not specify from which occupation they retired. The remaining nine retirees were classified according to their former profession.

4.1.2 Environmental Inclinations

One of the interests of this study is to determine if foragers exhibit strong environmental convictions and if these convictions result in action. Seven survey questions were written around this theme, particularly with regard to outdoor time, consumer behaviors, and environmental identity.

4.1.2.1 Outdoor Time

The first two questions in this section explored the frequency with which foragers spend time in natural areas, and their favored outdoor activities.

4.1.2.1.1 Question: How much time do you typically spend outdoors in a natural area (in the woods, on a farm, hiking trail, lake, park, etc.)? Walking downtown, for example, does not count.

The aim of this question was to determine the frequency with which foragers spend time in natural areas. Six checkboxes were provided with answers ranging from "daily" to "a few times per year or less". More than one third (36.2%) of foragers reported spending time in natural areas on a daily basis, while 89.4% spend time in these areas at least once per week (Fig 4.2).

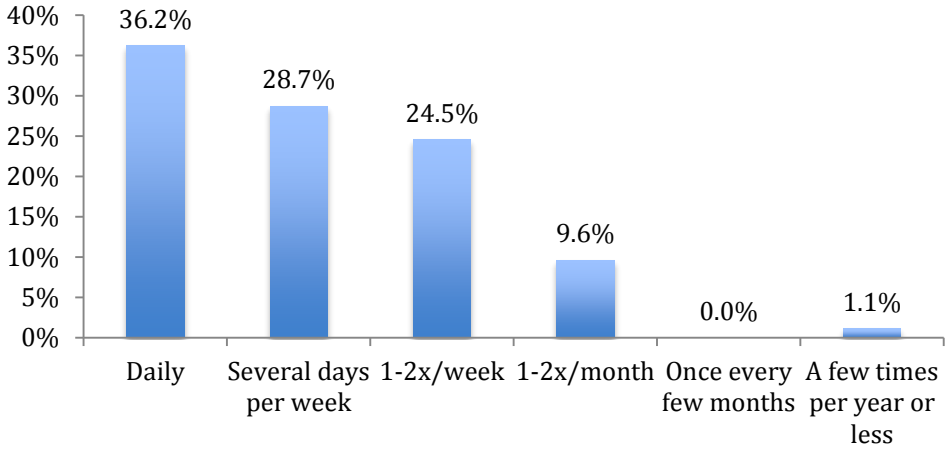

Figure 4.2 Frequency of time foragers spend in natural areas

Schultz (2002) reports few systematic studies have been conducted to determine the amount of time the general population spends in natural versus built environments. Thus, it was difficult to find

comparable data for the United States population with regard to time spent in nature. However, the studies detailed below may provide some clues.

Robinson and Silvers (2000) analyzed time diaries of a national sample; 51% of respondents reported spending no time outdoors (not including time spent outdoors moving from one built environment to another). It was determined the average amount of free time spent outdoors is approximately 5 minutes, and that people living in rural areas tend to spend more time outdoors (Robinson and Silvers, 2000). Another study has shown that employed adults spend only 2% of their time outdoors (Klepeis, 2001).

The National Recreation and Park Association reported that 98% of people go outside at least once per week; however, their usage of the term "outside" can include any outdoor area, not necessarily a natural area. This includes outdoor shopping, walking to the car, watching sporting events, and getting the mail. It is also telling that 19% of respondents spend 10 minutes or less when they venture outdoors, and only 53% report experiencing nature or gardening as a preferred activity (NRPA, 2014). Therefore, nearly half of respondents are engaged in other "outdoor" activities, rather than engaging with nature.

It is evident that Americans spend very little time outdoors, and even less in natural areas.

In comparison, foragers reported spending time in natural areas with great regularity; 89.4% spend time in nature at least once per week. In the above studies, 47% of people did not report a preference to spend time in nature or gardening, and 51% of people reported not spending any time outdoors at all (NRPA, 2014; Robinson & Silvers, 2000). In comparison, the regularity with which foragers spend time in nature appears to be remarkably high. This may also be explained to some degree by the fact that 50% of foragers live in rural areas, and natural areas are more easily accessible.

4.1.2.1.2 Question: What are a few of your favorite outdoor activities?

This question was open-ended, allowing participants a full range of expression. Answers were coded into categories; each category with at least five responses is included in Figure 4.3. Outdoor activities with national level data available were included on the graph. It is important to note the national data refers to participation (once per year or more) in each activity, whereas the forager data refers to the activities they prefer, irrespective of how often they participate in them. However, it seems reasonable to assume that foragers engage in their favorite outdoor activities with some regularity, especially given that 89.4% spend time in nature once per week or more. Interestingly, 49.4% of foragers reported that foraging or mushrooming was a preferred activity. It may appear surprising that this number is not higher, however, some participants may have felt this was obvious and did not need to be stated. Most of the categories of outdoor activities in Figure 4.3 are self-explanatory. However, it may be necessary to clarify that "production" refers to activities such as beekeeping and homesteading, "observation/learning" refers to activities such as plant identification, nature observation, and stargazing, and "other" includes items such as flying kites and climbing.

It is evident from Figure 4.3 that foragers participate in outdoor activities to a much larger degree than the average individual. All surveyed foragers responded with at least one favored outdoor activity, whereas only 49.2% of the United States population reported participating in some form of outdoor recreation during a given year. Further, 36% of the surveyed US population reported having no interest in outdoor activities. Of those who did participate, 48% reported being "close to nature" as a reason for being involved in outdoor pursuits (The Outdoor Foundation, 2014). The most popular outdoor activity for the United States population was running (19.8%); however, only 4.3% of foragers indicated they favor running (The Outdoor Foundation, 2014).

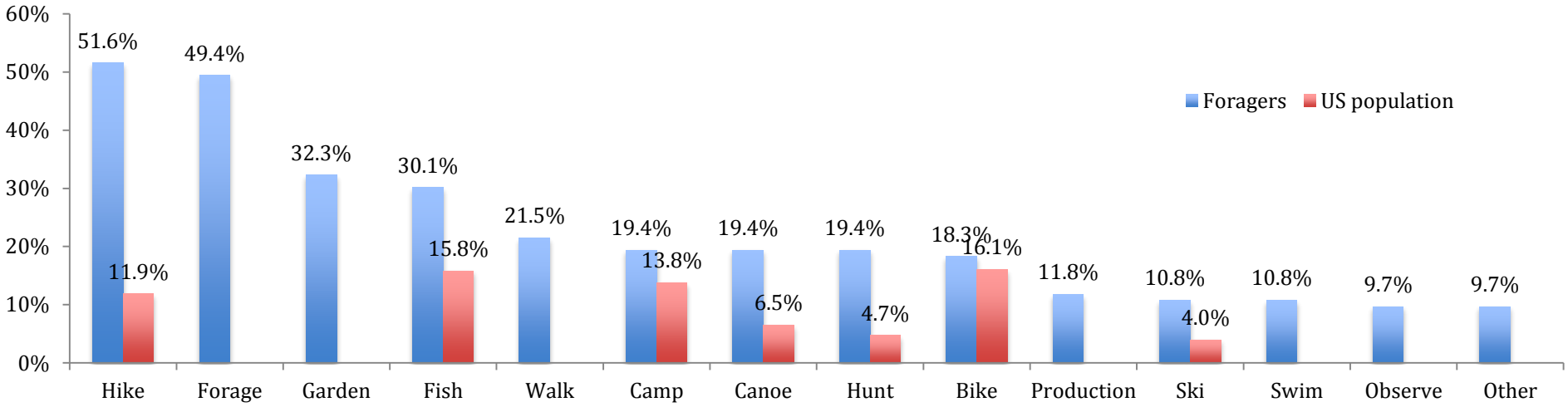

Figure 4.3 Preferred outdoor activities of foragers versus participation of general United States population. Percentages do not total to 100, because participants were able to select more than one answer. Statistics for the United States population are from The Outdoor Foundation, 2014.

4.1.2.2 Consumer Behaviors

The next three survey questions addressed consumer spending habits and satisfaction with material possessions. These questions were included due to the relationship between environmental issues and excessive material consumption. Decreasing personal consumption is typically considered pro-environmental behavior (Leonard, 2007).

4.1.2.2.1 Question: If you were given $20,000 and had no debts to repay, how would you choose to spend it?

The first question was open-ended and attempted to approach the matter of material consumption from the side. Responses indicating a preference for non-material, non-status items might indicate somewhat lesser adherence to the consumer cultural worldview, whereas a preference for luxury items would indicate a stronger attachment to environmentally negative consumption patterns. No national dataset was found to provide a comparison for this measure. Very few foragers indicated they would spend the money on non-necessary material items, although a large number indicated they would like to travel (42.2%). Purchasing or putting a down payment on land was also a popular choice (28.9%). As 50% of foragers live in rural areas, it is possible that quite a few already own land, and would prefer to spend the money elsewhere. For this reason, it seems possible that far more than 28.9% of foragers place a high value on landownership. Based upon the researcher's personal experience as a member of this population, land is seen as highly desirable, much as it is with those in the homesteading community; there does appear to be a considerable amount of overlap between these two groups. Although data on this topic for the United States population does not appear to exist, it seems likely that foragers desire land ownership more than the typical US citizen. Foragers tended to prefer using extra money for experiences, saving or investing, charitable donations, and for practical purposes such as education, growing a business, or purchasing a home (Fig 4.4). Without a national dataset for comparison, it is difficult to say whether foragers' values are more or less materialistic than average.

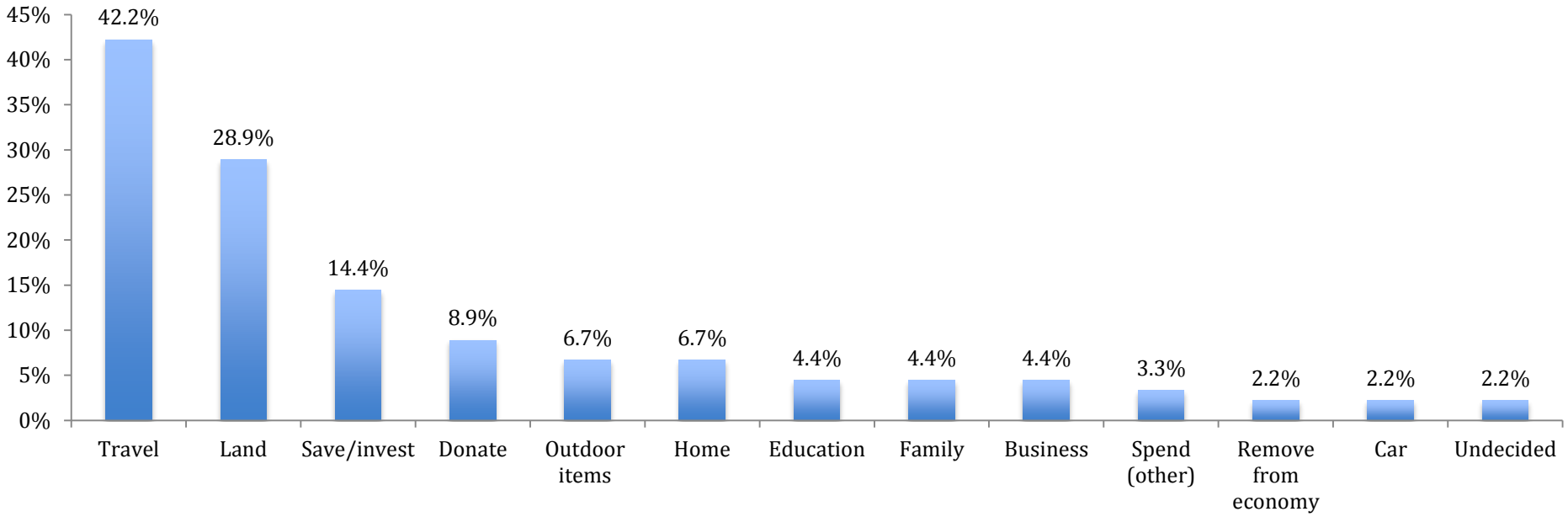

Figure 4.4 Discretionary spending of $20,000. For this question, percentages do not total 100 because participants were able to fill in more than one answe

4.1.2.2.2 Question: How satisfied are you with what you have now (your car, home, clothing, electronics, hobbies/leisure, etc.)?

