To the Graduate Council:

I am submitting herewith a dissertation written by Jonathan Matthew Scherch entitled "Living Responsibly: A Study of Sustainable Living in East Tennessee and the Southern Appalachian Bioregion." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Social Work.

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Living Responsibly:

A Study of Sustainable Living in

East Tennessee and the Southern Appalachian Bioregion

A Dissertation

Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

Jonathan Matthew Scherch

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DEDICATION

This work is dedicated to:

the Earth;

my mother, Louise, and my father, Jack; my sister, Marj, and my brother, David, and to their respective spouses, Roy and Laura; my nephews Taylor and Andrew; my Oma Collins, Uncle Red, Baboo, Aunt Helen, and Oma Scherch--whose years of life and history have touched this work in many ways, and who, like me, are the authors, fiduciaries, and interpreters of our family's accrued wisdom and folly;

and to Michelle Hall, whose patience, care, and steadfast support helped to make this project possible.

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* * *

ABSTRACT

This study examined the ways in which people living and working within East Tennessee and the Southern Appalachian bioregion attempt to do so more sustainably, and by extension, responsibly. A total of 94 subjects participated in guided interviews (N=76), with some interviews having multiple participants. The interviews examined the range of sustainable living practices which were being learned, developed, and practiced; the subjects' personal pathways to their practices and world views, as distinct from the social mainstream; and the subjects' demographic characteristics.

Results from data analysis drawn from subject responses to both open- and closed-ended questions indicate the following: (a) the majority of the 94 respondents (52 male, 42 female) were well-educated, white-Caucasians (91), while 3 were African-Americans, and most respondents fell within an age range of 30 to 50 years old; (b) the existence of individual and community sustainable living practices involve food, shelter, energy, transportation and health (including organic agriculture), use of alternative building designs and materials, alternative renewable energy systems, use of bicycles, car-pooling efforts and vehicle maintenance routines, and alternative health care practices involving preventive strategies and the use of herbal remedies; (c) the developing range of sustainable homesteads and communities are comprised of structures using materials including Styrofoam panels, straw bales, cob (clay, sand, and straw composite material), scrap lumber, and stone, and they often reflect efforts at integrating low-cost high thermal efficiency, solar heating and lighting, creative cooling techniques, indoor-outdoor connections, general interests in pursuing notions of self-

sufficiency in food and energy, and/or environmental sensitivity; (d) a group of people (N=84) are involved in occupations and vocations which reflect interests in, and ethics of, sustainability including organic crop and cattle farmers, human and animal health care professionals, small business owners and employees, educators (primary, secondary, and college-level), community organizers and activists, permaculturalists, home-makers, government employees, journalists, college students, and artists; and (e) complex and diverse motivations for why such efforts have been and are being undertaken include environmental concerns, personal and professional experiences, insights gained from education, travel, and personal contacts. Implications and recommendations for professional social work are suggested.

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CHAPTER 1

INTRODUCTION

As Brown (1995) observes, environmental issues appear to be taking center stage due to collisions occurring between accelerating human demands for and consumption of resources and the earth's natural limits. Correspondingly, Corson (1990) notes that there appears to be

> ample evidence of the seriousness of the world's population, resource, and environmental problems--poverty and hunger, deforestation and species loss, soil erosion and desertification, air and water pollution, acid precipitation and ozone layer depletion, as well as greenhouse effect and climate change. (Corson, 1990, p. xiii)

Moreover, according to Krause (1993), despite the advances in technical knowledge about environmental problems, the assaults on the earth and its physical components have not been resolved; our comfortable and often environmentally destructive lifestyles are deeply ingrained (Krause, 1993) and historically consistent (Ponting, 1991). Thus, the United States, for example, has been one of the most wasteful societies precisely because it also has been one of the most affluent (Melosi, 1987).

Since Earth Day 1970, incidents and evidence of environmental degradation have become more visible and frequent at global, national, bioregional, and local levels. It was at or around this time that environmental quality began to emerge as a major social problem in our society (Dunlap & Mertig, 1992). Today, collisions with the sustainable-yield limits of fisheries, forests, aquifers, and soils, and with the capacity of the Earth's

ecosystem to absorb carbon dioxide, are occurring with increasing frequency (Brown, 1995). Accordingly, scientists and environmentalists have been warning that the ever-increasing reach of modern technology is degrading environmental habitats and threatening global security (Berger, 1995). Thus, current issues of environmental quality challenge us, as a society, to adapt and adopt lifestyles which are socially responsible and environmentally sensitive. The concept of sustainable living embodies these desirable and necessary traits.

In East Tennessee and throughout the Southern Appalachian bioregion, environmental issues including rapid population growth and urban sprawl, tremendous resource consumption and waste production, and pollution, for example, are visibly and adversely impacting the health of the bioregion, and by extension, its human and non-human inhabitants. In response to such problems, people living and/or working in the bioregion have chosen to adopt sustainable living practices which reflect and promote environmental sensitivity, ecological integrity, and notions of individual self-reliance.

PURPOSE OF THE STUDY

The purpose of this study is to examine a range of sustainable living prototypes in the East Tennessee and Southern Appalachian bioregion to better understand (a) what efforts at sustainable living are being made, (b) where these are taking place, (c) by what types of people, and (d) for what reasons. More specifically, the study aims to (a) provide an overview of a sample of sustainable living practices including sustainable homesteads, sustainable communities, and types of sustainable business; (b) examine

how these sustainable living practices were learned and developed; and (c) examine the pathways by which persons became involved in their respective sustainable living practices.

The examination of these pathways involves four components: (a) an examination of the present and future aims and purposes of the sustainable living practices and the early influences and triggering events which appear to have inspired their sustainable living practices; (b) an examination of the types of supports and obstacles which affect the respondents' abilities to maintain their sustainable living practices; (c) an examination of the respondents' world views, including specific views of the social mainstream; and (d) an examination of the respondents' efforts at maintaining boundaries between the social mainstream and their non-normal world.

SIGNIFICANCE FOR SOCIAL WORK

As reflected in the supporting literature and examples, it is apparent that all individuals, communities and their bioregions share a close and common bond with each other as they evolve and adapt to each other. Thus, social work's use of bioregional "lenses" to define and examine communities can provide new insights about how communities function. Bioregionalism offers a conscious awareness of the status and requirements of the relationship between people and their environments. For example, as I note elsewhere (Scherch, in-press), when a community is examined from a bioregional context, the significance of its rural or urban designation is transformed from a simple descriptive term denoting location or demographics to one which describes the

relationship between the community and its ecological base. Thus, if the bioregional context of communities were to be operationalized within community practice and development efforts, the potential for creating healthy, symbiotic, empowering, and sustainable homesteads, communities, and businesses, reflecting a diversity of methods and models such as those examined here, would likely improve (See also Scherch, in-press).

For professional social work, communities constitute an important arena or context at all levels of intervention, but especially with regard to social policy, community organization, and administration and management (Fellin, 1995). Moreover, according to Weil (1996),

> to respond to the current political, social, economic, technological, and environmental context and to engage in practice that is oriented toward the next millennium, social work practice needs to reclaim and stress community building and community practice and to move decisively into both social and economic development. (p. 485)

Thus, with this call for further community-based social work practice, the addition of a sustainable bioregional context to such a practice would seem timely.

It is essential that the creation of an increasingly sustainable and just world, for both human and non-human species, continues to evolve as awareness and understanding of the need for sensitive interdependent living becomes more apparent. However, such awareness appears to come in contrast to a process where, according to Hoff (1994), industrially-advanced societies have been able to suppress awareness of humanity's

dependence on its physical environment, and in extension, "social welfare research and policy--and social work practice, research and education--have also gradually developed an almost exclusive focus on the social environment, generally ignoring the interdependent relationships between people and the physical environmental context" (p. 12). Here then, professional social work, throughout all of its dimensions--across the practice continuum of micro-practice to macro-practice--must reflect commitments to both social and environmental justice, and it must endeavor to advance the sophistication of its educational, research, and practice technologies correspondingly.

According to McNutt and Hoff (1994), regardless of the substantive area to which practice, education, and/or research is directed, and in keeping with the interdependence of clients with their natural environments, all aspects of social work practice need to be similarly grounded. Moreover, as the social work profession has always been concerned with the future (McNutt & Hoff, 1994), such a focus needs to embrace principles and methods of sustainability, and in so doing, raise the issues of development and resource extraction as they pertain to the current and future welfare of the persons serviced by social workers (McNutt & Hoff, 1994). In addition, McNutt and Hoff (1994) assert that,

> as the profession most intimately privy to human suffering and social breakdown engendered by the political economy, social work can and should take leadership to develop and publicize research on social needs and conditions at the local, regional, national, and international levels, which demonstrates the linkages between the quality of environmental conditions, social and health conditions,

and the operations of the economy. (p. 300)

Furthermore, Rogge (1994) notes that social workers must do more than assimilate, for example, technological hazards as just another problem to which professional expertise will be applied. According to Rogge (1994), "social work professionals should influence other actors to think differently about the implications of environmental hazards. We should evaluate what social work can gain by thinking differently about the definitions and boundaries by which we define our work" (p. 67). With this in mind, the work of Berger and Kelly (1993), and more specifically, the expansion of the National Association of Social Workers (1990) code of ethics to include and advance the Ecological Credo for Social Workers (Berger & Kelly, 1993) would be prudent (See Appendix IV to review Principles of the Ecological Credo for Social Workers).

According to Hoff & Polack (1993), the environmental crisis does not challenge basic social work values and practice with regard to how the profession assumes a transactional viewpoint between person and environment within an ecological model. To emphasize this point, Hoff and Polack (1993) provide illustrations as to how current environmental issues may be approached in light of an ecological model that incorporates concern for environmental sustainability and for human development. For example, Hoff and Polack (1993) note that social work research, having traditionally focused on disadvantaged populations, could expand to include cross-disciplinary research on the discriminatory effects of environmental pollution and, for example, citizens' resistance to the pollution of their local communities. Furthermore, social work

researchers in health care are particularly challenged to assess the potential environmental linkages to developmental disabilities, cancer, and other diseases (Hoff & Polack, 1993).

Within the areas of community organizing, advocacy for social justice, direct practice, social policy and research, and education, social workers are challenged to examine the social, political, economic, and environmental dimensions embedded within their focus and practice area of choice. Thus, amendments to social work educational curricula in the form of content which explores environmental issues and social welfare implications would be useful and valuable, at both graduate and undergraduate program levels, for developing leadership in building an environmentally-sustainable society (McNutt & Hoff, 1995).

CHAPTER 2

CONCEPTUAL FRAMEWORK

AND REVIEW OF THE LITERATURE

The conceptual framework developed for this study includes four parts. First, a review of the socioenvironmental literature is provided to (1) develop a scholarly argument for the centrality and urgency of sustainable living in the interest of our planet's survival, including an overview of literature focusing on the nature and origin of environmental concern; (2) reaffirm the interdependent relationship between social welfare and environmental quality; and (3) understand the context of environmental issues current within East Tennessee and the Southern Appalachian bioregion.

Second, building on this work, an overview of philosophical perspectives on environmental justice theory will be provided, with an emphasis placed on the work of Wenz (1988). Third, social movement theories will be discussed emphasizing (1) Barber's (1984) participatory Strong Democracy theory and Tatum's (1996) application of this work in the study of the American home power movement; and (2) Aronson's (1993) study of the transformation of ordinary people into political activists, which utilizes Flacks' (1988) theory of citizen-political activist transformation and Blumer's (1969) theory of situated interaction.

Finally, a brief overview of theories concerning social deviance and labeling, and the development of world views and social paradigms, will be presented. These theories are useful in understanding how and why the respondents adopt sustainable living practices which differ markedly from mainstream lifestyles, and they help to explain how

the sustainable living practices are justified, internally supported, and thus maintained.

PART 1:

SUSTAINABLE LIVING:

ACTING TODAY ON BEHALF OF TOMORROW

According to Brown and colleagues (1993), "the measure of individuals or nations is whether they respond to the great issues of their time, and for our generation, the great issues are environment and poverty" (p. 21). We have reached a point in time, according to Brown and colleagues (1993) where, "if we fail to convert our self-destructing economy into one that is environmentally sustainable, future generations will be overwhelmed by environmental degradation and social disintegration" (p. 21). To do so, according to Commoner (1992), we must recognize that the assault on the environment cannot be effectively controlled, but must be prevented. This, Commoner (1992) asserts, means transforming the present structure of the technosphere and bringing it into harmony with the ecosphere, which in turn will require massively redesigning the major industrial, agricultural, energy, and transportation systems.

Such a transformation of these systems, according to Commoner (1992), conflicts with the short-term profit-maximizing goals that now govern investment decisions, and accordingly, politically suitable means must be developed that bring the public interest in long-term environmental quality to bear on these decisions (Commoner, 1992). Calling attention to decision-making processes is important as a means to address

and prevent misconceptions regarding the relationship between humans and the natural world. On this point, Gore (1993) notes that "believing ourselves to be separate from the Earth means having no idea how we fit into the natural cycle of life and no understanding of the natural processes of change that affect us and that we in turn are affecting" (p. 162). Towards understanding this relationship and what history can teach about it, Commoner (1992) offers a more succinct interpretation: "A free lunch is really a debt" (p. 14).