A large number of foragers (85.1%) reported being either satisfied or extremely satisfied with their lifestyle, with regard to material possessions and hobbies (Figure 4.5). This level of satisfaction may indicate a lesser inclination to engage in unnecessary consumer spending. It has been shown elsewhere that sadness increases an individual's willingness to spend money (Cryder *et al*., 2008). The World Values Survey asked a similar question, relating to individuals' overall life satisfaction. Although their question was less specific and did not specify satisfaction with any particular aspect of one's life, it nevertheless makes for an interesting comparison. On a scale of 1 to 10 (1=completely dissatisfied and 10=completely satisfied), survey participants in the United States report a mean score of 7.37 (World Values Survey, 2014). Converting the foraging survey data to a 10-point scale yields a mean score of 7.92 for reported satisfaction. In order to draw an accurate comparison, the questions posed to each population would need to be exactly the same, however, it seems likely that foragers are at least as satisfied with their lifestyle as the average person, and perhaps more so.

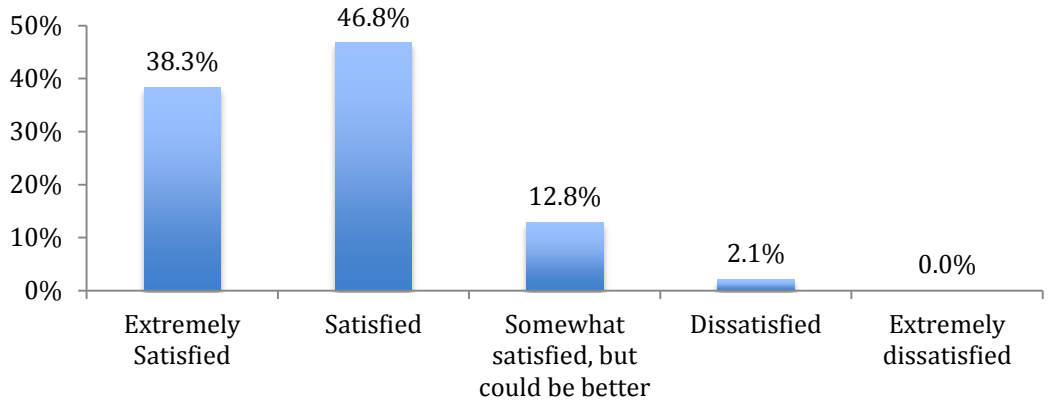

Figure 4.5 Forager satisfaction, with regard to material possessions and hobbies/leisure.

4.1.2.2.3 Question: How often do you typically make purchases (including in stores and online) for things other than groceries and necessities?

Perhaps due to the high levels of satisfaction mentioned above, foragers, in general, appear to make unnecessary purchases infrequently; 85.1% report making such purchases a few times per month or less (Fig. 4.6). National data was not available for this measure, therefore making it impossible to determine if this population is more or less inclined to frequent purchases.

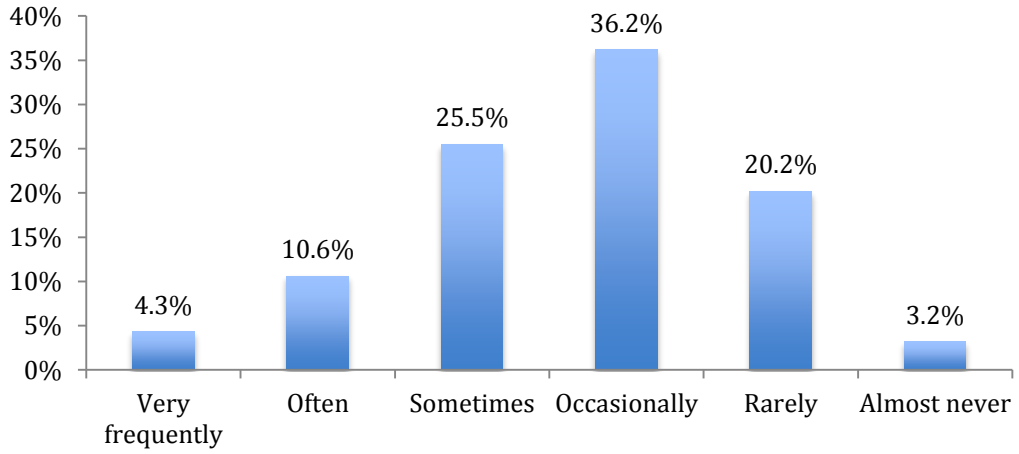

Figure 4.6 Frequency of non-necessary purchases.

4.1.2.3 Environmental Identity

The final two questions within the "environmental inclination" section dealt with environmental identity and the importance placed on the natural environment. These questions were utilized to determine to what extent foragers identify with their local landscape and with environmentalism in general.

4.1.2.3.1 Question: Part A: Do you identify as being environmentally aware?
Part B: Would your friends/family describe you that way?

The majority of foragers (93.6%) identified themselves as being environmentally aware (Fig 4.7A). Part B of this question (Fig. 4.7B) was intended to capture those respondents whose environmental concerns manifest, likely through speech or action, in such a way that external observers take note. Outward expression of environmental concerns might indicate stronger environmental values.

Slightly fewer (85.1%) foragers also agreed with this statement, however, compared to the typical United States population, the number of foragers self-identifying as environmentalists is extremely high. In comparison, the American Environmental Values Survey (2006) revealed that only 44% of individuals would be willing to refer to themselves as environmentalists. A 2012 Harris Poll found 64% of individuals agreed with the statement "I am an environmentalist" on a continuum from "somewhat well" to "completely". Thus, it is evident that foragers are more environmentally inclined than the average United States citizen.

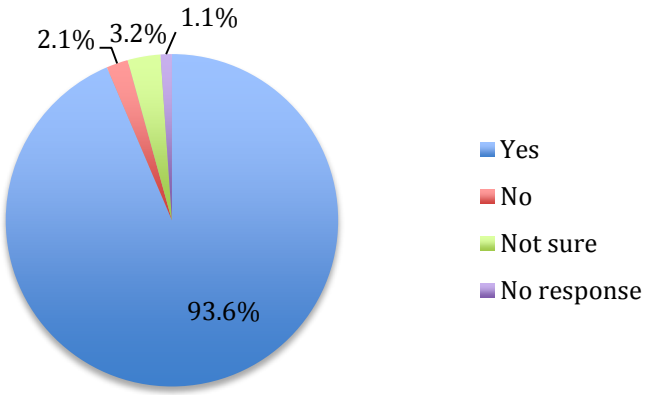

Figure 4.7a Environmental identity. (Part A: Do you identify as being environmentally aware?)

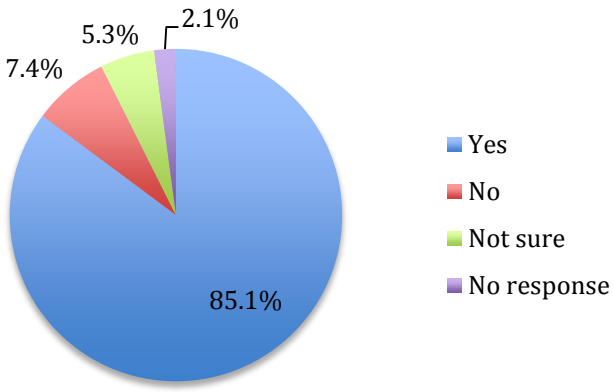

Figure 4.7b Environmental identity. (Part B: Would your friends/family describe you that way?)

4.1.2.3.2 Question: How important do you perceive your local natural environment to be for your daily life?

The majority of foragers (75.5%) consider their local natural environmental to be "extremely important" for their daily life (Figure 4.8). This may indicate some level of perceived dependence upon the natural environment.

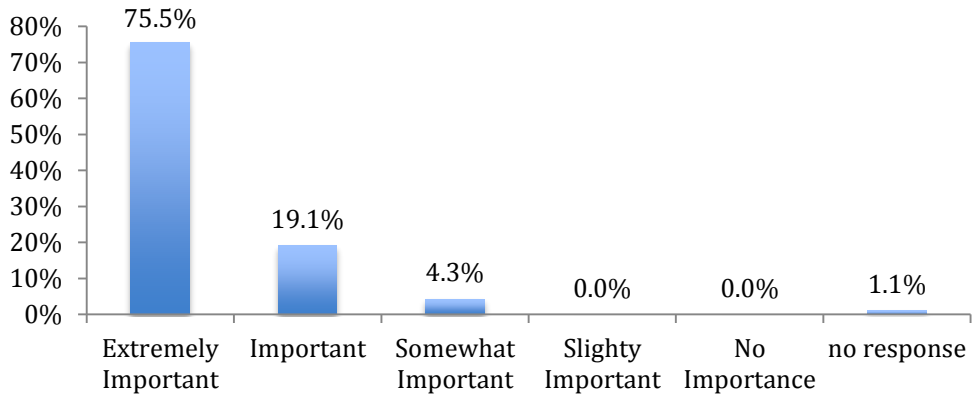

Figure 4.8 Perceived importance of natural areas.

4.1.3 Characteristics of Foragers

The following four questions were designed to get a general picture of how the activity of foraging fits within individuals' lives.

4.1.3.1 Question: How long have you been foraging?

Foraging appears, for many, to be a lifelong pursuit; one third of foragers have been engaged in this activity for more than 20 years (Fig 4.9).

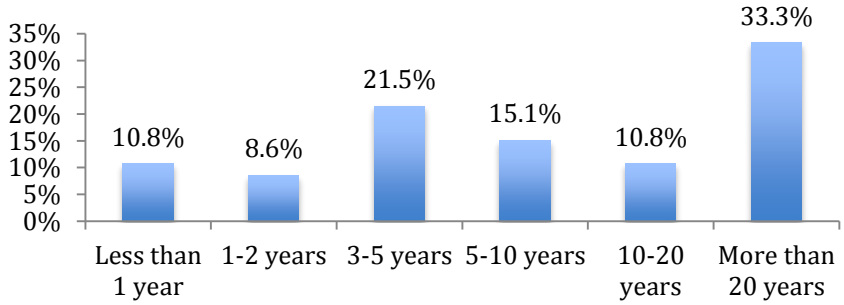

Figure 4.9 Years as a forager

4.1.3.2 Question: Do you see foraging as a hobby, lifestyle, or something else?

In general, foraging is viewed more frequently as a lifestyle than a hobby (see figure 4.10). A rather significant portion (10.6%) chose not to classify it in either category. Of these "other" responses, 40% indicated that foraging, for them, was somewhere on a continuum between the two, and a majority of them expressed the desire that it become more of a lifestyle over time.

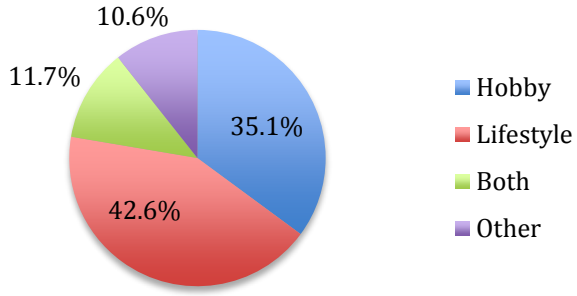

Figure 4.10 Perceptions of foraging as a hobby or lifestyle.

4.1.3.3 Question: How frequently do you typically consume foraged foods as part of your diet?

Foraged foods have a substantial role in the diet of nearly half (48.4%) of foragers, who include wild items in their diets once per week or more (see figure 4.11).

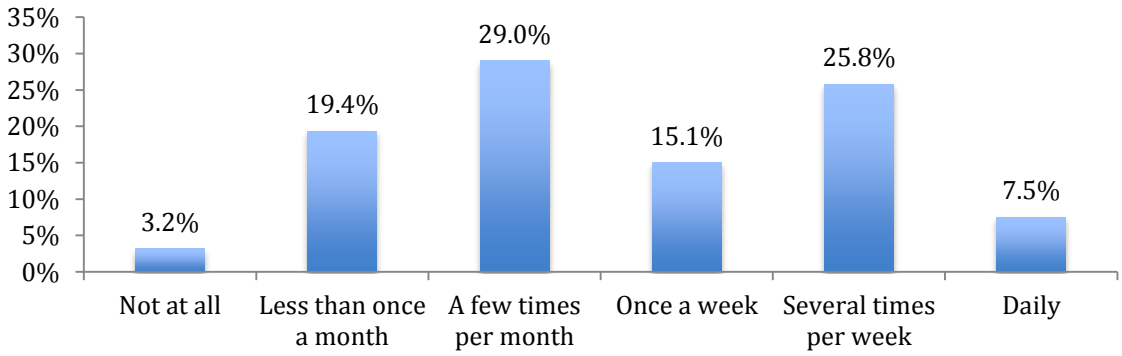

Figure 4.11 Frequency of wild food in diet.

4.1.3.4 Question: Do you typically forage (choose all that apply): alone, with spouse/partner/family, friends, club, other.

As is evidenced by figure 4.12, many foragers engage in this activity on their own, as well as with family and friends. This demonstrates that foraging can be considered both a solitary and a social activity.