In general, environmental problems are the result of people violating the three fundamental principles of ecosystem functioning (Cable & Cable, 1995). Cable and Cable (1995) define these principles as follows: (a) resources are supplied and wastes are disposed of by recycling all elements; (b) ecosystems run on solar energy, which is exceedingly abundant, non-polluting, relatively constant, and relatively everlasting; and (c) large biomasses cannot be supported at the ends of long food chains. With these principles in mind, Cable and Cable (1995) remark that

> the biological threats that directly affect the survival of individual human beings include: the spread of carcinogens and environmental toxins; the disorganization of the food systems necessary for present and future generations of people; and climatic changes that destroy habitats for humans. (p. 25)

Unfortunately, human understanding of the consequences of waste creation and disposal, for example, has always tended to lag well behind the release of pollutants into the environment (Ponting, 1991).

In earlier societies, Ponting (1991) notes that it is possible to find evidence of

many of the features which characterize the response to contemporary pollution including:

> fatalistic acceptance of pollution as an inevitable consequence of human activities; authorities balking at prevention and control measures; lack of foresight and technical understanding; the problem of allocating responsibility; a preference for short-term local fixes rather than long-term solutions and a failure of individuals and companies to take responsibility for their actions. (p. 346)

In short, Ponting (1991) notes that "attempts taken to control pollution are as old as the problem itself, but the response has usually been belated and inadequate with a poor record of co-operation and enforcement" (p. 346). Thus, as we focus attention on the interdependent global matrix of social issues and concerns, it seems important to note that--as living conditions deteriorate, leaving fewer and fewer favorable environments for human survival--conflict is inevitable (Cable & Cable, 1995).

In East Tennessee and Southern Appalachia, numerous issues of water and air quality, chemical emissions and radioactive contamination, solid waste management, rapid and expansive land conversion, and encroachment upon habitats supporting precious biodiversity characterize much of the current human / non-human relationship within the bioregion. For example, some streams and lakes do not support one or more of their designated uses as defined by the Tennessee Department of Environment and Conservation (TDEC) and have been posted as unsafe for swimming or consuming certain fish (The Tennessee Conservationist, 1994). Also, unhealthful ground-level ozone originating from automobiles and other types of combustion engines, factories,

and boilers, among other contributors, have caused the United States Forest Service to warn tourists about unhealthful air quality conditions in the Great Smoky Mountains National Park during peak summer seasons. Acid rain has contributed to the demise of already blight-weakened conifer stands located at the higher elevations of these mountains, leaving balds where trees once stood, and consequently contributing to a rise in acidity of aquifers, streams, and headwaters of the Tennessee River system. Furthermore, the long-standing effects of policies of the Tennessee Valley Authority (TVA) have converged to weaken the health of the bioregion (Broadened Horizon Riverkeeper Project, 1992). These policies have included (1) the impoundment of the Tennessee River and related water quality issues within the interconnected reservoir system, (2) the production of electricity and the subsequent wastes through the use of non-renewable nuclear and fossil fuels, and (3) support for chip milling within the southeastern forests adjacent to the Tennessee River, which contributes to forest and biodiversity depletion, erosion, and the proliferation of monoculture tree plantations.

These and numerous other environmental issues have motivated studies focusing on specific bioregional issues. For example, studies have focused on the effects of the long-standing abuses of the Pigeon River by the paper production processes of the Champion International Pulp and Paper mill in Canton, North Carolina (Bartlett, 1995), and the factors that influence family response to its contamination (Soliman, 1993); the history and current affairs surrounding the storage and management of radioactive material and hazardous wastes in Oak Ridge, Tennessee, and the relationship and dialogue between citizens, private industrial contractors, and the federal government

(Foundation for Global Sustainability, 1992); and the efforts of Project: Witherspoon, a community environmental organization in Knoxville, Tennessee, in lobbying for the cleanup and study of health hazards associated with the David Witherspoon, Inc. recycling, processing, and landfill sites (Conner, 1994).

Developments in environmental policy, the range of pro-environmental events (beginning with Earth Day, 1970), in addition to numerous highly publicized incidents and revelations of environmental accidents and neglect, have over the past few decades contributed to the development of concern for the quality of the environment. These concerns have resulted in political and consumer action (Dunlap & Scarce, 1991) and subsequent grassroots movements. According to Dunlap and Mertig (1992), contributing factors to the growth of national and grassroots movements include the rise of a post-1960's activist culture; increased scientific knowledge and media coverage of environmental problems and accidents (Szaze, 1994); increased direct contact with environmental degradation through outdoor recreation; growth of the petrochemical industry after World War II (Freudenberg & Steinsapir, 1992); economic growth which facilitates an emphatic shift away from material growth to concern for quality of life; and the maturation and development of environmental groups into environmental organizations (Dunlap & Mertig, 1992).

In general, such environmental concerns, according to Wenz (1988), encompass relationships not only among people who live in the same society at the same time, but also among people who live in different societies at the same time, between people of the present and those of the future, between human and non-human animals, and between

people and the biosphere. Social scientists have conducted studies in an effort to better understand the nature of environmental concern (Hackett, 1992). These include studies which focus on value orientations and gender (Stern et al, 1993; Arcury et al, 1987; McStay & Dunlap, 1983); environmentally-relevant knowledge, attitudes, and belief systems (Schahn & Holzer, 1990; Blocker & Eckberg, 1989); sociodemographic variables and political ideology (Samdahl & Robertson, 1989; Hamilton, 1985); and rural and urban differences (Freudenberg, 1991), among others. However, these studies have had limited success in explaining the social bases and dimensions of environmental concern (Van Liere & Dunlap, 1980; Hackett, 1992). (Also see Kowalewski & Porter [1993], Mohai [1985], Borden & Francis, [1978], Buttel & Johnson [1978], Dunlap and Van Liere [1978], Tognacci et al., [1972].)

In reviewing this research, Van Liere and Dunlap (1980) found that "age, education, and political ideology were consistently (albeit moderately) associated with environmental concern," and thus, they had "confidence in concluding that younger, well-educated, and politically liberal persons tend to be more concerned about environmental quality than their older, less educated, and politically conservative counterparts" (p. 192), while rural / urban residency and associated occupational differences (i.e.,, rural resource extractive and urban non-extractive occupations), and political party identification, correlated more weakly with environmental concern. Building on this work, deHaven-Smith (1988) asserts that different environmental problems are likely to mobilize different subgroups of the population given that

> the finding from numerous studies that environmentalism, when measured as a generalized concern, is consistently correlated only with age, education, and political ideology suggests that national and worldwide problems of overpopulation, resource depletion, and environmental degradation are of concern mainly to young, college-educated liberals and radicals. The environmental concerns of other groups probably stem from localized air and water pollution, gasoline shortages, unsightly urban sprawl, and other calamities that are relatively concrete and immediate. (pp. 294-295)

Thus, according to deHaven-Smith (1988), the ideological and demographic correlates of environmental concern vary depending on which environmental issues are examined.

Over the years, citizen action has reflected a broad-based public demand for more vigorous and comprehensive federal action to prevent (or control further) environmental degradation (Kraft & Vig, 1994). In the wake of increased environmental concerns, according to Grove-White and Szerszynski (1992), calls for a new environmental ethic have been growing. Until the mid-1980's, such calls tended to come primarily from the social margins and involved religious groups, moral philosophers, and/or philosophically-inclined conservationists. More recently, such calls are beginning to be heard from more orthodox sources such as politicians, international administrators, scientific bodies, industry, and other professions and mainstream institutions.

Grove-White and Szerszynski (1992) suggest that such calls represent a straight-forward response to serious problems we face collectively. More specifically, the sequence of contributing factors to these problems, according to Grove-White and

Szerszynski (1992), tends to be as follows: The accumulating impacts of humankind on the physical world and its inhabitants (human and non-human) result from trends in and commitments to our industrial way of life and the escalating global population that results. Such impacts have been underpinned by attitudes and values (i.e.,, an ethic) assuming the inexhaustibility and endless availability of nature for human purposes. The worldwide rates of loss of wildlife, plant, and other species; the reduction of tropical rainforests and erosion of productive agricultural land in many parts of the world; the impacts of pollution on the ozone layer, the oceans, and global climate are consequences of these commitments.

In short, Grove-White and Szerszynski (1992) assert that since earlier ethical commitments have led humankind into the contemporary environmental debacle, new ethical commitments must be adopted as the means by which to escape. Thus, issues of social welfare and environmental quality need to be treated simultaneously (Wenz, 1988), and accordingly, attention needs to be given to how matters of social and environmental justice are reflected in decisions and behaviors which characterize the relationship between humans and non-human species.

Calling attention to the need for simultaneous response to and treatment of social and environmental problems, scholars have been suggesting that such attention would need to involve a social shift towards sustainability. Milbrath (1989) notes that we must design government and politics to help a society learn how to become sustainable. Historically, according to Milbrath (1989), we have learned how to dominate our environments in similar fashion to our success in controlling disease, mending broken

body parts, improving infant mortality rates, securing reliable food supplies, isolating ourselves from undesirable weather conditions, developing means of quick travel, and so on. However, Milbrath (1989) observes that we have not done a good job of taking into account the long-term consequences of our actions and achievements.

Schnaiberg and Gould (1994) note that modern industrial societies would be well advised to examine and incorporate much of the socioenvironmental ethics espoused by pre- and non-industrial peoples into their current systems of values. Furthermore, according to Schnaiberg and Gould (1994), these societies must also attend to the important historical disjunctures between ethical words and technical deeds, which were often initially built around military or political ambitions. This advice appears in keeping with Mander's (1991) perception that "it seems quite obvious--almost self-evident--that native cultures that have lived successfully in one place for millennia have been abiding by successful economic practices, including wildlife and resource conservation" (p. 257). Thus, to achieve long-term socioenvironmental sustainability, all societies will either have to redefine their ethical relationships to the natural world or struggle to live up to the goals established by pre- and non-industrialized peoples (Schnaiberg & Gould, 1994).

Facilitating a social transition towards an ethic of sustainability is a complex and multidimensional process to take place over several generations. Indeed, with such a transition in mind, Harte (1995) notes that considering the interests of unborn humanity during our daily actions is a tall order. Nonetheless, given that such consideration is necessary, the following section provides examples of Harte's (1995) arguments in

support of a sustainable transition.

With regard to issues of population growth and the frequently made argument that people are a good thing, so let us have more of them, Harte (1995) replies "yes, let us have as many people as possible--*but not all at the same time*. Let us populate the world with people for as long into the future as possible, by taking care that we limit population growth now" (p. 150). With regard to the argument that the banning of timber cutting in old-growth forests, oil drilling near marine sanctuaries, or strip mining in the wilderness will eliminate existing jobs, Harte (1995) asserts that, if those natural resources are left intact, their inherent recreational and ecological value will create and sustain a far greater number of jobs for numerous future generations of workers. However, Harte (1995) warns that "if these finite resources are mined greedily today, the ephemeral jobs will soon disappear along with the resources, permanently destroying future opportunities for a much greater number of jobs" (pp. 150-151).

Furthermore, Harte (1995) offers a parsimonious response to the argument that the need exists to extract more rapidly our oil, gas, and coal resources to fuel growth of our industrial society. Countering this argument, Harte asserts that "the society that knows only how to burn fuel profligately will soon have none, whereas the society that knows how to use it efficiently can save barrel after barrel, generation after generation. Frugality and efficiency are the gifts that keep on giving" (p. 151). And, as society faces a choice between the welfare of people and the survival of some obscure fish, flower, fungus, or frog species, Harte (1995) provides a counter-argument that the welfare and survival of human and non-humans species is synonymous:

> In the short run, exterminating a wild species may confer on some people some advantage. But like a quick pickup from a narcotic, this advantage comes at the cost of placing the long-term health of humanity in jeopardy. The loss of every wild species is a loss of opportunity, both economic and aesthetic, for all the generations of our descendants. And the deliberate destruction of a species leaves a scar on the conscience of humanity that will never heal. (p. 151)

With this commentary in mind, it is helpful to note that, today, indications are that a growing number of people are redefining their relationships with the natural world in the interest of amity and sustainability. According to Commoner (1992), some people seeking more ecologically harmonious ways of life--at least for themselves--have returned to the land and endeavored to grow their own food, build their own houses and furniture, and recycle their waste. Others seek notions of self-reliance at the individual level as well as at the bioregional level. This approach, referred to as bioregionalism, according to Commoner (1992) "envisions a society based on ecologically defined bioregions, rather than on areas specified by their political boundaries and includes the belief that such an ecologically founded society will have many laudable features: it will be cooperative rather than competitive, decentralized rather than centralized, interdependent rather than polarized, evolving rather than growing, peaceful rather than violent" (pp. 171-172).