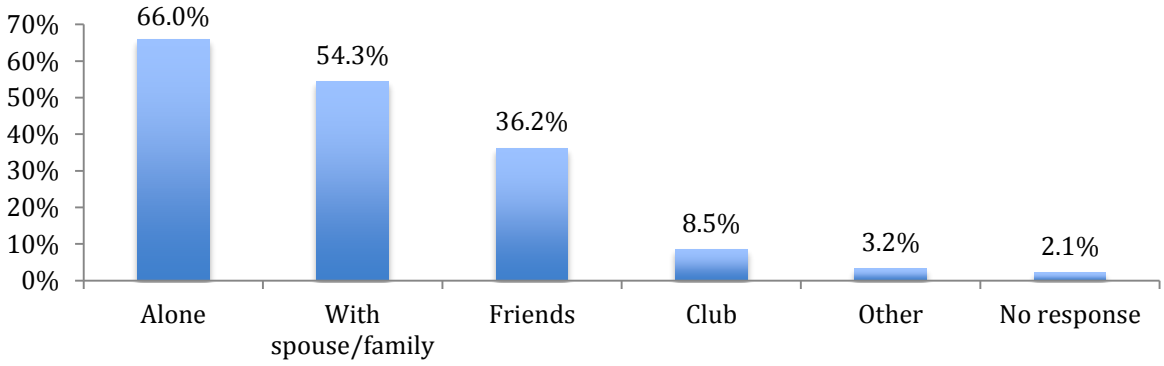

Figure 4.12 Foraging as an individual or social activity. Note that for this question, percentages do not total 100 because participants were able to select more than one answer.

4.1.4 Summary of Quantitative Survey Data

To summarize the quantitative survey results, the "typical" forager is engaged in a white-collar profession, lives in a rural area, and exhibits a strong environmental identity. The strength of this environmental identity is evidenced by the high frequency of time spent outdoors, engagement in a broad array of outdoor activities, seemingly conservative spending habits and high levels of satisfaction with material possessions, self-identification as an environmentally aware individual, and a high level of importance placed on the natural environment. The "typical" forager has been foraging for many years, makes wild food a regular part of their diet, and views the activity as a lifestyle more than a hobby. Of course, the "typical" forager described here may not be an accurate representation of any one individual; it is a generalization which supports the exploratory nature of this research while attempting to reveal who foragers really are. The context provided here may prove useful throughout the remainder of Chapter 4: Findings and Chapter 5: Discussion.

4.2 Qualitative Survey Findings

The qualitative portion of the survey consisted of 5 open-ended questions; the written responses were transcribed from the paper survey instrument and coded in NVivo for Mac. The five questions and the major findings for each will be addressed separately. The number of participants (frequency) whose remarks fit into each category are summarized in tables. Participants' responses may have fit into one or more categories. The themes with relevance to this study will be analyzed in greater detail in Chapter 5: Discussion.

4.2.1 Question 1: How did you start foraging?

The answers to this question provide some interesting context and a picture of how foragers might be introduced to, and gain knowledge about this activity. Of the survey respondents, 14 mentioned a prior interest in various aspects of nature or gardening, two began with a desire for improved nutrition, and five respondents reported being driven by a sense of curiosity. Berries and nuts were mentioned as a common entry point into foraging; 18 respondents mentioned one or both.

Most surveyed foragers, though not all, commented on whether they began foraging as a child (42.9%) or an adult (51.6%), as well as their primary avenues for learning, depicted as percentages in figure 4.13. The most common introduction to foraging is through friends and family, although just as many adults have been introduced through classes or events.

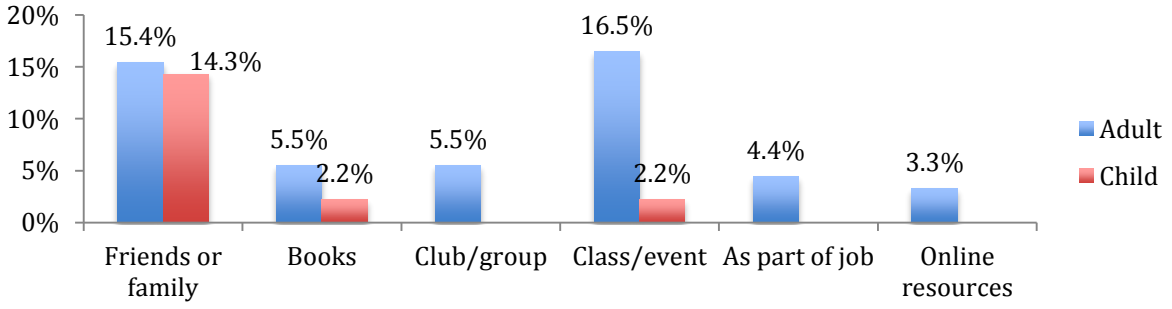

Figure 4.13 Introduction to foraging. Note that values are not additive, as individuals may have mentioned more than one way of learning, or none at all (ex: only mentioning having learned as a child). n=91

4.2.2 Question 2: Why were you attracted to begin foraging?

The reasons for being attracted to foraging are numerous; table 4.1 summarizes the major reasons reported. Five survey participants commented they had always foraged, or grew up doing it, and therefore did not provide any specific reason for being attracted to the activity. Many respondents mentioned an interest in the outdoors or a desire to facilitate a deeper connection to nature. One participant elaborated on this desire, referring to it as "an innate need, a primal urge to connect with our environmental surroundings". Many respondents also mentioned the health benefits as an attractive reason to begin this activity, particularly for nutrition and increased dietary diversity.

Category	Frequency
Prior interest in nature/outdoors	23
Health	22
Free food	18
Closer connection to nature	15
Self-sufficiency	14
Fun, excitement, and adventure	14
Curiosity/desire to learn	13
Taste	12
Food system sustainability	8
Part of simpler/environmental lifestyle	6
Social reasons	3
Easier than gardening	3
Love of cooking	3

Table 4.1 Summary of written responses to question two: "Why were you attracted to begin foraging?" n=91

4.2.3 Question 3: How do you feel foraging is beneficial to you?

There is a fair amount of overlap in the responses between questions two (Why were you attracted to begin foraging?) and three (How do you feel foraging is beneficial to you?), likely due to the fact that benefits of foraging are closely connected to the reasons individuals were attracted to begin. The responses to question three were a bit more detailed and nuanced, resulting in a greater number of categories, summarized in table 4.2.

Category	Frequency
Physical health a. Nutrition b. Exercise c. Food as medicine	(58) a. 31 b. 15 c. 5
Connection to nature	32
Time outdoors	19
Enjoy learning	18
Mental/emotional wellness a. Stress relief b. "being in the moment"	(15) a. 7 b. 4
High quality, diverse food	16
Non-industrial food source	15
Fun/recreation	14
Self-sufficiency and security	13
Economics (free food)	12
Spirituality	10
Taste	9
Sense of pride/satisfaction	8
Connection to ancient roots	8
Encourages observation/awareness of nature	8
Increases value/appreciation of nature	7
Social aspects/community building	6
Feeling of belonging in nature	4
Connection to local area	4
Enjoy cooking	4
Share knowledge with others	3
Convenience	3
Sustainability concerns	3

Table 4.2 Summary of written responses to question three: "How do you feel foraging is beneficial to you?" n=91

4.2.4 Question 4: Has foraging changed other behaviors in your life? Do you think or act differently?

The majority (81.9%) of surveyed foragers respond affirmatively to this question, indicating that foraging has been impactful for their lives. Those who did not respond or did not report experiencing change were in the minority (18.1%). Those who fell into the "can't tell" category were foragers who had been involved for their entire lives and could not distinguish any differences. One stated, "What I do with it is second nature". Responses are summarized in table 4.3.

Negative (17)	No	4
	Not sure/no response	7
	Not yet (new foragers)	2
	Can't tell	4
Positive (77)	Promotes environmental action/concern	23
	Heightened observation of plants, ecosystems, cycles	20
	Changed awareness of food/agriculture	16
	Appreciation, respect, and gratitude for nature	12
	Diet change	9
	Constantly scanning the landscape	6
	See "edibles everywhere"	6
	Always learning	6
	Changed view of land	4
	Nature as "life support"	3
	Changed view of "weeds"	3
	Share knowledge with others	3
	Slow down and "live in the moment"	3
	Understand place in world	3
	Feel a connection to the past	2
	Perceived as "weird" or "unique"	2
	Calmness and focus	2
	Relationship with plants	2
	Encourages personal responsibility for health	1

Table 4.3 Summary of written responses to question four: "Has foraging changed other behaviors in your life? Do you think or act differently?" n=94

4.2.5 Question 5: Does foraging make you feel more connected to the Earth? If yes, how so?

Five foragers (5.3%) respond negatively to this question; of those, two foragers (2.2%) commented they felt a connection, but it was not necessarily related to foraging. Six participants (6.4%) did not respond to this question. The remainder (88.3%) responded positively and mentioned a wide array of means by which they experience a connection to the Earth through foraging. The results to this question are summarized in table 4.4. Foragers specified that paying attention to their surroundings, becoming more aware of nature's interconnections, interacting directly with the landscape, and ingesting food from nature were key ways in which they found a connection to the land. They also expressed feelings of dependence on the Earth, feeling part of it and viewing it as home.

Negative (11)	No	1
	Not sure	1
	Not yet	1
	Not related to foraging	2
	No response	6
Positive (83)	Paying attention to ecosystems, seasonality, diversity	26
	Awareness of interconnections	24
	Direct interaction	21
	Feel a part of nature/nature as home	14
	Eating facilitates connection	13
	Dependence on Earth	13
	Connection to past or roots	10
	Spirituality/connection to God	10
	Relationship with plants	9
	Appreciation for Earth's provisions	9
	Responsibility to Earth and/or plants	7
	Awareness of human impacts	4
	Being "in the moment"	3

Table 4.4 Summary of written responses to question five: "Does foraging make you feel more connected to the Earth? If yes, how so?" n=94

4.3 Qualitative Interview Findings

The semi-structured nature of the interviews allowed the researcher more freedom in exploring an interviewee's point of view; some questions on the interview guide were not explicitly asked at all, often because the interviewee automatically covered one or more of the topics of interest in their narrative. For this reason, interviews were analyzed for overall themes rather than by specific question, as was done for the survey data. The interview findings supported and reinforced the findings from the surveys, but allowed for a deeper analysis, as probes could be utilized to explore certain areas in greater depth. Interviewees also tended to offer more information than survey participants. The surveys provided greater breadth and generated a larger number of categories, due to a significantly larger number of participants. The survey and interview data were analyzed separately, which helps to ensure data reliability.

4.3.1 Interviewees

Fifteen interviews were conducted; seven interviewees have professions related, at least in part, to foraging and outdoor skills. Three of these are published foraging authors, three work in natural resources and engage with the public, and one works at a restaurant which features some wild foods. The remaining interviewees do not have careers specifically related to foraging. Eleven mentioned having learned about foraging as a child, and nine were primarily self-taught, either as a child or an adult.

4.3.2 Data Themes and Categories

Eight general themes emerged from the data analysis:

1. Foraging provides multiple benefits
2. Foragers see themselves as being different
3. **Foragers experience a connection to Earth/nature**
4. **Connection to Earth/nature develops in multiple ways**
5. Foraging has social aspects
6. **Foraging promotes environmental concern**
7. Others' perceptions of foraging vary
8. Barriers for non-foragers

Themes listed in bold will be analyzed further, alongside illustrative quotations, in Chapter 5: Discussion. These three themes were selected for additional analysis due to their relevance to the key research objectives, with regard to how foraging may contribute to the development of ecological values while rejecting the predominant, modern understanding of humans as separate from nature. Specifically, these themes provide insight on how foragers view their relationship to the Earth, how that connection is uniquely developed through involvement in foraging, and how this activity has promoted environmental concern and action. The unanalyzed themes may provide interesting possibilities for future research, as discussed in Chapter 6: Recommendations and Future Directions. The following tables summarize the categories and sub-categories which emerged through the coding process, as well as broader, overarching themes.

4.3.2.1 Theme 1: Foraging provides multiple benefits

Theme	Categories	Sub-categories	Frequency
Foraging provides multiple benefits (15)	Multidimensional health benefits (15)	• Physical health Nutrition Exercise	11 10 7
		• Mental/emotional health and stress relief	9
	Excitement/Fun (14)	• Learning, curiosity, and experimentation	14
		• Discovery ("treasure hunt")	13
	Food (13)	• Taste, novelty, quality	13
	Foraging is empowering	--	10
	Self-Reliance/security	--	10
	Economics: free food	--	9
	Enjoy time outdoors	--	8

Table 4.5 Foraging provides multiple benefits.

Foraging provides numerous tangible and intangible benefits ranging from free, nutritious food to heightened physical health to increased feelings of security.

4.3.2.2 Theme 2: Foragers see themselves as being different

Theme	Categories	Frequency
Foragers see themselves as being different (15)	Foraging is part of identity	13
	Distrust/avoid grocery store	6
	Seen as unique or weird	6
	Less fearful	5
	Environmental behaviors	4
	Healthier diet/lifestyle	4
	Unique skill/knowledge	4
	Disinterested in TV or shopping	3
	Open-minded	3
	Value resources differently	2
	Able to improvise	1
	More respected	1

Table 4.6 Foragers see themselves as being different

Several of these categories emerge within other themes; however, these results pertain more specifically to instances in which foragers compared themselves to others.

4.3.2.3 Theme 3: Foragers experience a connection to Earth/nature

Theme	Categories	Frequency
Foragers experience a connection to nature/Earth (15)	Wonder, enchantment, spirituality	12
	Others are disconnected	12
	Connection to place	9
	Need to educate others	7

Table 4.7 Foragers experience a connection to the Earth

All interviewed foragers reported experiencing a connection to nature through foraging. A majority (80%) expressed feels of wonder, meaning, or spirituality associated with foraging; the same percentage expressed concern that other individuals lack a connection, and nearly half felt it would be a good idea to educate others about foraging. More than half (60%) expressed a connection to a specific place.

4.3.2.4 Theme 4: Connection to Earth or nature develops in multiple ways

Theme	Categories	Frequency
Connection to nature/Earth develops in multiple ways (14)	Deep observation/paying attention	12
	Eating from nature	10
	Direct interaction	8
	Appreciation of the past/deep remembering	8

Table 4.8 Connection to Earth or nature develops in multiple ways

The connection to nature develops through a deep observation and direction interaction with nature, eating the food nature provides, and by appreciating and understanding our deep history as a foraging species.

4.3.2.5 Theme 5: Foraging has social aspects

Theme	Categories	Frequency
Foraging has social aspects (14)	Social learning/knowledge sharing	12
	Belonging/"tribe"	4
	Deepens relationships	3

Table 4.9 Foraging has social aspects

Most interviewed foragers (80%) commented on the importance of learning and sharing knowledge with others. More than 25% of interviewees expressed feelings of belonging as related to foraging, and 20% felt it contributed to a deepening of close relationships.

4.3.2.6 Theme 6: Foraging promotes environmental concern

Theme	Categories	Frequency
Foraging promotes environmental concern (14)	Awareness leads to action	13
	Food system concerns	12
	Sustainable harvesting	9
	Access to land	7
	Concerns about the future	4
	Wastefulness	4

Table 4.10 Foraging promotes environmental concern

Foraging promotes a sense of concern for the environment in a variety of areas. Most foragers (87%) reported that an awareness of the natural world compelled them toward environmental action. Many (80%) also expressed specific concerns about the modern food system or industrial agriculture.

4.3.2.7 Theme 7: Others' perceptions of foraging vary

Theme	Categories	Frequency
Others' perceptions of foraging vary (13)	Fearful	11
	Viewed as "weird"	6
	Culturally acceptable in other countries	5
	Curiosity	3

Table 4.11 Others' perceptions of foraging vary

Most foragers mentioned how they feel that others perceive this activity, ranging from fear to curiosity. One third of interviewees mentioned that foraging is considered more normal in other cultures or countries.

4.3.2.8 Theme 8: Barriers for non-foragers

Theme	Categories	Frequency
Barriers for non-foragers (7)	Fear	6
	Time, knowledge, and effort	4
	Desire	1

Table 4.12 Barriers for non-foragers

About half of foragers noted that non-foragers may experience barriers to developing an interest or participating in foraging.

4.4 Summary of Key Themes

The themes of key interest relate to the development of a connection to nature through foraging, how foraging specifically contributes to the development of this connection, and how it promotes environmental concern and action. The data related to these themes, which emerged from both the surveys and interviews, will be further analyzed in Chapter 5: Discussion.

Chapter 5: Discussion

5.1 Selection of Relevant Themes

Numerous categories and themes emerged through the coding process, as presented in Chapter 4: Findings. This chapter will analyze three of these themes in greater depth, while drawing upon the literatures introduced in Chapter 2: Literature Review. These three themes were selected due to their ability to speak to the primary research objective, which is to analyze the potential foraging has in promoting an ecological worldview, by providing an avenue for re-connection with the natural world in a way that seeks to reject modernity while providing a sense of wonder, meaning, and enchantment. The data will be analyzed in accordance with the conceptual framework, which examines how foraging seeks to reject and move beyond modernity, how it complements existing ecological worldview concepts, and its ability to be psychologically fulfilling.

The three themes are as follows:

1. Foragers experience a connection to the Earth
2. Foraging develops the connection between humans and Earth in multiple, unique ways
3. A connection between humans and Earth promotes environmental concern and action amongst foragers

An analysis of these themes will be informed by referring to the qualitative survey and interview data, returning to the literature, and through my own observations and experiences, which are noted in italics.

5.2 Foragers experience a connection to the Earth

I've lived in rural Indiana for my entire life, surrounded by woods and creeks and fields. It wasn't until I started foraging that I began to feel connected to what was going on around me. I have lived on the same piece of land since I was 5 years old, yet somehow, I never noticed the mulberry tree, the giant patch of wood nettle, or the field of milkweed. Even the lush carpeting of purple dead nettle and the crawling cover of purslane in the garden escaped my eye, thought of only as weeds. I now know this piece of land well enough to remember the exact location of all these things; it makes me feel connected to this place, my home, just by knowing where these plants can be found.

As a personal observation, many foragers have a prior interest in the outdoors, but foraging appears to have facilitated and deepened this connection. The survey and interview data support this observation; one-quarter of survey participants mentioned a prior interest in the outdoors when asked why they were attracted to foraging, and 43% reported being exposed to foraging as a child. All of the interviewees had either been raised foraging or had a prior interest in nature or plants; for many, this relationship is difficult to tease apart. For about 60% of them, it appears the interest in foraging and other aspects of nature developed concurrently from a young age. The remaining 40% expressed an interest in nature prior to becoming involved in foraging. Due to early exposure and a prior interest in nature, it could be argued foragers developed a strong sense of connection to the Earth independently from foraging. Evidence presented in this section, however, indicates there is something unique about foraging, and that the connection between forager and planet may be somehow deeper than that experienced by other outdoor enthusiasts. This concept will be expanded on throughout this chapter.

More than half (59%) of survey participants mentioned a connection with nature early in their responses, prior to the final survey question, which asked if foraging facilitates a closer connection with the earth. Combined, 93% of surveyed foragers either mentioned a connection to the earth unprompted, or responded positively to the question on that topic. All interviewees mentioned that a connection to nature or the Earth was, for them, an important part of foraging.

Several participants stated this connection very plainly, one survey participant wrote, “It speaks to something deep inside of me. I love the sense of connection to my land that I get from foraging”. Leda Meredith, an author of several books related to food and foraging, was interviewed and articulated a connection to nature by stating,

> “A huge (thing) is a reconnection, for most of us, because most people have gotten disconnected, or never were connected, to nature. It sounds very cliché, but it’s absolutely

> true, and you become very tied to whatever landscape you forage in, especially if you forage in the same place for a long time…you're really connected to the weather and the seasons, the cycles and which plants are growing around you, and that is a feeling that is hard to describe, but it's a really incredible one".

This connection was also articulated by participants in a few other specific ways:

1. As a feeling of belonging, seeing oneself as part of the Earth, and as connection to a place.
2. As a sense of wonder, enchantment, or spirituality associated with foraging.
3. As a concern for others who lack this connection.

Each of these topics will be explored in further detail in the following sections.

5.2.1 A sense of belonging, seeing oneself as part of the Earth, and connection to place

A connection to the Earth was also articulated as a sense of belonging in nature, as being part of the Earth, or feeling connected to a specific landscape. These thoughts were expressed by 60% of interviewees and 22% of survey participants. As an example, two survey participants explained their feelings of belonging in this way:

> S-5: I feel more alive and in tune with myself, more connected to the living world around me, my home and environment.
>
> S-46: I'm not just out in Nature- I am a part of it. I feel connected to natural cycles and ecosystems. I feel like I belong.

An ability to see oneself as part of nature suggests the possibility for breaking through the damaging, dualistic view, which grants man a domineering role and separates humans from the natural world (Merchant, 2013; Sutton, 2004). Embeddedness within ecosystems may shift humankind's role from dominator to caretaker (Kidner, 2012). Concepts such as Deep Ecology, biophilia, the Gaia hypothesis, and the land ethic emphasize a harmonious relationship between people, land, and other life forms, promoting a shift in which people view themselves as part of, rather than separate from

nature (Leopold, 1949; Wilson, 1986; Lovelock, 2000; Taylor, 2001). One interviewee discussed the importance of everyone having the opportunity to see themselves as belonging in the world, and viewing nature as their home:

> I-4: "Everybody wants to have a place of their own where they belong, whether it's their own backyard or a local park where they can go and play around. Everybody wants to have that feeling. And foraging, you can just walk outside no matter where you are, and find something. It gives people that little feeling like, I know this place, this is my home, this is where I'm from, and I know what's here. I know my home."

An embedded life, in which one can view oneself as part of a larger ecosystem, allows us to once again view nature as meaningful, and offers a way of rejecting the alienation and disenchantment associated with modernity. This connectedness creates a source of enchantment, as was experienced by our hunter-gatherer ancestors (Sutton, 2004; Holmgren, 1999). One interviewee mentioned a sense of belonging in nature makes the Earth feel like a friendly and supportive place:

> I-7: "Just go outside and go for a walk and really look at things. It just makes the entire world, it feels like a naturally supportive place… like the universe is kind of friendly, and I don't mean to radically anthropomorphize it, you know, that it's not this hostile, us versus it sort of thing. No, I belong here, and I'm okay here, and I'm safe here, and it wants to support me, it's bursting with food and medicine everywhere I look, just right there, waiting for me to notice it. For all of us, to just notice it."

Foragers also express a sense of connection or belonging with regard to the specific areas where they live:

> S-44: "I have a deep sense of satisfaction and comfort by integrating myself in my local ecosystem".
>
> S-81: "It helps me be more tuned in to the place I live".

I-1: “I did a complete about face when I finally got a piece of land. So it had to do with me getting a little bit of my own roots”.

I-8: “It just helps you connect to an area when you learn what grows there, and helps you connect to the food culture of an area too”.

Connectivity to a specific place can also foster a greater sustainability, as one becomes more aware of the impacts of human action on the local area. Turner (2005) suggests that sustainable living begins by becoming “rooted to a place” (p. 67). A sense of place is key to the concept of bioregionalism, which advocates the development of a localized culture to promote harmony between people and their local environment (Berg and Dasmann, 1978). However, connecting to a specific place is more challenging in the modern era:

I-7: “I would almost say there’s more people than not that are struggling these days, and maybe that’s part of, we’re disconnected from nature, we’re disconnected from our own families and places we grew up. Nobody can say, ‘my family has been here for 500 years’, you know. Not anymore. We’re all scattered, we don’t have that support system anymore”.

A disconnection from one’s home and community is a uniquely modern phenomenon, in which relationships have oriented away from direct, face-to-face, and gemeinschaftlich, toward an emphasis on the individual within society (Tönnies, 1897; Beck and Beck-Gernsheim, 2002). Foraging presents an opportunity to re-discover an authentic, embedded relation to the Earth, self and each other:

I-7: “I think a lot of people are missing a sense of belonging. I don’t think they realize that on a conscious level, but we’re all kind of scattered to the winds, but what we still belong to is the earth. You can still do this anywhere, foraging”.

Not only does foraging appear to develop a sense of ecological belonging, as described above, it also offers a sense of social belonging; 93% of interviewees and 18% of survey participants commented on social aspects of foraging:

I-1: “It’s one of our favorite hobbies, so it’s the thing that has helped us to grow together, a lot. Maybe not more than anything, but maybe it is. Maybe more than anything else”.

I-7: “That’s why I came here, I guess, to be around kind of my tribe”.

The idea of “tribe” or community demonstrates social cohesion; belonging within a group provides a source of identity and self-esteem. A satisfactory culture, according to TMT theorists, must allow for personal identities and the ability to blend into a group (Solomon *et al*., 2004).

Worldviews are socially constructed and require the creation of shared meaning and value in order to be viable (Arndt *et al*., 2004; Pyszczynski *et al*., 2010). Within the western worldview, we typically find value and identity through possession of material goods, which largely dictate our social standing. Although capitalism is a prevailing social norm, consumption does not make us happier (Schor, 2000; Kasser, 2004). If socially constructed identities can instead become bound up in earth-based values, there might be some potential for an ecological worldview which moves beyond modern consumer values. The ecological belonging which foragers express has the potential for building ecocentric values, which will be discussed in further depth throughout the remainder of this chapter. Such values may have a greater opportunity to spread and take hold, due to the social networks and community which foragers appear to have built.