Considering the tremendous body of literature devoted to the origin and range of social and environmental issues, it would not be unreasonable to suggest that our society is at a crossroads. Furthermore, such reasoning would lend support to the need for the

integration of principles of sustainability into our lifestyles and business. The need exists for us to more closely examine the links and implications between the concepts of social welfare and environmental quality. The work of Marien (1992) attempted to compile and critique the most important references within this body of literature. More specifically, Marien's (1992) bibliographic review identified the most important English-language literature on environmental problems and sustainable futures of the past few years, and provided a framework for assembling it in a coherent manner (Marien, 1992).

According to Marien (1992), identification of various environmental problems and ideas for the transition to sustainability have been expressed in a wide variety of books, reports, and articles; however, what is referred to as an "infoglut" (p. 732) appears to be an important but under-appreciated part of the problem of learning our way to a sustainable society. Associated to this problem, Marien (1992) observes that

> little or no attention has been paid to this multi-disciplinary flood of information and how to handle it so that we can identify the most important writing, better learn from each other, and get the environmental message across to the vast majority of politicians, academicians and business leaders who have yet to appreciate fully or even partly the problems that we face and the directions that must be taken. (p. 732)

Accordingly, as noted above, many socioenvironmental issues have been studied and documented which are specific to the East Tennessee and Southern Appalachian bioregion. However, these studies have failed to adequately account for and/or portray the synergistic interrelationships which exist between these bioregional issues. Doing so

is an important and salient task in filling the gaps which inhibit a broader understanding of the origins, implications, and possible resolution of these problems. This knowledge gap is, essentially, what motivated the development of the publication What Have We Done?: The Foundation for Global Sustainability's State of the Bioregion Report for the Upper Tennessee Valley and Southern Appalachian Mountains (Nolt et al., 1997). The following section summarizes the content of this work, referred to hereafter as What Have We Done? (Nolt et al., 1997).

What Have We Done? (Nolt et al., 1997) focuses on the myriad of social and environmental issues affecting the holistic health of the East Tennessee and Southern Appalachian bioregion. Chapter themes focus on issues related to water; air, weather and climate; flora and fauna; food; energy; waste; transportation; population and urbanization; economics; and discussion of bioregional sustainable living methods. According to Nolt and colleagues (1997), the motivation for this text is that, although there are many organizations with environmental expertise in the Upper Tennessee Valley and the Southern Appalachians, and although their combined knowledge is extensive, no one now possesses a synoptic understanding of the bioregion's environmental problems. Legislators, policy-makers, educators, and citizens have access only to piecemeal information. But because ecological deterioration is systemic, piecemeal approaches ignore the interrelations and cumulative impacts that give such deterioration urgency.

Thus, the Foundation for Global Sustainability (1995) and Nolt and colleagues (1997) indicate that what is needed is a detailed, long-term, multidimensional

understanding--an understanding that matches the depth and complexity of the environmental dilemma. Achieving such an understanding requires research and synthesis.

What Have We Done? (Nolt et al., 1997) reflects an appreciation for the uniqueness of East Tennessee and the Southern Appalachian bioregion. Nonetheless, the uniqueness of the bioregion notwithstanding, Nolt and colleagues (1997) comment on the changes which have taken place over time within the bioregion:

> Today this land is fragmented and transformed by human impositions: dams and power plants (hydroelectric, coal-fired, and nuclear); Interstates 40, 75, and 81, three of the most traveled highways in the country; the heavily contaminated land and water of the nuclear weapons production facilities and national laboratory at Oak Ridge (which ties with Rocky Flats, Colorado, for third rank among the nation's worst-polluted sites); and the fast-expanding urban sprawl of Chattanooga, Knoxville/Oak Ridge, Pigeon Forge, Asheville, Bristol, Johnson City, and Kingsport. Near these urban hubs, strip development, new roads, and industrial parks multiply and proliferate until it seems that they will swallow up everything. (p. 3)

Such changes have adversely affected the health and diversity of flora and fauna; the means by which people live and work, whether by choice or not; and more generally, have contributed to what might be referred to as the rationalization of the bioregion, brought about by aggressive and systematic development and, like development activities occurring elsewhere, guided and characterized by the spurious virtues of efficiency,

calculability, predictability, and control as conceptualized by Ritzer (1996).

With these changes in mind, Nolt and colleagues (1997) comment on their subsequent effects on the bioregion:

> Slashed by roads and power lines; studded with microwave towers; noisy with the motors of cars, trucks, jet airliners, and chain saws; water and air polluted, the blue mist of the mountains now often a hazy sulfurous white; suburban sprawl flowing outward from cities small and large; the forests cut and cut again, the big trees all but gone, the solitude unrecoverable; the rivers dammed, tamed, and silting up; the meadows plowed, planted, paved. There are today few other regions in North America where so many assaults on nature intersect as the Upper Tennessee Valley and the Southern Appalachians. (p. 2)

What Have We Done? (Nolt et al., 1997) focuses on the issues and effects of a bioregion defined by the seven watersheds which form the basin of the Upper Tennessee River, including: Clinch-Powell, Holston, French Broad, Watts Bar-Melton Hill-Fort Loudon, Little Tennessee, Chickamauga-Nickajack, and Hiwassee. These watersheds occupy portions of four states: Tennessee, North Carolina, Virginia, and Georgia. The Great Smoky Mountains National Park is wholly included within the bioregion. Nolt and colleagues (1997) note that the region covered by What Have We Done? (Nolt et al., 1997) is only the central portion of the region covered by the Southern Appalachian Assessment (SAMAB, 1996).

The impetus for creating What Have We Done? (Nolt et al., 1997) derives in part from two beliefs: (a) the interdependent relationship between the human and non-human

systems present within the bioregion and (b) the range and scale of principally human activities which invariably influence the nature of this relationship. (For more information, see Appendix VI.) In the interest of clarity, Nolt and colleagues (1997) note that, since their definition of the bioregion does not precisely correspond with anyone else's definition, they often had to make use of data for regions that only partially overlapped with the bioregion. Thus, for example, Nolt and colleagues (1997) made frequent use of data for the whole state of Tennessee, the state most central to the bioregion; for the whole Tennessee Valley; or for the whole Southern Appalachian Assessment (SAMAB, 1996) region. Nonetheless, in such cases, Nolt and colleagues (1997) specified the actual area covered and provided additional defining information so as to correct for inaccuracies that might be introduced by any geographic disparities.

The research activities associated with the development of What Have We Done? (Nolt et al., 1997) gleaned a variety of important findings, which were organized around a conceptual framework that embodied and extended a notion of social and ecological health. More specifically, Nolt and colleagues (1997) indicate that their work was guided by the following rationale:

> To the materialistic ideal of endless growth, we, the authors of this report, have opposed an ideal expressed by a cluster of words etymologically related to 'health': healedness, haleness, wholesomeness, holiness, the harmony of the whole. An ecosystem which is healthy in this sense has a sustainable integrity. It is robust and hale, beautiful and invigorating to the spirit. It preserves and constantly renews the original delight of Creation. It creates little or no waste. It

> is self-healing. It develops, but in a dynamic equilibrium, harmony, or balance. It does not impose its pattern on everything else. It does not grow without limit.
>
> A healthy human society, in our view, exhibits the sustainable integrity, the same absence of waste, the same delight, the same self-sustaining, self-healing dynamic balance, the same creative development, and the same sensitivity to the limits of growth. In a healthy society, the pursuit of material gain is subordinated to deeper and more wholesome values: the love of family, friends, and neighbors; responsibility to the community; work that is meaningful, healthful, and beneficial to the whole; and respect for a Creation larger, more consequential, and more lasting than our material selves. (pp. 243-244)

Thus, according to Nolt and colleagues (1997), the aim of What Have We Done? (Nolt et al., 1997) was to evaluate the state of the bioregion with respect to this ideal of health.

Nolt and colleagues (1997) provide a list of symptoms which reflect the unhealthy system of life that inhabits the watershed of the Upper Tennessee Valley. For example, Nolt and colleagues (1997) indicate that "much of the water is polluted and burdened with trash or silt, much has been deprived of oxygen by the building of the dams. High in the mountains, the water is destructively and unnaturally acidic—as is the rain. Many wetlands, nature's water purification systems, have been disabled or destroyed" (p. 244). Other examples of symptoms presented by Nolt and colleagues (1997) reflect declining air quality and flora and fauna species, insufficient regional food production (sharply contrasting with the bioregion's rich agricultural history), unsustainable production and consumption of energies, among many others. (For more

information, see Appendix VII.)

In short, What Have We Done? (Nolt et al., 1997) documents and indicates the complex interactive and multi-dimensional nature of East Tennessee and the Southern Appalachian bioregion and the serious issues which have and continue to affect its health. Thus, in an effort to place the social and environmental issues of East Tennessee and the Southern Appalachian bioregion in a context useful for the purposes of this study, the content of What Have We Done? (Nolt et al., 1997) indicates the relevance and salience of studying sustainable living principles and methods in East Tennessee and the Southern Appalachian bioregion.

PART 2:

THEORIES OF ENVIRONMENTAL JUSTICE

According to Corson (1990), in addition to the impact of unsustainable technology and the growing human population,

> the current deterioration of the Earth's life-support systems stems in part from inadequate understanding of our dependence on those systems, and our failure to accept responsibility for the future consequences of their deterioration. Simply put, we tend to place a relatively low value on nature and natural resources, and on the future. (p. 316)

Social and environmental justice implications follow this value base. It is important and necessary to consider matters of social and environmental justice simultaneously if, for example, environmental issues in East Tennessee and the Southern Appalachian

bioregion are to be placed in proper context and accurately understood. Accordingly, environmental justice provides the conceptual framework for exploring both the nature and origin of socioenvironmental issues in the bioregion, and the relevance and salience of sustainable living efforts as healthy and responsible options.

According to Cutter (1995), a healthy environment is a basic right of all the Earth's inhabitants, as reaffirmed by the Rio Declaration (United Nations Commission on Environment and Development, 1992). Yet, environmental risks are unevenly distributed within and between societies, and these risks affect populations differently (Cutter, 1995). For example, there is considerable evidence that pollution and other forms of environmental degradation take a heavy toll on African-American communities (Bullard, 1992). Fortunately, examples of grassroots activism in response to numerous issues, led largely by local women of color (Rosen, 1994), appear to be contributing to the country's blossoming environmental justice movement (Fugazzotto, 1994). Unfortunately, despite creating one of the most potentially radical movements in recent American History, by way of weaving together ideas and tactics of the civil rights and environmental movements, Rosen (1994) notes that the movement for environmental justice has received scant national attention (See Capek [1992] and Rogge [1994] for further discussion).

Cutter (1995) indicates that the principle of environmental justice guarantees (1) the protection from environmental degradation; (2) prevention of adverse health impacts from deteriorating environmental conditions before the harm occurs, not afterwards; (3) mechanisms for assigning culpability and shifting the burden of proof of contamination to

polluters, not residents; and (4) redressing the impacts with targeted remedial action and resources.

According to Wenz (1988), environmental justice is primarily about theories of distributive justice--theories concerning the manner in which benefits and burdens should be allocated when there is a scarcity of benefits (relative to people's wants or needs) and an overabundance of burdens. The concept of distributive justice becomes important when at least some people must do without benefits that they would prefer to have, and at least some must take on burdens that they would prefer to avoid; we need to be able to decide which people are to bear which burdens, and who is to enjoy what benefits (Wenz, 1988). In short, theories of distributive justice are relatively abstract accounts of how these decisions are to be made if justice is to be served (Wenz, 1988).

Wenz (1988) argues that issues of justice, including issues of environmental justice, develop when people want more than they can have. Thus, according to Wenz (1988), under these conditions in which at least some people must give up at least some of what they want, a measure of agreement upon principles of justice is a practical necessity. In this regard, Wenz (1988) notes that

> In the absence of any agreement, the allocation of scarce goods might be determined by a free-for-all in which people get all they can by hook or crook. This would yield a violent and insecure existence for everyone. Coordinated restraint of people's actions is needed also if the environment is to remain habitable. In order to cooperate voluntarily under the required restraints, people must perceive the restraints imposed upon themselves to be just in relation to

> those imposed upon others. Voluntary cooperation is needed. Governments can influence people by force, but people in the modern world are increasingly vulnerable to the disruptive activities of relatively few dissidents whose behavior cannot be controlled completely by force. The vast majority must therefore perceive the social order to be tolerably just. (p. 5)

Furthermore, Wenz (1988) asserts that issues of social justice and environmental protection must be addressed together since, without environmental protection, our physical environment would become uninhabitable, and without justice, our social environment would become equally hostile. Therefore, Wenz (1988) asserts that

> ecological concerns must not dominate or consistently override the concern for justice, and justice must not be pursued in disregard for its environmental impact. We cannot ensure everyone the attainment of the material wealth that they seek if the provision of material goods in such quantities leads to intolerable levels of pollution. But we cannot consistently defer to the environmental concerns of the affluent if this leads to, or reinforces, injustice. (p. 2)

Because the concept of justice can vary, a social arrangement or environmental policy that one person considers just may be considered unjust by another (Wenz, 1988). Accordingly, there are several ways to account for the fact that most people in our society do not recognize many aspects of the world's economic order to be grossly unjust (Wenz, 1988). First, according to Wenz (1988), the world's economic order represents the status quo. As Wenz (1988) observes,

> People tend to accept as natural and reasonable things with which they are

> familiar. Acceptance of the familiar is particularly easy when one benefits from the status quo. Also, most people are unaware of the relationship of their affluence to the poverty of others. Ignorance is fostered by the educational system and probably also by self-interest. (p.324)

In short, the problem, according to Wenz (1988), is that we find plausible a plurality of theories of justice. We are attracted to using one theory in one kind of situation and a different theory in a different kind of situation; however, at the same time, it is commonly assumed that coherence among moral judgments requires the application of a single nonpluralistic theory to all matters (Wenz, 1988). When this requirement is assumed, and is combined with our practice of using a variety of theories, our views about justice become inconsistent and render incoherent our explanation of and defense for the justice of our actions and policies (Wenz, 1988).