5.2.2 Wonder, Enchantment, and Spirituality

As a beginning forager, I found myself desperate to find a patch of wood nettles. I’d read about how nutritious and delicious they were, and was keen to try them for myself. I had been searching sporadically for a couple of weeks, and had nearly given up on finding them on my parents’ property. One evening, I was hiking behind the house with a friend. We walked down into a shallow ravine and stumbled upon an enormous stretch of wood nettles, their leaves basking in the dappled sunlight which filtered through the canopy above. I felt a surge of pure joy, nearly bringing me to tears with admiration, wonder, and gratitude. I’m not a particularly emotional person, and was surprised by my own reaction. Reflecting on this moment of discovery, I feel a sense of happiness, although I can’t entirely articulate why.

Several foragers (26% of surveys and 80% of interviewees) mentioned feelings of wonder, enchantment, or spirituality as part of their connection to the Earth. The difference in number here is

perhaps due to the fact that interviewees elaborated more fully on their experiences, while survey participants often kept their answers shorter, typically two sentences or less.

The sacred and spiritual nature of foraging was well articulated by an interviewee who stated,

> I-2: "If you see the earth as sacred, then allowing the things that live here to live here is a religious act, and interacting with those things is a religious act…foraging develops a sense of morality regarding your interaction with the natural world because you are having an impact on the world around you, so you kind of automatically think about what that impact is and whether it is positive, or negative, or neutral. So I guess that's why I see foraging as an inherently spiritual act, and I would add that every culture that forages sees it that way. I mean, for every culture for whom foraging is an important part of the economy, it's always considered a sacred or religious act".

The participants' view of foraging as a spiritual activity indicates a rejection of, and desire to move beyond modernity in several ways. Foraging renounces the dualistic and reductionist view of nature, and by restoring the connection between people and nature, seeks to minimize the alienation and disenchantment which characterize modern social life. The concept of disenchantment was articulated by Max Weber, based upon Schiller's idea of the "de-godding of nature", which indicates the removal of magic and meaning from the world, through a dis-embedding from the natural environment. The result of disenchantment, according to Morris Berman, is that individuals see themselves as "an alienated 'thing' in a world of other equally meaningless things" (1981, p. 3). The rise of science and reason reduced the world to knowable bits, thereby shattering the original perception of nature as sacred and intrinsically valuable (Kidner, 2012). The idea of humans being outside and above the natural world destroys the wonder and meaning originally found there (Sutton, 2004; Merchant, 2013). The early, enchanted view shifted to one of nature-as-commodity; this split has been considered a primary reason for rampant environmental destruction (Merchant, 2013). However, the

spirituality implicit in foraging appears to restore a sense of wonder and enchantment previously found in nature. One interviewee stated,

> I-7: "Like anything vaguely spiritual, it's kind of beyond words. It's very hard to put it succinctly into words. There is a spirituality to it… I don't think about it too much to articulate it, it's just a peacefulness that I feel, and a groundedness that I feel, and a connection that I feel".

Recovering the spiritual, embedded view of nature could provide a sense of security and satisfaction:

> I-7: "As a kindness to my fellow humans, I would like them to experience that. To feel that. Wouldn't it be great if everyone felt calm, and grounded, and happy, and satisfied, and nurtured? Without you having to earn it or be good enough … just because I was born and here I am, just like this deer and like that bird. Just effortlessly, spontaneously cared for, and loved, and nurtured like any other creature, or plant, or animal. Yeah, that's got to be spiritual or something".

Alienation from the natural world also produces the feeling that "the cosmos cares nothing for me, and I do not really feel a sense of belonging to it" (Berman, 1981, p. 3). Removing the meaning once found in the natural world created a void, which is typically filled by secular strategies such as art, science, or materialism. In order to support an ecological worldview, we require a meaning making strategy which is not dependent upon consumption of material goods as a mechanism for self-esteem striving (Dickinson, 2009). It has been argued, even in the modern era, that nature can be a source of enchantment (Landy and Saler, 2009). The fact that foraging can be considered a spiritual act indicates its ability to restore meaning to nature, while fulfilling psychological needs. Finding meaning in the landscape and one's connection to it suggests the possibility for an ecological meaning-making strategy, in which we can find satisfaction through non-consumer channels. A meaning-making strategy of this type is critical for sustainability; the environmental movement has

been criticized for its continued failure to shift our cultural norms and desires away from an individualistic, consumer lifestyle (Suzuki, 2007). This uniquely modern phenomenon drives environmental problems; it is understood that a major shift in social norms is needed (Jackson, 2009). Terror management theory (TMT), as discussed in Chapter 2.2, suggests we have psychological requirements for constructing meaning for our lives and seeking self-esteem; the specific strategies for meaning making are culturally derived (Arndt *et al*., 2004; Solomon, *et al*., 2004). The environmental movement, by attempting to motivate change through the use of scientific facts, has failed to engage with non-rational drivers for change, such as spirituality. TMT implies that significant changes in our social norms cannot occur unless the focus is shifted to a personal level, by addressing psychological needs for meaning and self-esteem (Dickinson, 2009). The spirituality associated with foraging indicates this activity may hold promise for providing for those needs. This spirituality could act as the basis for a new set of values, as part of an ecological worldview, which could replace dominant western modes of meaning making, perhaps even disrupting our entrenched consumer culture, although it would likely take multiple generations before new values could become firmly established. Thus, finding meaning through a connection to the biosphere, facilitated through foraging, may be more able to drive paradigmatic change than typical environmental messaging.

5.2.3 Concern for others who lack connection

The majority of interviewees (80%) expressed concerns that other people do not experience a connection to the Earth. Survey participants were not asked to reflect on how they differ from others, thus no responses pertained to others' lack of connection to nature.

The interviewed foragers expressed a clear awareness that humans are alienated and disconnected from the natural environment:

> I-4: "There's this disconnect that I think everybody is kind of aware of by now, between society and the outdoors".

I-7: “I think people find it intimidating and kind of threatening, I’ve seen people jump when birds flew over their heads…I’m astounded by that attitude, they’ll kill any snake they see, any spider they see, just kill it, kill it. And they’re not bad people”.

Concern and sadness were expressed for others who do not experience this connection:

I-12: “I feel sorry for people who don’t have that connection. I really do. I feel very sorry for them”.

I-10: “I’ve seen… where kids don’t realize that food comes from farms. They think it comes from the grocery store and … that it comes from a factory before that. They don’t realize that something has to be grown at some point no matter how processed it is”.

Concerns for the future were also expressed, due to the fact that others are alienated from nature and therefore do not seek to protect it:

I-3: “Everybody’s so distant from nature and the natural way of doing things, and you know, I personally believe it’s heading us in an unsustainable direction that’s going to come to a crash”.

A primary concern is that without knowing nature and having the ability to interact with it, many people will never come to love it or care for it:

I-10: “It’s just such a horrible disconnect … if more people were out there making these connections our society would be a lot better off, because… you can’t respect something you don’t understand”.

I-4: “My take on it is as a way of connecting with the land around us and the more we can connect with the land and love the land around us, the better care we will take in preserving it. I can say, ‘Save the forests, and don’t cut down trees, and be responsible’ … getting people more connected, I think it would happen just in itself. The more you are connected to the land, the more you are going to want it to be cared for”.

Another concern is that the environmental movement has promoted the protection of nature, rather than interaction and appropriate use by people:

> I-7: "I feel like, for several decades, environmentalists, ecologists approach to preserving wild places, or even semi-wild places, has kind of been to put a dome over it, and say, you know, 'take only photos, leave only footprints', which frankly, I think is awful".

Many environmental activists seek to protect nature by keeping people away from it; this attitude makes nature less accessible to the average person. For example, in some natural areas in the States, picking plants, gathering firewood, and camping or swimming in non-designated areas are prohibited (MSP, n.d.). However, there is evidence that keeping people away from nature leads to ignorance and indifference, contributing to worse environmental outcomes overall. "Environmental conservation has given rise to a strange paradox: While emphasizing reduced use- and even avoidance- of the natural world, it has unwittingly further alienated from nature already alienated humans" (Kowalewski, 2010, p. 136). Keeping people out of nature reinforces this artificial separation, which has been considered a primary reason for modern environmental problems (Sutton, 2004). Thus, keeping people out of nature is counterproductive for the purported aims of the environmental movement as a whole, particularly for encouraging people to care about ecological problems. Developing and strengthening a personal environmental ethic requires positive experiences in nature (Louv, 2008):

> I-4: "People have to be able to really experience it, if they're ever going to get that connection".

Many foragers felt it was important for others to experience nature, in order to connect with it and develop feelings of appreciation and respect, which may contribute to an increased inclination for protection. Over half (58%) of the interviewees noted educating others about foraging could help them connect to the Earth, particularly with the goal of increasing environmental awareness and action. The survey instrument lacked a question on this topic, nevertheless, 9% of those surveyed

mentioned teaching and knowledge sharing as being important. Responses on this topic spoke to the importance of educating others on the value of nature, plants, and ecosystems, in hopes that a greater understanding of these things could contribute to a heightened concern for the natural environment:

> I-1: "It has an educational aspect, foraging does. They're so detached that they don't realize that the vital links to preserve their own physical… so teaching this is exactly what's needed for the youth. We should cancel the other forms of pedagogy and just say this is going to be foremost".

Foraging may be an ideal activity for promoting an ecological conscience, particularly because our dependence upon the biosphere is made so clear.

5.2.4 Summary on Connection to Earth

The sense of belonging and connection experienced by foragers allows for the emergence of eco-centric values which emphasize harmony and care for the land, as described by concepts such as the land ethic, biophilia, the Gaia hypothesis, Deep Ecology, and bioregionalism. Foragers, by feeling part of nature, move beyond the dualistic conception of humans as outside of nature, and recover an embedded understanding of this relationship. This embedded view possesses elements of spirituality and enchantment, and may be capable of satisfying our psychological need for meaning, without resorting to environmentally damaging consumer culture. The mainstream environmental movement has been unable or unwilling to engage with these non-rational drivers for behavior, contributing to its continued failure (Dickinson, 2009). A spiritual, embedded connection to nature is more capable of fostering an ethic of ecological concern, but by protecting nature from human use, the environmental movement serves to further alienate already disconnected humans. Foragers express concern that others will never fully experience nature or come to love it, and will therefore remain disinclined to care about or protect it.

5.3 Connection develops in multiple ways

The positive impacts of interacting with nature have been well established; such interaction has the potential to be mentally and emotionally therapeutic and can build environmental awareness (Lohr and Pearson-Mims, 2005; Louv, 2008; Selhub and Logan, 2012). Certainly, many outdoor activities help people connect with and enjoy nature. Foraging, however, develops this connection through three channels which are extremely unique, and serve to create a spiritual connection with the Earth, as discussed previously. This type of connection to the Earth appears to develop a strong ecological awareness and concern; therefore, it is important to consider more specifically how this connection develops. Of all other outdoor activities, perhaps only hunting or fishing for food utilize similar avenues for developing a connection to land and nature. These three channels, which will be expanded upon in this section, are as follows:

1. **Deep observation**
2. **Direct interaction**
3. **Ingestion of nature through wild food**

5.3.1 Deep Observation

Most interviewees (80%) and nearly half (47%) of survey participants differentiated foraging from other outdoor activities due to the depth of observation which is required to forage safely and successfully. Foraging requires an increased level of knowledge about ecosystems:

> I-2: "With foraging you have to know what is there, and so there is a requirement for … a deeper understanding and a greater level of knowledge".

In order to forage, an individual must be able to find and accurately identify plants and know when they are ready to harvest. This level of observation is deeper, and much different than what is required for hiking or other outdoor activities:

> I-1: "I think, going back to that connection that I was talking about, that you begin to feel the world around you. You notice more. You're looking. Whereas you can take a hike and say, 'Oh, isn't that pretty, look at that tree'. But when you're foraging, you're looking at things

closely, looking at trees, looking at the ground, looking at plants, examining things. And so it's just a much deeper sense of awareness".

Foragers articulated their experiences as observers of nature, and mentioned the importance of using their senses more fully:

I-3: "When you get into foraging, as with hunting, now you're engaging your senses even more and you have to be more in tune with your surroundings and it's like a whole new level of observation and awareness with nature…Makes your senses stronger, makes you more one with nature, puts you into balance, just cause it's just the natural law, it's the way it is".

I-4: "Whenever I'm walking through the woods, I can spot it. My eyes are like this radar to pick them up, and I just kind of make a mental note for where they are. And it's something that was a new thing this past year, I started doing that. And for other plants too, I'd just make these mental notes and sort of pick up where certain things are and I have this feeling that I'm obligated to make sure things stay there".

Using the senses in this way places value on somatic rather than abstract experiences; by fully utilizing the senses of the body, we experience a physical immersion in nature, in which the body experiences the natural world in a more profound and meaningful way (Berman, 1989).

By observing nature more deeply, foragers become aware of ecosystems where specific plants grow and the impacts of weather patterns and seasonality:

I-7: "It's the interaction with the plants. Not just taking them and using them, but when you're learning about plants, you're not just learning about taxonomy and growth patterns. You know, different plants like different bioregions, different conditions. If you want cattails, you're not going to look on a high, dry ridge".

> I-6: “For most foragers who are collecting a diverse array of different stuff, they have to be aware of different micro ecosystems and weather patterns and all of that stuff. You take care of the place because you come to cherish it”.

Observing the natural world on this level makes interconnections between weather, plants, animals, people, geology, and so on, more obvious. An understanding of these interconnections on a local level also makes human impacts, whether positive or negative, more apparent. The salience of these impacts allows foragers to respond accordingly, in order to develop a relationship of sustainable use.

5.3.2 Direct Interaction

More than half (53%) of interviewees and nearly one-quarter (22%) of survey participants noted that directly interacting with nature, through foraging, was a key part of developing a relationship with the natural world.

> S-27: “I feel more connected with God’s creation in that I’ve handled, smelled, tasted, and enjoyed its beauty and design more than I would have if I hadn’t needed to examine the plants closely enough to make a positive identification to determine their edibility”.

This direction interaction makes the impacts of one’s actions on the local environment more salient:

> I-2: “In … most other activities, you’re either observing nature or you’re using it as a backdrop for your activity. But with foraging, you’re acting directly upon, you’re acting directly with, the ecology around you as part of the activity. And so inherent in that is you have to recognize that what you’re doing is affecting the environment, so it makes you constantly think about how you’re interacting with the environment, how you’re affecting it, and I just feel like it creates a much higher level of awareness. You can canoe, or bicycle, or run, or hike and have absolutely no idea what things you are running, hiking, or canoeing by”.

By foraging, impacts to the local ecosystem are made far more obvious than they otherwise would be; this quick and evident feedback may encourage more sustainable behaviors, at least with regard to the preservation of local ecosystems. Foragers also suggest that by directly interacting with the Earth, they are able to recognize and appreciate its provisions, and become aware of the importance of a relationship between humans and the Earth:

> S-24: "Instead of just walking around on top of the Earth, it allows you to interact with the Earth. You realize how much the Earth provides for us and how it can be such a symbiotic, mutual relationship".

By interacting directly with the natural world, one is more able to see how they fit and belong within the larger web of interconnections:

> I-7: "When you're out there interacting with it and using these things, sustainably, of course, it becomes very personal and you remember that you're an animal too, and that you're actually a part of this ecosystem just as much as a deer, or a sunflower, or a butterfly. And I know that kind of sounds really woo-woo and squishy, which sometimes annoys me, that aspect of the environmental movement, but bottom line, that's how I feel, and I feel that I belong. And not enough people feel that way anywhere, anymore".

The direct interaction with nature is a key aspect of foraging; this interaction allows us to regain our original place in the world, to find a sense of belonging and meaning within it, and to understand the impact of our actions.

5.3.3 Ingestion of nature through wild food

Foraging is a unique outdoor activity in that the intent is to find, harvest, and consume food; only hunting and fishing are similar in this regard. The act of eating from nature is perhaps the deepest form of direct interaction possible between the human body and our planetary home; 67% of interviewees and 22% of survey participants mention food as being a key part of this connection:

I-3: “You’re putting this stuff in your body…it’s humbling”.

Berman (1989) suggests “eating is the most fundamental form of Self/Other relationship, the incorporation of the body of another into your own body” (p. 69). The split between humans and nature is oftentimes traced to a changed relationship to food, which began with the shift to agricultural livelihoods (Kidner, 2012). Eating from the wild restores a visceral, primitive connection to our food source; it allows foragers to experience an authentic relationship to food and the land from which it came. Some foragers express a higher level of trust in their own ability to procure food, and indicate disillusionment with the modern food system:

S-32: “I trust it more than grocery store food because I knew exactly where it was sourced from”.

I-1: “Its doctrine is that you are powerless to do anything but to go buy the food and medicine that they have determined is right for you. Whereas here you say, you know what, I’m fine. I don’t really need that thing”.

In the age of grocery stores and pre-packaged foods, an intimate connection to one’s source of sustenance at every step in the chain, from earth to body, is exceedingly rare. Foraging allows a recovery of this ancient relationship to food, which in turn deepens one’s connection to the source of this food, nature. This form of direct experience is the ultimate connection, in which the natural world literally becomes assimilated into the body (Kowalewski, 2010). Harvesting and consuming wild edibles activate all of the senses, enabling an intuitive and practical understanding of one’s environment:

I-4: “I think what really drew me in, when you eat something, you remember it. You’re using all of your senses. It’s a way of connecting with the outdoors, and it’s different from a lot of other activities that I do because you do use all of your senses. You’re taking it and it’s

literally becoming part of you. So that direct connection with the land around me, I was so drawn to it".

The level of connection to the Earth, which is experienced by direct ingestion of nature (through foraging, but likely hunting and fishing as well), cannot be attained by other outdoor activities:

I-1: "And because it's food it's very, to me, it's extremely different than just hiking. It's different than just spending time in the woods".

Berman (1989) suggests we are missing out on the full range of human experience due to modern social conditioning and the emphasis on cognition, rather than experiencing our senses and valuing our body's intelligence and experience. He indicates valuable information is encoded in the body, which the modern overemphasis on cognitive experience forces us to continually ignore (Berman, 1989). The universality of food in human societies extends into the deep past; 53% of interviewees and 13% of survey participants expressed an awareness of a primal urge, or instinctual motivation toward foraging. Foraging for and consuming wild foods utilizes our full range of senses, respecting the intergenerational information which is somatically encoded:

S-55: "I feel our bodies don't know they are missing something necessarily, but eating wild foods helps our bodies "remember". We (humans) know these plants and mushrooms, and have just been waiting to be reunited".

I-3: "You want to be healthier, happier and I think it's just reaching back to that simpler time we're all built for, that we all experienced at one time, our ancestors, it's in our blood, our genes".

I-7: "There's something I think, some sort of deep memory maybe, that we all still have, retained that in our DNA; there's something about picking it off the plant yourself, picking that berry or fruit".

I-3: "I know that in my blood, I know how to work with all this stuff, in my instincts".

S-32: “I feel connected to the part of myself that still contains instincts to gather and hunt”. Foraging is unique in this regard; hunting and fishing are the only other activities which provide a food-based connection to the ecosystem. The ability to obtain food for oneself also ties into self-reliance and security. Two-thirds (67%) of interviewees and 27% of survey participants indicated foraging for food provides a feeling of security, and is part of a self-reliant lifestyle:

> I-10: “It’s kind of nice to know, in a way, that if something were to happen or my boss was to be a real jerk or something, I could just go off grid and at least for a short time be self sufficient and not have to worry about stressing, ‘Am I going to have something to eat?’, and things like that. So it gives you some security, I guess”.
>
> I-2: “I don’t feel the insecurity that I think people sometimes feel: like if I was to lose my job or … if there was a natural disaster, or there was a war, or all these different scenarios where people, you know, feel insecurity thinking about that. I don’t feel that same insecurity”.

By providing a sense of security through the provision of food, it appears foraging could be seen as a source of self-esteem and empowerment:

> I-13: “You find a plant that you’ve heard about, or you’ve read about, and find it, and it just really feels empowering”.
>
> Leda Meredith: “I’m less scared. I’m less scared to try new things, to try new foods. I’m less scared to, or I guess I trust myself more, is another way to say it, to learn how to safely identify something, and safely harvest, safely prepare it and not need some other expert to tell me it’s okay. To sort of have the agency to do that, and I think that is really kind of rare these days”.

Foraging bolsters self-esteem and confidence through the recognition of one’s ability to procure food and provide for basic needs. This sense of empowerment, alongside a spiritual connection to the biotic world, can both be seen as mechanisms for constructing meaning. Again, if foraging can be

considered a meaning making strategy and an avenue for bolstering self-esteem, it may have the ability to provide for psychological needs in an ecologically benign manner. A food-based connection to nature promotes this sense of security, while restoring the ultimate connection between land and body.

5.3.4 Awareness of Interconnectivity

Each of the three avenues described above (deep observation, direct interaction, and ingestion of nature through food) contribute to an understanding of interconnectivity within ecosystems and between people, society, and the natural world. Several foragers (39% of survey participants and 67% of interviewees) mentioned an understanding of interconnections within ecosystems, temporal interconnectivity, or an interconnection between humans and ecosystems:

> S-23: "I am increasingly aware of relationships that exist in natural settings. I think that it has set me on a lifelong path to foster my own human connection to the natural world".
>
> S-15: "When you spend time getting to know the plants you also come to know and understand all the surrounding things in nature".
>
> S-23: "It (foraging) helps me to see more clearly connections and relationships in the natural world".

Foraging, as a link to our common ancestral past, also creates a temporal sense of interconnectivity, linking us to our human instincts:

> S-54: "I feel tied to my past and future by preserving both in the present".

The process of deeply observing, interacting with, and consuming one's natural surroundings makes it possible to gain a clearer understanding of one's place in the world:

> S-53: "It also reinforces the idea of ecological connectedness, which makes me notice my place in the larger food chain/environment".
>
> S-71: " (I have) a larger awareness of my place in the world".

The awareness of humans as an embedded part of nature suggests the possibility for moving beyond the view of nature-as-commodity, instead viewing it as intrinsically valuable (Sutton, 2004; Kidner, 2012). The tenets of Deep Ecology likewise hold life and the biosphere as being valuable in their own right, irrespective of any utility value for humans (Taylor, 2001). Viewing nature in this way hints at the possibility for a paradigmatic shift in values, away from the idea of humans as dominators of nature and toward a recovery of our place within nature. Ignorance and apathy develop when we are unable to view ourselves as being linked to the natural world; this apathy is a driver for modern environmental issues (Zweers, 2000). Altering our perception of our place in the world, and coming to view ourselves as an interconnected piece, has the potential to encourage values which would support an ecological worldview (Monbiot, 2013). This type of worldview could satisfy psychological needs for belonging (both socially and ecologically) while maintaining planetary health for future generations. A true sustainability will require a recovery of our proper place in nature, with new norms following the tenets of Deep Ecology, by developing a respectful relationship to the Earth, while allowing all life forms an equal ability to flourish (Kidner, 2012; Taylor, 2001). A new cultural narrative based upon embeddedness will allow us to re-envision our relationship with land as a partnership, in keeping with Leopold's concept of the land ethic. Although the land ethic mandates respect and preservation of the natural world, it also requires humans to play a role there, rather than remaining separated from it (Leopold, 1949). Re-embedding ourselves could also allow us to find meaning within nature, as was common amongst pre-industrial societies. Indigenous worldviews tend to be ecocentric; viewing the Earth as sacred and interconnected provides a strategy for seeking meaning and purpose (Turner, 2005). These psychological needs are not well met in modern consumer society; seeking meaning though consumption leaves us empty and unfulfilled (Schor, 2000). A worldview based upon ecocentric values, which arise from a sense of embeddedness and interconnection, could reduce the modern problem of alienation, and serve as a starting point for

moving beyond the unfulfilling paradigm of consumer culture. By seeing oneself as part of nature and as part of the interconnected web of life, foragers come to appreciate their dependence upon the Earth:

S-24: “You realize how much the Earth provides for us”.

S-15: “You can’t help but be more respectful and thankful for what nature provides”.

Viewing nature as a life support system necessarily triggers concern for the health of the planet, as it becomes obvious that one’s own health and wellbeing is connected. By being aware of nature’s interconnections on a deeper level, foragers become more attuned to harm, damage, change, or disappearance of ecosystems. This awareness drives a responsibility and desire to protect and care for the Earth.

5.4 Foraging promotes environmental concern and action

As evidenced by the survey results, foragers tend to be environmentally conscious. Nearly all (93.6%) of the survey participants self-identified as being environmentally aware, and 75.5% perceived their local natural environment as being extremely important for their daily lives. In particular, foragers express concern about the sustainability of the modern food system. Individuals also express that developing an awareness, appreciation, and respect for the natural world, through foraging, has led them to increased ecological concern and action.

5.4.1 Food system sustainability concerns

Numerous foragers (80% of interviewees and 48% of survey participants) expressed concern with regard to the modern food system, both for their personal health as well as for ecosystem health. Foraging is the ultimate in eating locally and seasonally, which foragers believe contributes to health and nutritional aspects:

I-10: “You’re eating seasonal, you’re getting higher concentrations of nutrients in most wild foods than in farmed and supermarket food. Everything’s unprocessed”.