On this point, Wenz (1988) comments that no single nonpluralistic theory is able to accommodate all of our considered moral judgments. However, Wenz (1988) notes that we cannot simply alternate among such theories whenever we feel like it.

> In order to determine reliably what is just, we need a principled justification for preferring the dictates of one theory in one situation and the dictates of another theory in a different situation. We need a pluralistic theory of justice that enables us to appeal in a consistent manner to principles featured in a variety of theories, even when those principles cannot all be reduced to or derived from a single master principle. (Wenz, 1988, p. 113)

Thus, according to Wenz (1988), because each theory and many principles contained in

each theory seem reasonable when applied to certain kinds of cases, they should not be abandoned entirely. Rather, they should be modified and blended to form an all embracing, flexible, pluralistic theory.

A theory is pluralistic, notes Wenz (1988) when it contains a variety of independent principles that cannot be reduced to or derived from a single master principle. Wenz's (1988) Concentric Circle Theory is a pluralistic theoretical framework which structures one's thoughts about issues of environmental justice. It indicates the considerations that are relevant and the factors that one should take into account when assigning relative weights to those factors (Wenz, 1988). As Wenz (1998) notes, "the theory facilitates good judgment instead of trying to replace it" (p. 315). Moral relationships are pictured in terms of concentric circles. The closer the relationship is to someone or something, the greater the number of obligations in that relationship, and/or the stronger the obligations in that relationship (Wenz, 1988). (See Appendix II for the major theses of the Concentric Circle Theory.)

According to Wenz (1988), relatively few people exist in the closest circle, more people exist in the next circle, and so on. Thus, Wenz (1988) notes that "existence in a given circle is usually correlated with (but is not tied to by definition) such characteristics as family membership, personal friendship, employment, ethnicity, and physical location" (p. 317). However, Wenz (1988) defines closeness in terms of the strength of one's obligations to other people, including responsibilities for honoring the rights of others over "mere preferences" (p. 322), and in terms of the frequency of the obligations' applicability to actual or potential relationships and interactions. In other words,

closeness is not defined by relation or proximity, but rather by obligation. For example, if a relative comes to visit and prefers air conditioning on a hot day, one must weigh the effects of honoring that preference against the potential violation of someone's rights elsewhere. Accounting for the hidden costs of electricity draws us closer to the people affected by our practice.

Wenz's (1988) notion of closeness, as qualified by one's obligation to honor the rights of others, can involve actual or potential relationships and interactions with both humans and non-humans proximate to one's immediate family and/or community, as well as with life in other parts of the world. Exercising this responsibility, however, requires competency and knowledge in understanding and distinguishing rights from needs and desires. Doing so can be difficult given that, as relationships become more remote, our ability to account and take responsibility for these considerations diminishes, but remains no less important. With such a task in mind, the following example illustrates Wenz's (1988) theory:

> More directly related to environmental concerns is our use of farmland in poor countries to grow bananas and beef cattle for ourselves while many people in those countries are severely malnourished. The people in many such countries could grow enough food for themselves if only they had control of the land. Why do we do this? It makes our bananas and hamburgers a little bit cheaper, so we can afford things like designer jeans instead of plain pocket jeans. In these cases, we prefer the (sometimes artificial and irrational) desires of people in a closer concentric circle, including ourselves, to the fulfillment of the positive human

> rights of people in a more remote circle. But if all people really do have a right to adequate nutrition, health care and education, our practice is wrong. Our practice is inconsistent with our view that there are positive human rights and that rights have a much greater moral pull than mere preferences. (p. 323)

In short, Wenz's (1988) Concentric Circle Theory is important because it organizes relationships with both humans and non-humans with respect to our inherent obligations to the rights of others, whoever or whatever they might be. Furthermore, Wenz's (1988) theory is important because it privileges and qualifies the significance of endeavoring to understand and take account of the complex interactive nature of our living, with regard to how our human decisions and behaviors affect the means by which justice is served, in the interest of humans and non-humans alike (Wenz, 1988).

Considering theories of environmental justice, including Wenz's (1988) Concentric Circle Theory is important to the study of sustainable living practices, given the requirement of the fulfillment of social and environmental justice for sustainable living to be achieved. Thus, with regard to the current study, several questions about the sustainable living practices represented arise: (a) How and in what ways do these practices reflect principles of social and environmental justice? (b) How and when do the respondents articulate an awareness of the rights of others, both human and non-human, and how are these rights differentiated from needs and desires? (c) How and in what ways do the respondents' sustainable living practices reflect the difficulty involved in pursuing a socially and environmentally just lifestyle?

PART 3:

THEORIES OF SOCIAL MOVEMENTS

Given the non-normal nature of sustainable living practices, in comparison to mainstream lifestyles, such practices can be regarded as a social movement. This view follows the example of the American environmental movement which began in the 1960's; included scholarly writing, political activism, and incidents and evidence of environmental degradation; and culminated in the staging of the inaugural Earth Day 1970 (Dunlap & Mertig, 1990; Cable & Shriver, 1995). Also, the study of the development and use of independent renewable energy systems, referred to as the home power movement (Tatum, 1996), offers special evidence to the utility of social movement theories to the current study, given that many of the respondents were involved in so-called home power practices.

The study of social movement theories also offers an opportunity to explore the democratic roots of social change and conditions by which people are or become involved in political activism and participatory politics. Accordingly, a brief discussion of social movement theories will be presented, with an emphasis on the following: Barber's (1984) Strong Democracy theory and Tatum's (1996) application of this work in the study of the home power movement; and Aronson's (1993) study of the transformation of ordinary people into political activists, building on Flacks' (1988) theory of citizen-political activist transformation and Blumer's (1969) theory of situated interaction.

Strong Democracy

The theory of Strong Democracy, according to Barber (1984), envisions politics

not as a way of life but as a way of living, and it suggests that "human beings with variable but malleable natures and with competing but overlapping interests can contrive to live together communally not only to their mutual advantage but also to the advantage of their mutuality" (p. 118). More specifically, Barber's (1984) conception of Strong Democracy organizes the political realm around three prominent conditions: the necessity for public action; conflict or potential conflict over what that action should be (Tatum, 1996); and the obligation to choose and take actions in the absence of universal guiding principles. In short, through these conditions, Barber (1984) suggests that the "future of democracy lies in strong democracy--with the revitalization of a form of community that is not collectivistic, a form of public reasoning that is not conformist, and a set of civic institutions that is compatible with modern society" (pp. 150-151).

With this in mind, Barber (1984) asserts that political action involves being "free with a vengeance--to be free in the unwelcome sense of being without guiding standards or determining norms yet under an ineluctable pressure to act, and to act with deliberation and responsibility as well" (p. 121). Thus, in the interest of becoming politically active, Barber (1984) suggests that public citizen participation in democracy incorporates notions of "political talk," "politics as epistemology," and "public seeing and doing."

More specifically, Barber (1984) refers to "political talk" as "a universal participatory conversation involving listening and speaking" (p. 183) through a continual process of deliberation, decision, and action towards mutuality, affiliation, autonomy, and self-expression. Accordingly, Barber (1984) notes that political talk "is not talk

about the world; it is talk that makes and remakes the world" (p. 177).

Barber (1984) also makes reference to "politics as epistemology" with regard to the influence of participatory politics on knowledge and, more generally, ways of knowing. With this in mind, Tatum (1996) offers a helpful interpretation:

> Politics of epistemology situates us in the moment of what might be called the "social construction" of knowledge as a foundation for action. And it seeks to make that construction democratic. The imprimatur knowledge is placed through a process that is narrowly scientific but democratic, broadly participatory, and concerned at least as much with action as with truth. (p. 34)

Barber's (1984) reference to "public seeing and doing," in short, melds talk and knowledge into action, thus producing a form of democracy that "is neither government by majority nor representative rule: it is citizen self-government" (p. 211). As such, this reflects and promotes Barber's (1984) assertion that "action in common is the unique province of citizens" (p. 211) and "makes citizenship not a condition of participation, but one of participation's richest fruits" (p. 212).

Participatory, strong democracy, according to Barber (1984), offers political representation of diversity, in that

> many citizens are bound together intimately through their common citizenship, and they interact guided by opinions that in themselves are slender and provisional but that when woven together into a communal will and a public purpose inspire powerful conviction. A citizenry cannot speak truth to power because it does not pretend to know what truth is. What it does instead is simply

> to speak to power in a voice rich with affect and commonality, a voice colored by its origin in autonomous wills seeking imaginative self-expression and by the public medium through which it is conveyed. (pp. 166-67)

Such a notion of commonality derived from political / citizen diversity is useful to consider with respect to the study of social movements, given the myriad potential causes and motivations at the origin of such movements.

With this in mind, Tatum (1996) found that the study of the home power movement, including people involved in the personal production of energies, resonates well with Barber's (1984) conception of strong democracy and "involves patterns of participation many would argue are uniquely supportive of democratic ideals" (p. 32). Tatum's (1996) study revealed "a remarkable, if largely unexamined intelligence which has elicited from what can be seen as deep commitments to the underlying values of democracy, a fascinating model for more democratic technology design and development" (p. 32). Tatum (1996) also noted that such commitments reflected "a vigorous collective effort of people to take charge of their own lives" (p. 32). In short, Tatum (1996) described those involved in the home power movement as having achieved

> a virtual elimination of "lay" / "expert" distinctions and the barriers they present to communication in the shaping of technology. We see an almost fanatical dedication to educational efforts, creating a uniquely accessible and widely shared "common" store of knowledge. We see a pattern of political involvement aimed specifically at protection from arbitrary external interventions ranging from the siting of a nuclear waste repository, to the exploitation of local environments.

> And, in the outspoken statements and vigorous action of home power people, we see a vigorous "sense of individual moral responsibility for behavior that affects the whole community" that is sometimes explicit . . . sometimes firmly present in essentially aesthetic commitments. (p. 32)

Tatum's (1996) study of the home power movement, including the application of Barber's (1984) Strong Democracy theory, has relevance to the present study of persons practicing sustainable living, which arguably may be viewed as a social movement group itself. With this in mind, several questions arise about those involved in sustainable living practices: (1) How and in what ways might sustainable living practices, including alternative energy, parallel or extend Tatum's (1996) study of the home power movement? (2) What evidence supports a notion that sustainable living practices reflect underlying values of democracy? (3) Do persons involved in sustainable living practices do so as "vigorously" as those Tatum (1996) observed within the home power movement?

In view of the possible political and democratic elements of those practicing sustainable living, perhaps resembling those examined in Tatum's (1996) study, understanding how and why persons become involved in sustainable living practices is of interest to the present study. Here, then, attention is given to several theories which discuss elements of political activism and processes by which citizens become political activists.

Citizen-Political Activist Transformation

Given the non-normal nature of sustainable living practices, inquiries about how

people come to be involved in sustainable living practices, in lieu of enjoying mainstream support in their efforts, are valuable. More specifically, understanding better the process by which those involved in sustainable living became compelled to do so, and how their non-normal behavior was justified and maintained, is of interest. With this in mind, the study of citizen-to-political activist transformation theories is particularly applicable. The following section discusses this theoretical area, beginning with Flacks's (1988) theoretical work focusing on the process of behavioral transformation of citizens and political activists.

In short, Flacks (1988) distinguished two arenas of human action: (1) those which sustain everyday life which is comprised of time devoted to sustaining one's identity--that is "the sense of our selves as individuals, having a unique biography, a particular character, our own configuration of interests, needs, and traits" (p. 2); and (2) those which are directed at making history--that is "action relevant to the survival, maintenance, and development of society" (p. 2). History-making, as defined by Flacks (1988), is comprised of activities that have the effect of changing one or more features of the patterned everyday ways-of-life characteristic of a community or a society. Thus, for example, Flacks (1988) notes that

> history is being made when rules are promulgated and laws are passed; when investment decisions create or destroy opportunities to work; when it is decided that land should be used to grow sugar or resort condominiums; . . . when a song is sung, a book is written, a slogan shouted that provides a dispersed and cowed populace with a sense of unity and strength. . . .(pp. 2-3)

In addition, Flacks (1988) comments on the "free" time that remains in between these two chosen realms of activity.

> A portion of our daily time is (thus) expected to be "free"--that is, unconstrained by the demands of necessity, available for uses that are discretionary, self-chosen, expressive of individuality. People in all societies must spend much of their day in livelihood, household, and physically necessary consumatory activity, but it is not universally true that time left over is left to individual discretion. On the contrary, cultures are likely to elaborate a variety of spiritual and communal obligations, rituals, and observances that members are expected to participate in, either in assemblages or private spaces. In our culture, uses of free time are also patterned, but the individual is thought to be free to select from a great range of patterns, to vary his or her choices at will, to invent new uses, to do nothing. (p. 2)

Considering a person's, group's, or society's activities of either sustaining everyday life or making history, and the sort of "free time" which exists in between, is useful towards understanding the form and functioning of democracy, given Flacks's (1988) assertion that "in general, people are committed to the making of their lives rather than history" (p. 8). Furthermore, such an understanding also requires an appreciation of the real and perceived distribution and dynamics of power.

Flacks (1988) defines power as history-making capacity and the ability to "influence the conditions and terms of everyday life in a collectivity" (p. 5). Recognizing and understanding dynamics of power is important; Flacks (1988) asserts that

> insofar as society is organized so that the conditions and terms of daily life can be shaped by conscious human decision, and insofar as such decisions can be made by a relative few and implemented effectively, the distribution of power becomes a central reality in social life. . . . To the extent that power differentials exist, there will be a generalized experience of separation between everyday life and history. To the extent that history making is centralized, then people not at the center are likely to feel that daily life and history occur in two different realms, that they themselves are objects of historical forces alien to themselves, that they themselves are without power. (pp. 4-5)

Thus, a distribution of power which provides for activities of everyday life and history making is not only important with respect to a just, democratic structure, but also, as Flacks (1988) asserts, is important to the organization of individual and collective behavior and how such behavior extends the collective good. More specifically, Flacks (1988) notes that

> this idea (of democracy) is that the people are capable of and ought to be making their own history, that the making of history ought to be integrated with everyday life, that all social arrangements that perpetuate separation of history making from daily life can and must be replaced by frameworks that permit routine access and participation by all in the decisions that affect their lives. (p. 7)

In short, such a framework involves an equitable distribution of power from which the integration of everyday life and history-making activities can occur.

With the work of Flacks (1988) in mind, Aronson's (1993) study of the process

of behavioral transformation for citizens-turned-activists offers a useful summary application of Flacks's (1988) theory of how citizens and history makers differ. More specifically, in his study of the transformation of ordinary people into career activists in the hazardous waste movement, Aronson (1993) cited eight identifiable steps in this transformation process and organized them within four stages of development. The following presents these steps and stages in the interest of their applicability to the present study.

A. **Pre-Transformation Stage:** (1) Individual perceives that an existing or proposed hazardous waste facility in their community is a threat to their family's health; (2) though responding to an unusual problem, the individual takes first action within his/her usual role; e.g. as a mother protecting family's health. They have little interest or experience in active civic involvement and they expect that the government will take the necessary action to protect their health.

B. **Transitional Stage:** (3) Individual's meanings are "loosened" due to unexpected, unsympathetic, and "unfair" governmental responses and intentional misinformation about the problem. Their sense of the "socio-cultural charter" is violated. They begin to doubt their original conception of how "the system" works; (4) Individual immerses self in information about the perceived problem and begins to try other ways to pressure the government to deal with the problem. The information in itself increases commitment to dealing with the problem because the risks appear greater

than initially feared.

C. **Transformation from Private to Public Action:** (5) Individual begins to recreate, or discovers, grassroots democratic ("populist") action. Individual reaches out to and works with neighbors and other organizations to deal with problem. Problem now constructed as community or public problem. Individual acts as an "activist" and not just as a "concerned parent"; (6) Individual overwhelmed by the forces perceived to be aligned against them; (7) Individual bolstered by social support. For some reason - support from family or others, a victory, a sign from God, a reservoir of anger, upbringing, etc. - the individual perseveres long enough to have some measure of success which further sustains them.

D. **Self Identification as a Career Activist:** (8) The individual, with their group, resolves their local battle. They are transformed; they have new conceptions of themselves, citizenship, government and environmental problems. They are more likely to participate in a range of political activities. They now believe in the necessity of citizen action for community protection. They have discovered a greater sense of purpose in their lives as they fight for a large good and they choose to actively continue their public orientation. They make political activism their vocation. (pp. 75-76)

Furthermore, Aronson cites Blumer's (1969) theory of symbolic interactionism as useful in the explanation of this transformation.

Blumer's (1969) theory posits three premises: (a) "that human beings act toward

things on the basis of the meanings that the things have for them" (p. 2); (b) "that the meaning of such things is derived from, or arises out of, the social interaction that one has with one's fellows" (p. 2); and (c) "that these meanings are handled in, and modified through, an interpretative process used by the person in dealing with the things that he encounters" (p. 2). Aronson (1993) asserts that the evidence of transformation gleaned from his study is in keeping with Blumer's (1969) description of symbolic interactionism; whereas, the activists redefined themselves and the government, came to realize that government decisions were not based on fairness or who is right, discovered the necessity and utility of applying consistent pressure on the government to produce desired results, and found that this activity produced cause for an identity transformation into an activist.

In short, the works cited above are useful towards understanding the possible nature and origin of how people come to be involved in sustainable living practices, and how such practices relate to a larger social movement. Barber's (1984) theory of Strong Democracy, as applied within Tatum's (1996) study, provides context for a possible interpretation of sustainable living practices as a catalyst of and for democratic political activity. Also, Flacks's (1988) and Aronson's (1993) focused studies on citizen-activist transformations may offer insights towards understanding the original activity of the sustainable living practitioner or "history maker".

PART 4:

THEORIES OF DEVIANCE AND WORLD VIEWS

In addition to the applicability and utility of theories of environmental justice and social movements, the examination of how people come to view themselves, others, and their world is pertinent to the present study. Given the non-normal nature of the sustainable living practices, such an examination offers insights about how people become involved in sustainable living, their experience in their particular roles, and how they sustain their efforts in a society which largely does not support them. Accordingly, the following section will briefly review theories of deviance and labeling theory and the development of world views and paradigms.

Deviance and Labeling Theory

In short, deviant behaviors can be defined as different from those considered common to a normal group, including behaviors which break the normative rules of a group (Becker, 1963). Rubington and Weinberg (1973) view deviance to be dependent upon an individual's perception of deviance, and that an individual who witnesses

> an act, person, situation, or event as a departure from social norms, must categorize that perception, must report that perception to others, must get them to accept this definition of the situation, and must obtain a response that conforms to this definition. Unless all these requirements are met, deviance as a social fact does not come into being. (p. vii)

Becker (1963) asserts that because all social groups make and attempt at times to enforce rules for defining behavior as right or wrong, when a rule is enforced, the person

who has broken it may be regarded or labeled as an outsider. Defining and labeling deviant behavior, according to Becker (1963), can be tricky in that,

> the simplest view of deviance is essentially statistical, defining as deviant anything that varies too widely from the average (or most common). . . . A less simple but much more common view of deviance identifies it as something essentially pathological, revealing the presence of a "disease" (using a medical analogy). . . . Of course, there is little disagreement about what constitutes a healthy state of the organism. But there is much less agreement when one uses the notion of pathology analogically, to describe kinds of behavior that are regarded as deviant. For people do not agree on what constitutes healthy behavior. (pp. 4-8)

In addition, Becker (1963) asserts that deviance is not simply a quality of behavior, but also the interaction between the person who commits an act and those who respond to it. Thus, Becker (1963) contends that the perspectives of those who engage in so-labeled deviant behavior are likely to be quite different from those of the people who condemn it, and thus, "a person may feel that he is being judged according to rules he has had no hand in making and does not accept rules forced on him by outsiders" (p. 16). Reciprocally, the person who is labeled an outsider may question the competency or legitimacy of the judges, and perhaps in return, will regard them as outsiders (Becker, 1963).

In his study of marijuana users, Becker (1963) found that, "instead of the deviant motives leading to the deviant behavior, it is the other way around; the deviant behavior in time produces the motivation" (p. 42). Evidence in support of Becker's (1963)

observations is reported by Aronson (1993) in relation to the study of the citizen-activist transformation process. Aronson (1993) found that within the social groups from which his informants came, grassroots oppositional politics was considered deviant. When the citizens became compelled to act, they did so in spite of the fact that activism was alien to them. Then, according to Aronson (1993), "once they acted, they were perceived by others--neighbors, government, and journalists--to be "activists". Because they were, consequently, treated by others as activists, they began to conceive of themselves that way as well" (p. 77).

Understanding the nature and origin of how deviance is perceived and labeled is important towards accurately appreciating the effects which the labeling of deviance can potentially have on how existing and potential social behavior is deemed appropriate or normal. To this point, Levy (1981) notes that

> whether a label is primarily a consequence of behavior or the behavior is primarily a consequence of the label is not as important in this context as the relevance of each to the other and the effects of both on the labeler, the person being labeled, and the community. (p. 335)

In view of the potential effects of labeling deviant behavior, Levy (1981) offers a point of caution, noting that the study of deviance and labeling must be careful, disciplined, and sensitive to definitions of normal and non-normal behavior. Such caution derives from Levy's (1981) view that acts of labeling can involve risks including stigmas and effects with regard to how persons are viewed, treated, and judged.

In examining those involved in sustainable living practices, whether such

practices are considered deviant or not, of interest to the current study is their views of themselves and others within their social world. Accordingly, the following section introduces literature which examines the bases of the development of world views and paradigms.

World Views

In short, world views are assumptions about how the world works. According to Glock (1988), such assumptions reflect ideas that the world is controlled by an agent of some kind--that is "people attribute what exists and what happens in the world to be the result of the action of some agent or agents which have the innate capacity to exercise control" (p. 94). Such agents include one's self or free will, supernatural control agents including God, natural control agents including human nature, heredity, environment, culture, and probability; and conspiracy involving "conscious efforts at control on the part of individuals exercising freedom of choice" (Glock, 1988, p. 97). Interestingly, world views which attribute control of the world to natural agents, according to Glock (1988), "have been a stimulus to social change more often than supernaturally grounded world views" (p. 99).

Also relevant to the discussion of world views are people's beliefs in a just world (Benson, 1992), a concept which conforms to Lerner's (1980) Just World Hypothesis. According to Benson (1992), "many researchers have attempted to explain the tendency of people to attribute unusual moral, characterological, or behavioral qualities to those who have experienced great misfortune or extremely good fortune" (p. 73). Within the literature, three explanations for a belief in a "just place" have emerged, including high

religiosity, naiveté about the world, and successful acquisition of societal rewards (Benson, 1992, p. 73). However, Benson (1992) indicated that tests of these explanations did not find religiosity to be related to the "just world" phenomenon and that support for the other two explanations was inadequate.

Nonetheless, this is an important area of investigation, according to Benson (1992), given the body of evidence suggesting that this belief has significant consequences for a variety of behaviors involving group relationships. Also, Benson (1992) notes that "the extent to which one believes the world to be a just place, appears to influence the way people respond to a diverse set of groups and situations creating, therefore, profound theoretical and policy implications" (p. 74).

Furthermore, with regard to the development of world views, Stern and colleagues (1993), report that research on environmental attitudes has focused on how individuals concerned with the environment view the world in ways that differ fundamentally from those who are less concerned with the environment, and that this research suggests a new world view or paradigm associated with environmentalism to be emerging. This finding seems consistent with Krause's (1993) view of the historical roots of environmental concerns, where, in general,

> some level of concern for the quality of their physical surroundings has probably existed for as long as human beings have walked on the earth. Those early environmental issues, however, did not present much of a threat to human health or safety. The threats came later, as handmaidens to the industrial age. And as those dangers became more apparent, discussions about what was to be done

grew more intense. (p. 126)

Also, Stern and colleagues (1993) note that this work is consistent with "the argument in the social movement literature that environmentalism, like other 'new social movements,' aims not at redistributing resources, but rather at a different and in many ways more fundamental restructuring of society" (p. 323). Correspondingly, such an argument appears to dovetail with the notion of a social paradigm shift. With this in mind, a brief discussion focusing on the development, function, and effects of paradigms is in order.

Paradigms

Paradigms are defined as the logics or mental models that underlie the missions, systems of governance, organizational character, and structures which are the parameters of the social architecture of institutions (Perlmutter & Trist, 1986). More specifically, Perlmutter and Trist (1986) assert that

> a paradigm expresses a self-consistent world view, a social construction of reality widely shared and taken for granted by the members of a society, most of whom are aware only to a limited extent of the underlying logic, which is implicit rather than explicit in what they feel or think and in the courses of action they undertake. A paradigm provides, as it were, the medium in which they exist and tends to become explicit only when the need for a new overall perspective arises through increasing dysfunction in the prevailing paradigm. (p. 2-3)

In complement to this definition, Milbrath (1996, 1989) offers a definition of a social paradigm as one which incorporates beliefs about how the world works physically,

socially, economically, and politically.

In extension to the definition of a social paradigm, the concept of a Dominant Social Paradigm (Milbrath, 1996; Dunlap and Van Liere, 1984; Pirages, 1977), or DSP, is a constellation of common values, beliefs, and shared wisdom about the physical and social environments which constitute a society's basic world view. More specifically, according to Dunlap and Van Liere (1984), "transmitted from generation to generation via institutional socialization, a DSP forms the core of society's cultural heritage. And while it may not receive universal endorsement, the paradigm nonetheless provides general guidance for both individual and societal behavior" (p. 1014). Correspondingly, Milbrath (1996) defines a DSP to be a society's belief structure which serves to organize the way most people perceive and interpret the functioning of the world around them.