S-32: “(Foraging) made me think about food more, about not just eating organic or local or from my garden, but searching for foods that haven’t been affected by agriculture. Why is one rosehip filled with more Vitamin C than 10 oranges? Grocery store food and mainstream vegetables became much less appealing and unnatural”.

The desire to consume local, healthful foods indicates a desire to recover a more authentic relationship to food. Through foraging, we move beyond alienation from our food source, by recovering an intimate connection to food. This connection makes our dependence on the earth clear, and alters and restores our relationship to nature. The modern food system cannot replicate this relationship, even if we are buying at the farmers’ market. By learning to identify, harvest, and prepare food from the wild, one gains skills through which they can sustain their life, contributing to a sense of pride and satisfaction. This ability indicates foraging is a form of re-skilling, as opposed to Marcuse’s (1964) concept of deskilling, in which modern individuals lack the knowledge to perform more than a handful of tasks. Today, very few people have the skills or knowledge necessary to find or produce food. Learning to forage, however, provides a means of gaining skills and escaping industrial agriculture:

I-14: “Some people are concerned about the way our modern food is looking, and it’s not looking great, so they’re wanting real food and this is a way for them to do that”.

S-41: “Our crappy food supply (is) going downhill over the years and (I) want free, healthy foods to supplement (my) diet”.

Foragers are also concerned with the environmental costs of conventional agriculture:

S-16: “I realize how unnatural agriculture is. I think about how much habitat destruction has taken place from farming and animal domestication, to the point of making many plants rare or extinct”.

The health of global ecosystems could benefit from a more sustainable approach to agriculture. Unsustainable farming practices contribute to erosion, habitat loss, climate change, and pollution (WWF, n.d.) By adding wild foods to our diet, ecosystems could be maintained in a state which offers multiple benefits that conventional agriculture cannot, including wildlife habitat and various ecosystem services:

> I-2: "I think there's a lot of room for what I call ecoculture…you're taking an ecosystem that exists and you're managing it to produce more food. Say, a maple sugar bush with wild leeks in the understory. That's a naturally occurring ecosystem that can produce a significant amount of food, now it's less than a soybean field would, but it can produce that permanently. Forever. You know, without deteriorating the soil, and still providing all of these services to the ecosystem like clean water, soil formation, habitat for wildlife… and still produce human food. So we have this dichotomy of nature in our heads that you either have to destroy nature to make a farm, or you don't have any food. And I don't believe that".

Seeing wild plants as a source of food provides an awareness of modern agriculture and the harm it is capable of causing. Other ways of producing food, such as ecoculture, can promote ecological and human health. Foraging provides a means of escaping unsustainable industrial agriculture, and offers a way to recover an authentic relationship with food and the land which produces it.

5.4.2 Awareness leads to concern and action

Foraging could be a key strategy for developing ecocentric values; such values could foster an ecological worldview, in which a heightened awareness of nature encourages environmental concern and action. Many foragers (87% of interviewees and 24% of survey participants) suggested the awareness of the natural world gained through foraging contributes to a concern for environmental health and sustainability:

S-24: “I appreciate the environment so much more and want to protect it even more than I already did”.

S-36: “I’ve been trying to live a more compassionate and sustainable lifestyle. It has helped in the process of shifting my perception so as to pay better attention to the other species I share my home with, and to have good relationships with these, my neighbors”.

Foragers indicate the importance of experiencing nature, in order to develop a connection or relationship with it. This relationship, in turn, is capable of producing feelings of gratitude, appreciation, and respect:

S-70: “(Foraging) makes me aware of the gifts of our world”

S-74: “It (foraging) encourages a deeper appreciation and understanding of our wild world”.

S-13: “I am more respectful of nature”.

Appreciation, gratitude and respect create eco-centric values which involve a sense of responsibility to care for and protect the natural world:

S-56: “The plants are my friends and I must care for them”.

S-57: “I become aggravated if someone damages the land the slightest bit… I feel empowered to save all life from destruction”.

S-14: “I like to think that I am doing a small part to help the Earth be healthy”.

In order for these kinds of values to develop, people must be able to interact with nature. By experiencing nature in a positive way, people are more able to love it and see it as meaningful; if they come to love it, they are far more likely to protect it:

I-4: “He said that we don’t need to save nature, we need to love nature. And that in order to love nature, we need to interact with it, and the best way to interact with it is to participate in it firsthand”.

"Such use causes people to *care more* about the earth, leading to a wealth of knowledge about it. Respectful use of nature in a hands-on way, in order to fulfill one's most basic needs, *necessarily* leads to a geometric increase in natural knowledge" (Kowalewski, 2010, p.137). "Without experiences in nature, we develop ignorance and apathy" (Suzuki, 2007, p. 261). By remaining ignorant, it becomes easy to unintentionally destroy the environment (Gibbons, 1966). Participating with nature is critical for developing an ecological conscience; too often, environmental messaging ignores our innate need to affiliate with other life forms (biophilia) by putting a fence around nature in order to protect it from human harm:

> I-2: "Environmentalism has basically said, 'don't interact with nature', and yet as a society, the entire problem environmentalism addresses is the fact that we interact improperly with nature, therefore environmentalism has purposely avoided the very problem that it purports to address".

Louv (2008) suggests this approach to environmental preservation has resulted in a further distancing of people from nature, creating what he terms "nature deficit disorder", caused by a lack of positive experiences in nature. Without these experiences, people are unlikely to develop an awareness or concern for the natural world:

> I-2: "I feel like environmentalism has failed because it has failed to condone interacting with the landscape in a real, physical sense and since that's the primary activity of human existence no matter what we try to do, essentially, that means environmentalism has ignored human existence. It doesn't make any sense".

Thus, promoting direct, physical interaction with nature appears more likely to motivate the paradigmatic change in values which will be required as the basis for a sustainable society.

Interacting with and ingesting nature contribute to a heightened awareness and a motivation to protect it. Perhaps introducing others to foraging would allow them to become more aware of nature, and make them realize the need to protect the environment for present and future generations:

> I-15: "I think if more people went out and were foraging for food, they'd gain a better appreciation of what's out there. They'd see butterflies, they'd see worms, they'd hear the birds, they'd hear the squirrels, along with gathering food, and the out of doors would mean more to them, and they might then decide that it matters and it should matter for the people who come after us. So yeah, I think it could make changes".

A hands-on relationship with nature provides a greater awareness of the environment, which can lead to a sense of gratitude and respect; this leads to increased ecological concern and action. These kinds of values will be critical for ushering in a new era in which sustainability is based upon a personal connection between people and land.

5.5 Conclusions

Although there is evidence of a strong environmental ethic among foragers, they are certainly not perfect ecological citizens. They drive cars, participate in consumer culture, and so on. There may be a couple of reasons for this. For starters, societal change is slow; multiple generations may be required before our entrenched consumer worldview gives way to one based upon ecological values. One forager expressed his understanding of how such a shift might take place:

> I-2: "Values change organically, so one person has a new value and if they are comfortable with that and they display that publicly, other people look at that person and decide if they want to emulate that behavior. And if the behavior is beneficial, then other people emulate it. I mean that's just how essentially all human behavior works. So we already are seeing that.

> There are already people who have expressed this value that the ultimate point of life is not to accumulate more stuff".

As of now, modern, individualistic social conditions primarily expect and reward consumer behavior. However, by rejecting certain aspects of modernity and seeking to recover more authentic relationships to land, foragers take a step away from this paradigm. Secondly, foragers may continue to engage in a number of environmentally negative behaviors because the impact of one's actions beyond the local area remains invisible. For example, the greenhouse gases emitted by driving result in climate change, but this relationship is somewhat distant and abstract. The environmental impact of clear-cutting a local forest where one has picked wild leeks, however, is far more obvious and personal. Therefore, it is likely that foraging is better at motivating environmental action on a local level. Further research would be required in order to gain a more specific understanding of the types of environmental concern which foraging motivates.

Although foragers are not perfect environmental citizens, the values generated through foraging, including a strong sense of connection to the Earth, are promising indicators for the possibility of a future ecological worldview. Foraging is a particularly good strategy for fostering the kinds of ecological values required for such a worldview, as it rejects and seeks to move beyond the negative aspects of modern society while also addressing human psychological needs for meaning, self-esteem, and spirituality.

In particular, foragers have exhibited a desire to move beyond the modern concepts of disenchantment and alienation; this is achieved by regaining a more authentic relationship to the land. This relationship renounces the dualistic view of humans as outside of and above nature, which has permeated society since the Enlightenment. Instead, foragers have adopted an embedded understanding in which they view themselves as a part of nature, with a role as partner and caretaker. The redefined relationship between humans and land begins to heal the split between people and

nature, which has been identified as a primary driver for environmental problems, by creating an awareness of interconnections and dependence upon the natural world. This in turn leads to feelings of respect and gratitude, through which ecological values emerge. These values develop through a unique connection to the Earth, which is fostered by the deep observation and direct interaction required to forage effectively; obtaining food from nature provides the ultimate connection between us and the world.

An ecological worldview will not only move beyond modernity, but must also provide for psychological needs, as per TMT, in order to be successful. Luckily, foraging has the ability to provide for these needs without resorting to a consumption-based meaning making strategy. Instead, meaning can be found through the enchantment and spirituality associated with a restored connection to the natural world, feelings of social and ecological belonging, and a sense of pride, empowerment and self-esteem associated with being able to provide for oneself. The environmental movement's inability to engage with these types of non-rational drivers for behavior is a major contributing factor to its failure to motivate meaningful change (Dickinson, 2009). Compounding this failure is the mainstream environmental message that people must stay out of nature in order to protect it. However, this further contributes to alienation from nature and does not promote the development of an ecological conscience. Instead, direct interaction with nature is far more likely to drive a paradigmatic change in values. Gaining an understanding of nature and the human place within it allows people to develop a personal relationship with the land around them. In so doing, its value becomes clearer and more personal, thus motivating an urge to protect and care or it.

The unique and deep connection fostered by foraging encourages ecological values similar to those which have been put forth in various environmental literatures, such as Deep Ecology, biophilia, the Gaia hypothesis, and the land ethic. Foraging, however, provides a concrete, non-abstract strategy for

developing these ecological values; it changes how we perceive our place in the world, while promoting a practical understanding of nature rooted in direct experience.

Chapter 6: Recommendations and Future Directions

As an exploratory study, numerous themes emerged from the interviews and surveys which were not directly related to the research objectives, and thus were not analyzed in depth. Therefore, a multitude of avenues exist for further research. A number of these will be discussed, as well as recommendations for furthering the work presented within this thesis.

6.1 Recommendations for Further Research

6.1.1 Extent of Environmental Action

This study has demonstrated the presence of a strong environmental ethic among foragers, and some evidence of a desire to act according to these values. However, no questions specifically pertained to the level or type of action which foragers take on behalf of the environment. A future study with a focus on this topic would be useful to investigate the extent to which foragers take environmental action. For example, do they show signs of rejecting consumer culture, as compared to the general population? Do they use less electricity, grow their own gardens, make local purchases, and so on? Such a study would provide some understanding as to whether foraging specifically increases environmental concern and action, or if it simply increases these types of beliefs and values, without a significant increase in ecological behaviors.

6.1.2 Extending the Study to Non-Foragers

One limitation of this study is that only the attitudes and values of foragers were examined. Extending this study to include non-foragers would allow for a useful comparison, to determine if the attitudes and values expressed by foragers are significantly similar to or different from, for example, the general population, nature lovers, hunters, and fisherpersons.

Foragers, in general, have a strong ecological conscience and it appear that foraging plays a role in the development of that, particularly through their reported connection to the Earth. It seems possible, by extension, that introducing non-foragers to this activity may serve to increase their ecological

awareness and values, and increase their desire to act in an environmentally positive manner. A future study could explore this possibility by introducing ecologically ambivalent individuals to foraging over a series of several months, while measuring their ecological values and behaviors through pre and post surveys or interviews. This would take the form of a longitudinal study, in which indifferent people with no prior interest in nature or outdoor activities are incentivized to participate in foraging workshops. If this type of study revealed heightened ecological values after being involved in foraging, then a recommendation could be made to parks and environmental groups, to encourage sustainable interaction with nature, including the use of wild plants.

6.1.3 Comparison to Hunting and Fishing

The unique mechanisms through which foragers develop a connection to the Earth (deep observation, direct interaction, and ingestion of nature through wild food) appear to facilitate an awareness of interconnectivity which triggers a protective desire with regard to nature. It would be of interest to determine if these three avenues for developing a connection to nature are unique to foraging, or if they can be experienced through other activities, such as hunting and fishing. Several foragers mentioned a spiritual connection and feelings of belonging to the Earth, as well as to the specific area where they forage. Do hunters and fisherpersons express a connection to the Earth in similar ways? This type of study could further reveal how these specific activities generate an environmental awareness and responsibility, due to the unique pathways through which an ecological connection is developed.