Variations in the definition of a DSP notwithstanding, Rosenbaum (1991) indicates that many scholars have concluded that broad public consensus about environmentalism reveals an ongoing transformation in the American public's belief about how the world works and that such beliefs seem to reflect a paradigm shift from the traditional ways of perceiving the world and one's place in it to a more environmentally enlightened one. Moreover, this paradigm shift is reported (Rosenbaum, 1991) to represent a profound redefinition of social values and a transformation in self-concept, rather than simply a change in public mood or attitude. With this in mind, Milbrath's (1996, 1989, 1984) work offers insights regarding the elements of such a paradigm shift through an examination which compares and contrasts a New Environmental Paradigm (NEP) with the DSP.

Milbrath (1996, 1989) asserts that solid evidence indicates that a new paradigm is emerging from environmentally oriented thinkers who constitute a vanguard. They advocate a new set of beliefs and values that people have begun referring to as the NEP (Dunlap & Van Liere, 1978). For those who challenge and are in opposition with the vanguard of the NEP, Milbrath (1989) has labeled them rearguard, including those who defend the DSP. Table 2.1 provides a comparative list of beliefs and values which differentiate NEP and DSP.

Milbrath (1989) asserts that about one-half of the American public have not clearly worked out a logically consistent belief structure; many hold beliefs and values that come from both paradigms. On this point, Milbrath (1989) notes that people "love nature but they also want to use nature to produce goods. They see humans interrelated with nature and wish to avoid blind domination of nature, but they also have widely adopted technology to exploit nature. They want economic growth but they want environmental protection even more" (p. 134). Despite such duality, Milbrath (1989) provides several insights which are useful in qualifying this condition:

1. A very different paradigm than the one that now dominates societal institutions and thought could become dominant. In fact, the public already has adopted many beliefs that would comprise a NEP; as usual, the people are ahead of most of the leaders of our dominant institutions.
2. These beliefs and values form into structures. The better educated a person is, and the more active, the more tightly the beliefs and values are organized into an internally consistent structure.

Table 2.1. A Comparative List of Beliefs and Values of the NEP and DSP (Milbrath, 1989, p. 119).

New Environmental Paradigm (NEP)	Dominant Social Paradigm (DSP)
1. High valuation on nature a. Nature for its own sake--worshipful love of nature b. Wholistic-relationship between humans and nature c. Environmental protection over economic growth	**1. Lower valuation on nature** a. Use of nature to produce goods b. Human domination of nature c. Economic growth over environmental protection
2. Generalized compassion toward: a. Other species b. Other peoples c. Other generations	**2. Compassion for only those near and dear** a. Exploitation of other species for human needs b. Lack of concern for other people c. Concern for this generation only
3. Careful plans and action to avoid risk a. Science and technology not always good b. Halt to further development of nuclear power c. Development and use of soft technology d. Government regulation to protect nature and humans	**3. Risk acceptable in order to maximize wealth** a. Science and technology a great boon to humans b. Swift development of nuclear power c. Emphasis on hard technology d. Deemphasis on regulation--use of the market--individual responsibility for risk
4. Limits to growth a. Resource shortages b. Increased needs of an exploding population c. Conservation	**4. No limits to growth** a. No resource shortages b. No problem with population c. Production and consumption
5. Completely new society a. Serious damage by humans to nature and themselves b. Openness and participation c. Emphasis on public goods d. Cooperation e. Simple lifestyles f. Emphasis on worker satisfaction	**5. Present society okay** a. No serious damage to nature by humans b. Hierarchy and efficiency c. Emphasis on market d. Competition e. Complex and fast lifestyles f. Emphasis on jobs for economic needs
6. New politics a. Consultation and participation b. Emphasis on foresight and planning c. Willingness to use direct action d. New party structure along a new axis	**6. Old politics** a. Determination by experts b. Emphasis on market control c. Opposition to direct action - use of normal channels d. Left-right party axis--argument over ownership of means of production

3. These belief structures are highly contrastive; if each were a dominant paradigm, but in different countries, they would create quite distinctive societies that would have very different impacts on the biosphere. We really are seeing the possibility for a new society.
4. These disagreements between the DSP and the NEP are so fundamental, and the positions of the vanguard and rearguard are held so fervently, that we can expect sharp political contest on these matters for several decades. The contestants are struggling not simply to see who can win elections but, more fundamentally, to see which paradigm will shape and dominate social learning.
5. Even though the DSP is currently dominant, giving the rearguard the upper hand in the contest, a sufficient number of people doubt the wisdom of many DSP beliefs to make it reasonable that the DSP could be supplanted (p. 133).

The work of Hand and Van Liere (1984) extends the notion of a dominant social paradigm, as they focused on the system of beliefs and values which represent a culture's dominant value orientation regarding the relationship between a society and its natural habitat. More specifically, Hand and Van Liere (1984) explored the links and implications between religion and religious participation, environmental attitudes, and dominance of nature beliefs, building on Kluckhohn & Strodtbeck's (1961) man-nature orientation. According to Kluckhohn & Strodtbeck (1961), such an orientation is comprised of three points along a continuum: mastery-over-nature; harmony-with-nature; and subjection-to-nature, with the mastery-over-nature orientation being the "first order orientation of most Americans" (p. 13).

Hand and Van Liere's (1984) work indicates "support for the view that Judeo-Christians are generally more committed to the mastery-over-nature orientation than non-Judeo-Christians, but that this commitment varies considerably among denominations. Furthermore, commitment to the mastery-over-nature orientation is instrumental in shaping concern for environmental problems" (p. 555). Understanding these links and implications is considered important by Hand and Van Liere (1984), as the mastery-over-nature orientation may be inappropriate in an age of scarcity and in light of the development of a variety of environmental problems.

Despite the predominant commitment to mastery-over-nature among some contemporary religious institutions, movement is underway within religions which reflects stewardship and respect towards the natural environment. Kearns (1996) identifies three broadly defined ethics or models of eco-theology, including Christian Stewardship, Eco-justice, and Creation Spirituality, which are emerging among Christian organizational proponents in the United States and are reflective of "the differences and tensions among conservative, mainline, and liberal Christian theologies" (p. 57). Kearns (1996) briefly describes these models as follows:

> Christian stewardship focuses on an evangelical interpretation of the biblical mandate for humans to take care of the earth. The eco-justice position focuses on linking environmental concerns with church perspectives on justice issues such as the just sharing of limited resources and the real cost of environmental problems. It thus combines an already present Christian social justice framework with environmental concerns--particularly those that center on the effects of

environmental degradation on people of color and the poor. Creation spirituality, broadly characterized, focuses on reorienting humans to see their place as one part of a large, pantheistic creation. From this proper ecological place, humans must recognize the need to preserve the whole (p. 57). (See Appendix IX to review Christian-related Eco-theological Ethics among Organizational Proponents in the U.S.)

Also, Kearns (1996) notes that Eco-feminism has influenced and informed the three emerging Christian eco-theologies, though was not included given that its proponents include those who reject Christianity and/or view Ecofeminism to be separate from any religious grounding. Considering these eco-theological perspectives is relevant and important, given what Kearns (1996) notes, namely that, as a culture, "we are searching for how to respond to our intensifying sense of ecological crisis" (p. 64), and that contemporary Christian religion, both within the United States and elsewhere, is showing signs of change and contributing to a more comprehensive and enlightened world view.

In summary, insights about the theoretical bases of social deviance and labeling, world views and paradigms are important to the purpose of the current study. More specifically, understanding better the ways in which respondents involved in sustainable living practice view their social world, and the origins of those views with respect to environmental concerns, assumptions about how the world works, and perceptions and interpretations of social paradigms, are salient to this study.

With this in mind, several questions emerge for consideration: (1) How do those practicing sustainable living view their social worlds, and in what ways might their views

differ from the mainstream of society? (2) Does the practice of sustainable living, based on the reports of the respondents in the current study, resemble aspects of Milbrath's NEP?

STATEMENT OF THE PROBLEM

Presently, a broad and interrelated range of social and environmental issues threatens the welfare of humans and non-humans across all levels of society, from local to international. These issues include tremendous resource extraction and consumption; pollution and waste management; rapid growth in human population, urbanization and fossil-fueled transportation; the continued predominant use of non-renewable fuels and energies; and contemporary socioenvironmentally-unfriendly growth-oriented economics, among others issues. With respect to the bioregional focus of this study, these types of issues have negatively affected the capacity of people living and/or working within East Tennessee and the Southern Appalachian bioregion to do so sustainably.

Furthermore, as anticipated, individuals and communities who are already economically disenfranchised and vulnerable to issues affecting the quality and accessibility of vital resources (i.e.,, pollution to air, water, and land; dependency on external sources for food and energy), face further hardships as they attempt to cope and respond to these issues. In view of professional social work's commitment to serving people in need, while making social institutions more responsive to such needs, an understanding of sustainable living practices in response to contemporary

socioenvironmental issues can inform social work practice, research, and education accordingly.

RESEARCH QUESTIONS

Essentially, three basic questions are examined in this research: (a) In response to a current range of bioregional social and environmental issues, what sustainable living methods are being developed and practiced in the East Tennessee and Southern Appalachian bioregion? (b) What are the personal traits and demographic characteristics of the people who are attempting these methods? (c) For what reasons do they do what they do?

In turn, these questions raise additional questions: What specific types of sustainable living practices are being developed and performed? When and how did these efforts begin, and what is their developmental history? Where do they exist, and who do they serve? What critical events and influences compelled those involved to do what they do, and how? What supports and obstacles affect the maintenance of the sustainable living practice? What is the content and function of the respondents' world views and how are such views maintained?

DEFINITIONS OF TERMS

The following section defines the important terms used in this study.

Bioregionalism refers to a comprehensive new way of defining and understanding the place where we live, and living in that place sustainably and respectfully. According

to Haenke (1995), "bioregionalism speaks to the heart of community. If we are to continue living on Earth, the definition of community has to include all the living things in our ecosystem" (p. 118). In support of this definition, John Nolt (personal communication, December 9, 1996) defines bioregionalism as an attempt to organize community, economic, and political action in units delineated by ecological systems and relationships. Thus, in short, thinking bioregionally reflects the acknowledgment of, and a deliberate attempt to enrich, the interdependent relationships between human and non-human communities.

Sustainable living is broadly defined here as an end product of the ethic of respect and care for each other and the Earth as the foundation for one's lifestyle (Social Impact Foundation, 1992). This concept is in keeping with a definition of a sustainable society, according to Brown (1981), as one that lives within the constraints imposed upon its resource base. This means reduced consumption, reduced destruction of the environment, and more appropriate ways of planning the future on a global scale. It also means an economic and political order that is in harmony with the biological base of society (Brown, 1981).

Furthermore, the sustainable living ethic is in keeping with a concept of social development which, according to the Social Impact Foundation (1992), should not be at the expense of other groups or later generations, nor threaten the survival of other species. Thus, the benefits and costs of resource use and environmental conservation should be shared fairly among different communities, among people who are poor and those who are affluent, and between generations and those who will come after us

(Social Impact Foundation, 1992).

> According to Ponting (1991), over the course of human history, the invention of new techniques and more complicated production processes and the utilization of more resources can be viewed as progress--the increasing ability of human societies to control and modify the environment to meet their needs through sheer ingenuity and a capacity to respond to challenges and to engage in problem solving. (p. 396)

However, from an ecological perspective, progress, as Ponting (1991) observes, appears as a succession of more complex and environmentally damaging ways of meeting the same basic human needs.

Thus, according to Berry (1986), while we cannot easily account for the behaviors in our past, we can take responsibility for our actions and awareness in the present. Given the interdependency between ourselves and our complex ecosystems (Ponting, 1991; McKinney & Schoch, 1996), actions now need to be taken which emphasize and contribute towards a renewed commitment to and respect for this interdependent existence, especially actions which reflect principles of sustainability (Milbrath, 1989). In the interest of advancing efforts of sustainable living, the work of the Social Impact Foundation (1992b), in identifying four actions which are needed for the implementation of principles of sustainable living, is valuable. These actions are described in summary as follows:

First, the ethic for sustainable living should be developed through a dialogue between religious leaders, thinkers, leaders of society, citizen's groups, and all caring

people. The groups concerned should be linked in national coalitions and an international network. The product of the action should be a clear and universally accepted statement of the principles of human conduct within the world of nature.

Second, states should adopt a Universal Declaration and Covenant on Sustainability that commits them to the world ethic and they should incorporate its principles into their national constitutions and legislation. Third, people in all walks of life should incorporate the ethic into codes of personal behavior and professional conduct.

Finally, a new world organization should be established to watch over the implementation of the world ethic and draw public attention to major breaches of it. This organization would have a role in relation to world sustainability as that of Amnesty International in relation to human rights.

Furthermore, nine principles are identified by the Social Impact Foundation (1992b) as contributing toward the achievement of sustainable living goals. The following summary descriptions highlight these principles:

1. **Respect and Care for the Community of Life.** All life on Earth, with soil, water, and air, constitutes a great, interdependent system--the biosphere. Disturbing one component can affect the whole. Our survival depends on the use of other species, but it is a matter of ethics, as well as practicality, that we ensure their survival and safeguard their habitats.
2. **Improve the Quality of Human Life.** The integration of sustainable living and development methods should enable people to realize their potential and lead lives of

dignity and fulfillment.

3. **Conserve the Earth's vitality and diversity.** Living and development must be conservation-based; it must protect structure, functions, and diversity of the world's natural systems, on which our species depends.
4. **Minimize the depletion of non-renewable resources.** The depletion of non-renewable resources such as minerals, oil, gas, and coal must be minimized. While these cannot be used sustainably, their "life" can be extended (for example, by recycling, by using less of a resource to make a particular product, or by switching to renewable substitutes where possible). These practices are essential if the Earth is to sustain billions more people in the future and give everyone a life of decent quality.
5. **Keep within the Earth's carrying capacity.** There are finite limits to the "carrying capacity" of the Earth's ecosystems and to the impacts that they and the biosphere can withstand without dangerous deterioration. The limits vary from bioregion to bioregion, and the impacts depend on how many people there are and how much food, water, energy, and raw material each person uses and wastes. Policies that bring human numbers and lifestyles into balance with the Earth's carrying capacity must be complemented by technologies that enhance that capacity by careful management involving stabilization of population growth and resource consumption, new methods for resource conservation and waste control, and the implementation of family planning programs.
6. **Change personal attitudes and practices.** To adopt the ethic for living sustainably, people must re-examine their values and alter their behavior. Society must promote

values that support the ethic and discourage those that are incompatible with a sustainable way of life. Information must be disseminated through formal and informal education so that needed actions are widely understood.

7. **Enable communities to care for their own environments.** Communities and local groups offer the easiest channels for people to express their concerns and must take action to create securely-based sustainable societies. However, such communities need the authority, power, and knowledge to act. People who organize themselves to work for sustainability in their own communities can be an effective force whether their community is rich, poor, urban, suburban, or rural.
8. **Provide a national framework for integrating development and conservation.** All societies need a foundation of information and knowledge, a framework of law and institutions, and consistent economic and social policies if they are to advance in a rational way. A national program for achieving sustainability should involve all interests and seek to identify and prevent problems before they arise. It must be adaptive, continually re-directing its course in response to experience and to new needs.
9. **Create a global alliance.** Global sustainability will depend upon a firm alliance among all countries. But levels of development in the world are unequal, and the lower-income countries must be helped to develop sustainability and to protect their environments. Global and shared resources, especially the atmosphere, oceans, and shared ecosystems, can be managed only on the basis of common purpose and resolve. The ethic of care applies at the international as well as the national and

individual levels. No nation is self-sufficient. All stand to gain from worldwide sustainability--and are all threatened if we fail to attain it.

With these principles in mind, many concepts, definitions, and examples of sustainable living exist which help to illustrate and articulate the above-mentioned principles. While the examples themselves vary greatly with regard to the means by which sustainability is pursued, the common theme of rekindling a respectful living relationship between human and non-human systems appears to inspire the efforts.

Unsustainable Living is broadly defined as a lifestyle which reflects the distant, albeit interactive and interdependent, relationship which has evolved between human and non-human species and Earth. This relationship is characterized by (a) an aggressive and largely destructive desire for and rapid extraction of many non-renewable resources; (b) the use of such resources as primary components within current activities of daily living; (c) a linear process in the production, accumulation, and deposition of organic and inorganic wastes (Commoner, 1992); (d) the subordination of non-human species by humans (Hand & Van Liere, 1984); (e) the continued treatment of environmental costs as external to production costs within contemporary views of economic development (Miller, 1993); and (f) a lifestyle which should, though fails to, reflect the equitable development and sharing of valuable resources across gender, socio-economic status, future generations (McCormick, 1994), and race. Thus, in essence, according to Ponting (1991), "the problem for all human societies has been to find a means of extracting from the environment their food, clothing, shelter, and other goods in a way that does not render it incapable of supporting them" (p. 407).

Also, unsustainable living can be characterized by our society's tremendous consumption of both renewable and non-renewable resources and associated production of various wastes which contribute to environmental degradation, loss of biodiversity, and a threat to the balance of existence between human and non-human ecosystems. Historically, the relationship between social welfare and environmental quality has commonly remained an external consideration to the means and methods of resource production and usage. This notion appears to be in keeping with how economic data, used as the conventional means of measuring economic progress, fail to reflect the loss of ecological capital involved in the achievement of economic growth (Brown, 1995). Moreover, the social and environmental implications of current and historical methods of resource production and consumption, technological development, and waste management practices have been studied and acknowledged ex post facto to such behaviors.

Sustainable Homesteads are conceptually defined to be primarily characterized by (a) the respectful relationship between the inhabitants of the homestead to the actual physical structure of the home, the maintenance and quality of land, water, and air, and noticeable concern for the overall welfare of the social and natural environment; and (b) the role the homestead plays as the foundation for the social, economic, political, ethical, and environmental beliefs of the inhabitants and, in extension, the significance it carries as the "social anchor" of the inhabitants in their interactions with external systems including, for example, social institutions, extended family, and other communities.

This conceptual definition subsumes the notion of a homestead as a home for

independent living (Potts, 1994). The concept of independent living is defined here, drawing from the work of Potts (1994), to connote the lifestyle of persons who (a) know and appreciate the origin or true cost of their food, their goods, or their power; (b) identify and exercise lifestyle choices which reject unthinking dependence on unknown resources; (c) embody characteristics which reflect thoughtfulness in acts of resource consumption and the whole-life costs associated with the act; and (d) endeavor to develop a keen sense of place and always strive for the long view, with attention paid to the invisible, the indigenous, and the fragile (Potts, 1994).

Sustainable Communities are conceptually defined here as an interlinked constellation of homesteads where the unifying factor is sustainability, and through which the homestead residents are afforded opportunities to share common resources, find social support, assume a desirable quality of life standard, find spiritual fulfillment, and live lives which are or strive to be essentially environmentally benign. Furthermore, as the definition of a sustainable community embodies and is strengthened by the conceptual work of various authors and thinkers (Scherch, in-press), the concepts of sustainable communities, eco-villages, sustainable neighborhoods, and the like, are treated as synonymous in meaning and mission. With this in mind, Gilman's (1995) concept of an eco-village, defined as "a human-scale, full-featured settlement in which human activities are harmlessly integrated into the natural world in a way that is supportive of healthy human development and can be successfully continued into the indefinite future" (p. 109), seems consistent (Scherch, in-press).

Additionally, an eco-village or sustainable community, according to The Farm

(1995), would be characterized by (a) a conscious awareness of the inter-relatedness of all life and the cyclic sustainable systems of nature; (b) a mission of understanding and supporting cultural, social, and spiritual values of this awareness and how humans can live ecologically balanced lives; and (c) the use and promotion of viable technologies that do not further harm, but rather help to heal the planet (The Farm, 1995).

Sustainable Business is conceptually defined here as entrepreneurial efforts and/or professional occupations which aim to provide goods and/or services which are founded on and/or reflect principles of sustainable living. More specifically, a sustainable business would be characterized by (a) use of and/or advocacy for environmentally-friendly resources, products, and services; (b) direct and maintained acknowledgment of the implications of business, including social, political, economic, and environmental; and (c) strategic efforts to remain aware and knowledgeable of progressive markets and innovative technologies which can offer consumers and society increased social and environmental benefits. Such sustainable business can be either for-profit or not-for-profit in its design and function. Thus, the concept is not limited to a wage-earning context; an enterprise of sustainable business can be, for example, a community organizing for sustainable energy policy, the integration of themes of sustainable living in classroom teaching, or the production and/or sale of eco-friendly products.

Furthermore, to clarify and distinguish sustainable business, aspects of independent living, according to Schaeffer and colleagues (1994) and Potts (1994), are subsumed within this definition including a commitment to (a) using energy sensibility by embracing renewable energy solutions; (b) decreasing pollution and encouraging

alternatives to the consumption of fossil fuels; (c) promoting products and services which support a practice of material moderation despite our habits and a culture that rewards over-consumption; and (d) employing an ethic of efficiency and environmental responsibility within an economy that largely values instant gratification and tolerates waste.

RATIONALE FOR THE STUDY

This study offers a reaffirmation that all life on Earth is interdependent in its existence, with no exceptions. Humans and non-humans must live in close and harmonious proximity in order for diverse life to continue; conversely, distant and imbalanced relations will limit diversity and weaken the integrity of ecological systems. In other words, human and non-human relations which privilege one over another are unjust and ultimately unsustainable. Thus, social and environmental justice are required interdependent concepts for sustainable living to be achieved.

Given the range and nature of the issues facing the inhabitants of East Tennessee and the Southern Appalachian bioregion, this study utilizes the summarized content of What Have We Done? (Nolt et al., 1997) to establish a current context of social and environmental issues in the bioregion from which to justify and support the study of sustainable living methods as a timely and salient endeavor. (See Appendix VI for a summary of What Have We Done? [Nolt et al., 1997].)

CHAPTER 3

METHODOLOGY

Given the unique and relatively unexplored topic of this study, a qualitative research design was used, consisting of a hybrid approach of guided interviewing and grounded theory (Glaser & Strauss, 1967). The guided interview used a set of questions developed in advance of the interview, for the purpose of exploring areas of interest and preconceived notions about the topic as well as providing some direction to ensure that data was obtained relevant to the area of research (Fowler, 1993). The grounded theory component provided interpretive latitude with regard to allowing trends and themes to emerge naturally and unexpectedly.

Qualitative research can be defined as research that produces descriptive data based upon spoken or written words and observable behavior (Sherman & Reid, 1994). According to Sherman & Reid (1994), qualitative methods are procedures for identifying the presence or absence of something, or describing the amount of something in words, in contrast to quantitative methods, which involve numerically measuring the degree to which some feature is present. Deciding what to count as a unit of analysis is essentially a qualitative and interpretive issue that requires judgment and choice in the development of themes, categories, classifications, and typologies from data collected in naturalistic situations, rather than in the experimental or otherwise controlled conditions common to quantitative procedures (Sherman & Reid, 1994).

According to Fowler (1993), the goal of qualitative-based research is to seek understanding as the participants in the study understand their world. The search is for

truths, of which there can be many. An assumption is that people can be best understood by an examination of their views as learned through their own words and trains of thought. The approach is discovery oriented, building theory from data rather than making assumptions about truth and then trying to confirm or disconfirm them. Therefore, data are analyzed inductively (Fowler, 1993).

With regard to social work research, Kohler Reissman (1994) indicates that social work has witnessed polarized debates about the relative value of quantitative versus qualitative methods. Based on research experience with both methods, Kohler Reissman (1994) argues for diversity: equal time for qualitative approaches in research training. Nonetheless, according to Kohler Reissman (1994),

> many act as if particular research approaches are superior, not only for a given project, but for all research projects. Polarized arguments about the relative value of qualitative, compared to quantitative, methods obscure what each has to offer. Both sides of the debate have contributed to a lack of mutual respect. Quantitative researchers imply only their methods are 'empirical,' other kinds of data are anecdotal or descriptive, suitable perhaps for generating hypotheses but not for testing them. Proponents for qualitative methods engage in science-bashing, imply their methods are better, and label anything they don't like as positivist, sometimes incorrectly. (p. viii)

This debate notwithstanding, for the current study, the motivation for using qualitative methods derives from the researcher's belief that the topic, which heretofore has not been extensively explored, would be best assessed using such methods. Thus, the

information gleaned from this study provides a starting point or baseline of knowledge from which future research, integrating quantitative methods, could take place.

STUDY PROCEDURE

The research for the current study was conducted by way of scheduling and staging in-depth interviews with identified subjects at pre-arranged sites (i.e.,, the subject's homestead, a common location within a sustainable community, or the subject's place of business). The interviews had a duration of approximately 1.5 hours and were recorded by the researcher via a combination of written notes and audio recording. The purpose of recording the content of the interview session was to (a) aid in the organization and differentiation of the sources of information and (b) support eventual data analysis.

Permission to conduct these recordings was requested in writing, within the Letter of Informed Consent (See Appendix III), in advance of the scheduled interview. Each collection of written notes and audio-tapes was organized by code-number and secured within a locked filing cabinet located at the office of the researcher.

The actual interviews were conducted using an interview guide which served as a question pool reference for the researcher in the interest of providing some direction to the interview to ensure that relevant data were obtained. Questions within the interview guide were organized across three broad areas of inquiry: (1) what types of people are practicing what sustainable living method, how, and where; (2) why the sustainable living method is being practiced; and (3) how the practice was learned and developed.

In using this guide, the researcher attempted to facilitate discussion within the interview, was not committed to asking questions in any specific order, and revisited points of interest at the discretion of both the researcher and interviewee. Thus, the interviews accommodated discussion which could glean subtle yet important information not addressed through specific questioning.