6.1.4 Social Aspects of Foraging

The social aspects of foraging emerged as a theme within the data, however, it was not a targeted topic during data collection and fell outside the scope of this study. Therefore, this theme was not analyzed in depth. Many foragers reported learning and knowledge sharing as taking place within a social context, and over a quarter of interviewees commented that foraging facilitated a sense of social belonging or the deepening of close relationships. Thus, a future study pertaining specifically

to the social aspects of foraging could investigate this activity's promise for restoring social connections and a sense of community, as a rejection of modern alienation and social distancing. It seems likely that foragers would benefit from expanding their community, as it would offer opportunities for relationship building and knowledge sharing.

6.1.5 Physical Health Benefits of Foraging

Most foragers mentioned that the benefits of foraging, at least in part, are to gain better physical health outcomes. The higher levels of nutrition in foraged plants, alongside the increased exercise and time spent outdoors, do indicate foraging may confer health benefits. Further research could compare the physical health outcomes of foragers to those of the general population; such a study would require a large sample size and would likely need to focus on foragers who consume wild foods with some level of regularity. A study on the health of foragers would provide evidence in support of the decision to forage, given that many foragers are hoping to gain health benefits from this activity.

6.1.6 Mental and Emotional Benefits of Foraging

Foragers also mentioned mental and emotional health benefits associated with this activity. It has already been documented that nature can serve as a form of therapy (Selhub and Logan, 2012). A future study could focus on the mental and emotional impacts of foraging, as compared to other types of nature therapy in order to determine if foraging is substantially similar to or different from existing forms. Such a study may also offer further insight as to how foraging can be fulfilling of psychological needs.

6.1.7 Investigate barriers to foraging

Foragers perceive numerous benefits associated with this activity, ranging from economic to health. If others were aware of these benefits, then it seems likely more people would have an interest in participating. Additionally, if it is found that introducing non-foragers to this activity increases their environmental awareness, then promoting foraging could improve environmental outcomes.

However, barriers such as fear, lack of knowledge, time, and desire may prevent people from becoming involved in what appears to be a highly beneficial activity. Future research could clarify these barriers and determine how obstacles, particularly fear and lack of knowledge, can be remedied, in order to introduce more people to foraging in an ecologically sound manner.

6.2 Methodological Recommendations

The following recommendations offer suggestions for expanding and improving this study.

6.2.1 Expansion of Study

One of the aims of this study was to provide a broad characterization of modern foragers in the United States. However, the study was limited to surveying participants at two wild food events, due to constraints of time and finances. A preferred approach, allowing for generalization of the findings to a larger population, would be to access a wider array of foragers, including those who do not have access to these events due to constraints of time, location, or finances. However, the approach taken in this study was the most efficient, allowing access to a large number of foragers within a short timeframe.

6.2.2 Length of Interviews

Due to time constraints at the wild food events, 15 interviews were conducted, ranging from 20-45 minutes in length. While this length is appropriate for the exploratory aims of this study, given more time, a wider range of questions could have been developed. Additional questions could have allowed for elaboration on a wider range of topics, such as how foragers perceive themselves as part of a social community, how foraging impacts their family, and the extent of their environmental concern and action.

Chapter 7: Conclusion

The failure of mainstream environmentalism indicates the need for new strategies with the capability of shifting our cultural paradigm away from individualistic, growth-oriented consumer culture and toward a new, ecological worldview (Leonard, 2007). The process of modernization has altered the human condition in relation to other people, self, and nature, resulting in social, psychological, and ecological divides. There is a desire to move "beyond civilization" (Quinn, 1999, p. 3) by bridging these divisions and recovering more authentic relationships; however, it remains challenging to divorce oneself from the entrenched modern worldview which emphasizes and rewards rationality, individualism, and consumer values. These values and expectations maintain our alienation from nature and each other, as do environmental protection strategies which prevent human interaction with the landscape (Kidner, 2012). An alternative, future worldview with the aim of sustainability for human society must address and remedy the current dualism between humans and nature; this divide is seen as a critical root of modern environmental problems (Sutton, 2004). In order to move beyond the current, entrenched paradigm, we must seek ecologically benign strategies for meeting our psychological needs for meaning and self-esteem, without depending upon material consumption. An ecological meaning making strategy may function by rejecting the dualistic view of nature and finding meaning, spirituality, or enchantment through embeddedness in the natural world, and by seeing oneself as interconnected and dependent upon the Earth. A number of concepts within the environmental literature, particularly Deep Ecology and the land ethic, suggest that recovering an ecocentric relation to the natural world has the ability to promote environmental values (Taylor, 2001; Leopold, 1949). Thus, reconnecting people with the Earth in a personal and meaningful way, through which individuals can experience a sense of wonder and spirituality, may be a more effective strategy for motivating paradigmatic change, rather than by attempting to alter behaviors through the use of scientific facts and logic (Dickinson, 2009).

The concept of "reconnecting with the Earth" remains an abstract recommendation; the environmental literature does not typically make specific, concrete suggestions with regard to how one might develop such a connection. The work done within this thesis attempts to fill this gap by suggesting that foraging, as a physical, non-abstract activity, offers a way of restoring authentic, ecocentric relations between people, nature, and food, through direct interaction with the Earth. Foragers were surveyed and interviewed at two wild food events in order to explore whether foraging might promote the kinds of values required by an ecological worldview, as well as to produce a general characterization of the population. The data analysis, which involved coding verbatim interview transcripts and survey responses, searched for evidence that foraging is a reaction to modern human-nature dualism, and that it can play a role in restoring a meaningful, embedded relationship to nature and food. The analysis also searched for evidence that foragers possess environmental values, and the ways in which foragers express a connection to nature.

Analysis of the data revealed foragers are environmentally concerned and have a desire to act accordingly; some foragers attribute this inclination, at least in part, to the heightened awareness of the natural world they have gained through foraging. Foragers also report a connection to the Earth, and that foraging develops this connection through channels which appear to be unique. In particular, foragers experience a physical connection between body and land, by ingesting nature through wild food. Perhaps only hunters and fisherpersons experience a similarly visceral connection to nature as a form of sustenance. In order to collect food effectively, foragers mentioned a need to engage with the natural world on a deeper level than is necessary in most other outdoors pursuits; foraging requires individuals to deeply observe their surroundings and interact with them directly. An awareness of interconnectivity arises from this level of interaction; the data revealed some foragers feel a sense of ecological belonging and an ability to view themselves as part of the Earth. Seeing oneself as part of the Earth indicates a re-envisioning of humanity's role, moving beyond dualism and into an

embedded understanding. Several foragers also expressed elements of wonder, meaning, and spirituality associated with foraging. By providing a sense of belonging and spirituality, the type of connection to nature which foraging appears to develop may serve to fulfill psychological needs for meaning and self-esteem. By meeting these needs, foraging appears to hold promise as part of an ecological meaning making strategy, the development of which is an important first step in shifting our paradigm toward an ecological worldview.

While the evidence presented throughout this thesis makes it clear that the participating foragers experience a connection to nature and heightened ecological values, it is not possible to generalize these findings to determine how the broader population would respond upon becoming involved in foraging. Further research is advisable, in order to determine if introducing non-foragers to this activity could result in positive shifts toward a collective ecological awareness. If so, then it would seem wise to promote a new environmental message, one in which humans are once again permitted to integrate their bodies and minds into the natural world, by seeing, feeling, experiencing, and tasting it for themselves.

Appendix A

This is a partial list of foraging blogs and websites, businesses, and events and classes.

Blogs and Websites

Eat The Weeds: http://www.eattheweeds.com

Wild Edible Food: http://www.ediblewildfood.com

Forager's Harvest: http://foragersharvest.com

Hunger and Thirst: http://hungerandthirstforlife.blogspot.ca

The Mushroom Forager: http://themushroomforager.com/blog/

Three Foragers: http://the3foragers.blogspot.ca

Wild Foodism: http://wildfoodism.com

Wildcrafting: Forage for Free Food: http://www.wildcrafting.net

"Wildman" Steve Brill: http://www.wildmanstevebrill.com

Hunter-Angler-Gardener-Cook: http://honest-food.net

First Ways: http://firstways.com

A Forager's Feast: http://ledameredith.com

Businesses

Forbes Wild Foods: http://www.wildfoods.ca

Events and Classes

Midwest Wild Harvest Festival: http://wildharvestfestival.org

Wild Food Adventures: http://notastelikehome.org

John Kallas' workshops: http://wildfoodadventures.com/workshops/

Wild Food Summit: http://www.wetccextension.org/?p=1159

Nature Wonder Wild Foods Weekend:
http://www.wvdnr.gov/2015news/15news129.shtm

North Carolina Wild Foods Weekend: https://www.facebook.com/NC-Wild-Foods-Weekend-159788180709235/

Appendix B: Interview Guide

1. **How did you start foraging and why were you attracted to begin?**

2. **Describe your best memory had while foraging.**

3. **Why do you forage? What benefits do you feel it provides?**

4. **Do you feel that being a forager makes you different from the average person or your neighbors? If yes, how?**

5. **Has foraging changed other behaviors in your life? Are there ways you think or act differently?**

   Probe: a. Have you noticed changes in others that have been influenced by participation in foraging?

6. **Do you believe that foraging provides any benefits beyond what other outdoor activities provide (examples: hiking/canoeing/camping)?**

7. **If more people foraged, do you think society would change? If yes, how?**

8. **Does foraging cause people to view land or the environment differently?**

9. **Is there anything else you would like to add?**

Appendix C: Paper Survey

Research Study: Characterization of Modern North American Foragers

This survey is anonymous; giving your name is not necessary. Feel free to skip over any questions you prefer not to answer.

This study has been reviewed by and received ethics clearance from a University of Waterloo Research Ethics Committee. However, the final decision to participate is yours.

Age: _____

Gender: _____

Occupation: _____

Part One: Baseline Information

1. Is the area where you usually live:
   - ☐ Urban
   - ☐ Suburban
   - ☐ Rural
   - ☐ Other:

2. What are a few of your favorite outdoor activities? (List below):

3. How much time do you typically spend outdoors in a **natural area** (in the woods, on a farm, hiking trail, lake, park, etc.)? Walking downtown, for example, does **not** count.
   - ☐ Daily
   - ☐ Several days per week
   - ☐ 1-2 times per week
   - ☐ 1-2 times per month
   - ☐ Once every few months
   - ☐ A few times per year or less

4. How satisfied are you with what you have now (your car, home, clothing, electronics hobbies/leisure, etc)?
   - ☐ Extremely satisfied
   - ☐ Satisfied
   - ☐ Somewhat satisfied, but could be better
   - ☐ Dissatisfied
   - ☐ Extremely dissatisfied

5. If you were given $20,000 and had no debts to repay, how would you choose to spend it?

6. How often do you typically make purchases (including in stores and online) for things other than groceries and necessities?

- ☐ Very frequently (several times per week, or more)
- ☐ Often (1-2 times per week)
- ☐ Sometimes (a few times per month)
- ☐ Occasionally (once a month or so)
- ☐ Rarely (2-5 times per year)
- ☐ Almost never

7a. Do you identify as being environmentally aware?

- ☐ Yes
- ☐ No
- ☐ Not sure

7b. Would your friends/family describe you that way?

- ☐ Yes
- ☐ No
- ☐ Not sure

8. How important do you perceive your local natural environment to be for your daily life?

- ☐ Extremely important
- ☐ Important
- ☐ Somewhat important
- ☐ Slightly important
- ☐ No Importance

Part II: Experiences as a Forager

1. How long have you been foraging?

- ☐ Less than 1 year
- ☐ 1-2 years
- ☐ 3-5 years
- ☐ 5-10 years
- ☐ 10-20 years
- ☐ more than 20 years

2. Do you see foraging as:
   - ☐ A hobby
   - ☐ Lifestyle
   - ☐ Other: _____.

3. How frequently do you typically consume foraged foods as part of your diet?

   ☐ Not at all
   ☐ Less than once a month
   ☐ A few times per month
   ☐ Once a week
   ☐ Several times per week
   ☐ Daily

4. Do you typically forage:
   (choose all that apply)

   ☐ Alone
   ☐ With spouse/partner/family
   ☐ Friends
   ☐ Club
   ☐ Other: _____.

5. How did you start foraging?

6. Why were you attracted to begin foraging?

7. How do you feel foraging is beneficial to you?

8. How has foraging changed other behaviors in your life? Do you think or act differently?

9. Does foraging make you feel more connected to the earth? If yes, how so?

Any other comments you would like to make:

Thank you for completing this survey!

If you are interested in the results of this study, you may contact the research student, Kristen Giesting, by email: kgiestin@uwaterloo.ca, or leave your email address below, if you choose. If you do not have email, you may also write your mailing address below, if you choose, to be sent a copy of the study. The anticipated completion date is May 2016.

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