While the interviews were characterized by open-ended discussion intended to delve into many areas of interest, the structure of the interview included specific content areas which served to (a) clarify the types of sustainable living practices the subjects represented; (b) clarify which of the dimensions of sustainable living the subjects were currently learning, designing, and/or practicing (i.e.,, food, shelter, energy, transportation, and health); (c) explore why the particular sustainable living methods were being practiced and what benefits, obstacles, and/or difficulties were experienced from the practice; (d) explore differences between aspects of the respondents' past unsustainable lifestyles with those of current sustainable living efforts; and (e) compile demographic descriptive data.

SUBJECTS

Subjects were either residents of or currently working within East Tennessee and the Southern Appalachian bioregion and, by their own report, were screened accordingly. An initial pool of approximately 25 subjects were identified for the study using a membership database of the Foundation for Global Sustainability (FGS) Sustainable Living Program, as well as persons already known by the researcher to be

practicing methods of sustainable living in the bioregion. (Refer to Appendix V for more information regarding the Foundation for Global Sustainability.)

These subjects consisted of adult residents, community leaders, educators, crafts-persons, artists, and/or business owners who, by their own report, currently use, promote, support, or design sustainable living methods within East Tennessee and the Southern Appalachian bioregion. The age of the subjects varied, though no subjects were under the age of 18. No payment or incentives were used to recruit or motivate the subjects to participate.

The total number of interviews for the study was 76, including 94 participants. This number developed via a "snowball" method of recruitment, whereby, as part of the Letter of Informed Consent (See Section IV), each participating subject of the initial sample group was asked to identify, if possible, two additional persons known to be practicing a method of sustainable living within the bioregion. Persons identified through this process were contacted by the researcher and sent a Letter of Informed Consent requesting their participation.

DATA COLLECTION PROCEDURE

The interview discussion was guided by the use of a question pool. These questions were organized across four areas of inquiry: (1) Overview of Sustainable Living Practices--this area served to clarify the types of sustainable living which the subjects represented; (2) Descriptive Information about the Sustainable Living Practices--this area served to explore in detail what dimensions of sustainable living were/are being

practiced, learned, and/or developed (i.e.,, food, shelter, energy, transportation, health); (3) Pathways to Sustainable Living--this area served to glean information about the subjects' life experiences, among other motivating factors and influences, in the interest of understanding how they came to be practicing sustainable living; (4) Characteristics of People Practicing Sustainable Living--this section provided demographic information towards understanding what types of people were involved.

The initial pool of questions is provided within the attached Interview Guide (See Appendix I).

HUMAN SUBJECT ASSURANCE

Procedures for Obtaining Consent

It was the intention of the researcher that, at least two weeks in advance of the anticipated interview, each subject would receive, by regular mail, a package of materials containing (a) two copies of the Letter of Informed Consent (See Appendix III) and (b) an enclosed self-addressed stamped envelope for return mailing. Each subject was asked to review the Letter of Informed Consent, within which the definition of Informed Consent was clearly presented. The style of the Letter of Informed Consent was directed to prospective participants who were relatively well-educated and somewhat sophisticated, having at least a high school education, with many having college experience.

Each subject was requested to review, comment on (if the prospective interviewee was in need of clarification), and sign both copies of the Letter of Informed

Consent. One copy was retained by the subject; the second copy was returned to the researcher by the subject using an enclosed self-addressed stamped envelope, and was retained and securely stored at the office of the researcher located at the University of Tennessee, Knoxville, College of Social Work, 4 Henson Hall, Knoxville, Tennessee 37996-3333. It was requested that the interviewees promptly return the researcher copies of the Letter of Informed Consent. The researcher attempted to schedule an interview date and time upon receipt of the researcher copy.

In the event that the researcher did not receive all of the returned copies of the Letter of Informed Consent, the researcher endeavored to contact the prospective interviewees who did not return a copy by phone on or after 10 days from the initial mailing of the package. In the event that efforts made to contact the prospective interviewee and secure the copies of the Letter of Informed Consent failed, the subject was omitted from the interview list.

Safeguards for Confidentiality

Confidentiality of the identity and response data of all participants was treated with great importance. Accordingly, all interview data including notes and audio tape recordings were coded and securely stored in a locked filing cabinet at the office of the researcher. Access to the interview data was limited to the researcher and hired transcribers who worked to transcribe the audio-tape recordings and prepare for the researcher copies of the transcriptions in both paper and computer file formats. These workers transcribed the data at the office of the researcher and kept all related materials securely stored in the locked filing cabinet. The transcribers did not have access to any

information which identified any of the participants, and at no time was identifying data examined together with interview data.

The materials will be retained for a period of three years, at which time all paper materials will be shredded and audio-tape recordings will be erased and destroyed by the researcher.

Potential Risk

Risk Related to Audio Tapes

Audio-tape recordings were used by the researcher during and after the interview session for the purposes of recording important information and data relevant to the objectives of the study. The Letter of Informed Consent, sent to each subject in advance of the interview, requested the permission of the subject to audio-tape record and transcribe the interview for use in analysis. The data was not used in any way other than for analysis as described in the study proposal.

Procedures for Minimizing Risk

Subjects for the study were not anonymous, though their names, addresses and all pertinent information which might have identified them remained confidential by using a number coding system. No indication or mention of identifying information was included in any written notes or audio-tape recordings. The terms of confidentiality were clearly defined within the Letter of Informed Consent so as to allow each participant an opportunity to review, comment on, and agree to the terms of confidentiality as specified.

No explicit benefits for participating in this study were anticipated, though some

participants may have enjoyed the experience of talking about their lives and endeavors to an interested and attentive listener. No sensitive or extremely personal information was requested or discussed. In advance of initiating any discussion, the researcher requested that the participant not introduce or discuss anything which might make them uncomfortable. In the event that such discomfort might have developed, the researcher, a social worker with clinical counseling experience, was sensitive to this response and, if necessary, could have assisted the participant by referring them for professional assistance. Also, as a precaution, in advance of the interview, the participant was informed that their participation was clearly voluntary, that the interview could be canceled or terminated at any time by the participant, and that the participant's identity would not be revealed due to measures taken to ensure confidentiality.

Limitations

There are several limitations to this study. First, results derived from the small, non-random sample may not be generalizable to other populations. Further research is required to determine how, when, and where the findings of the present study are applicable to individuals and groups within the larger population, especially those living outside of the East Tennessee and Southern Appalachian bioregion.

Also, the nature of the open-ended interview, the extensive question pool, the various settings in which the interviews were conducted, and related time constraints influenced the type and depth of inquiry undertaken by the researcher. With this in mind, the researcher's decision to delve into and probe areas of interest or importance was also continually balanced by a sensitivity to and an awareness of the potential effects which

such probing could produce (i.e.,, defensiveness, emotional discomfort of painful personal experiences, etc.) and introduce to the interview process. Subsequently, any areas of interest or importance which were unexplored in this study, as they become apparent, serve to suggest avenues for further study in the future.

CHAPTER 4

DATA ANALYSIS

In general, the aim of the data analysis was to organize and report similarities and differences among the respondents with regard to their demographic characteristics, current and future sustainable living practices, and personal pathways which reportedly motivated the practices. Using the structure of the interview guide, the data were organized according to specific questions within the interview guide. This type of organizational procedure followed what Rubin and Rubin (1995) refer to as coding, which they define as "the process of grouping interviewee's responses into categories that bring together the similar ideas, concepts, or themes you discovered, or steps or stages in a process" (p. 238). In addition, the coding process also allowed for the identification of heretofore unexpected or naturally occurring themes in keeping with a traditional grounded theory (Glaser & Strauss, 1967) approach.

Data analysis was facilitated using the NUD*IST qualitative software program published by Qualitative Solutions and Research (QSR, 1996). NUD*IST (QSR, 1996) is an acronym for Non-numerical Unstructured Data Indexing Searching and Theorizing, and it is designed to aid users in handling non-numerical and unstructured data in qualitative analysis. NUD*IST (QSR, 1996) was used to analyze and organize coded textual data which consisted of verbatim transcriptions of the audio-taped interviews. No identifying information was included in the data set. (See NUD*IST Revision 3 User Guide [Qualitative Solutions and Research, 1996] for more information about NUD*IST.)

RESULTS

Results of the data analysis are organized within four sections. The first section reports demographic data and other sample characteristics. An overview of the types of sustainable living practices comprise the second section, including the number and approximate location of the sustainable homesteads, communities, and types of businesses studied. The third section provides more descriptive information about the respondents' practices, organized respectively by sub-sections (A) Sustainable Homesteads and Communities, and (B) Types of Sustainable Business.

Sub-section (A), which focuses on sustainable homesteads and communities, provides details regarding sustainable living practices in the areas of food, shelter, energy, transportation, and health; how these practices differ from current mainstream practices; and why. Sub-section (B) provides details regarding the types of sustainable business undertaken, the products and services furnished, and the nature and purpose of the business.

The final section provides information about the respondents' pathways to their practice of sustainable living. More specifically, this final section involves an examination of four areas: (a) Why Practice Sustainable Living?--including respondent motivations for practicing sustainable living and related views of mainstream society; (b) Life Experiences--including experiences derived from family, community, bioregion, travels, professional / work endeavors, and religious beliefs; (c) External Supports--including sources of information and training indicated by the respondents as helpful to their

practices; and (d) Benefits, Obstacles and Difficulties--including remarkable experiences encountered in the development and practice of sustainable living methods.

CHARACTERISTICS OF THE SAMPLE

Participants lived and/or worked within the Southern Appalachian bioregion, and represented both rural and urban settings (See Table 4.1) across the states of southeastern Kentucky, western North Carolina, central and southeast Tennessee, and southwest Virginia. Urban locations are characterized by high residential and commercial population densities, extensive evidence of built environments and infrastructure including major highways and mass transportation, and the absence of large portions open land space including farm lands, meadows, and forests. Rural areas are characterized by relatively low residential and commercial population densities, limited evidence of built environments and infrastructure, and open land spaces including farms, meadows, and forests. Of the ninety-four (94) respondents, (52) were male, and (42) were female. The majority of the respondents were white-Caucasian (91), while three (3) were African-Americans.

The actual ages of the respondents was not ascertained, though appeared to range in age from mid 20s to late 70s, with the majority of the respondents falling within an age range of 30 to 50 years old. Also, while the respondents' personal income levels were not ascertained, many of the participants reported minimal incomes, including levels reported to be below the federal poverty line, while others reported incomes which were commensurate with that perceived to be of the mainstream middle-class.

Table 4.1. Rural / Urban Location of Respondents by State

Location	N	N	N	N	Total
	Central & Southeast TN	Western North Carolina	Southeast Kentucky	Southwest Virginia	
Urban	42	4	-	2	48
Rural	30	11	4	1	46
Total	72	15	4	3	94

Respondents represented a wide range of educational experiences, professional disciplines, and occupations (See Table 4.2). Educational experience across the sample group varied, including persons with only high school experience, though most of the respondents were college-educated. Many respondents also reported completing advanced graduate degrees across the social and natural sciences, law, and the humanities.

Occupations and vocations represented within the sample group included organic crop and cattle farmers; human and animal health care professionals; small business owners and employees; primary, secondary and college-level educators; community organizers and activists; permaculturalists; home-makers; government employees; journalists; college students; and artists. Table 4.3 portrays the distribution of categories reflecting the types of business and occupations represented and the respective number of respondents involved in each.

Table 4.2. Range of Respondents' Educational Experiences

Educational Level	N
High School Attendance and/or Graduation	9
College Attendance	10
Achievement of College Degree	35
Post-Graduate Work	7
Achievement of Graduate Degree	22
Not ascertained	11
Total	94

Table 4.3. Respondent Occupation and Vocation Categories and Frequencies

Occupation	N
Small-business Merchants	13
Educators	9
Community organizers and activists	17
Permaculturalists	6
Home-makers	2
Government employees	3
Renewable Energy & Technologies	6
Journalists	5
College students	5
Artists	3
Health-care professionals	3
Farmers	16
Total *	88

* Some respondents represented more than one occupation

Generally, the sample group included people of Catholic, Islamic, Jewish, Presbyterian, and Unitarian faiths, and persons reported to be associated with pagan groups or atheist. Of the Christian respondents, many expressed discontent with contemporary Christian institutions and subsequently reported a holistic spiritual connection with the earth and the environment as a supplement to and/or substitute for attendance and participation in the mainstream Christian church.

OVERVIEW OF SUSTAINABLE LIVING PRACTICES

The subjects of this study represented 42 homesteads, 3 communities, and 12 business and/or occupational categories, with some respondents assuming work roles across categories (i.e.,, an educator and community organizer, farmer and merchant, etc.; see Table 4.3). Many of the subjects also represented multiple sustainable living practices where, for example, they might be involved in the development of a homestead, participate as a member of a sustainable community, and/or serve as a worker in a type of sustainable business enterprise.

Sustainable Homesteads

The sustainable homestead examples varied greatly in design, function, state of completion, and rural and urban location. The actual homestead buildings were designed and/or constructed using a wide range of materials--including Styrofoam panels, straw bales, cob (clay, sand, and straw composite material), scrap lumber, and stone--and often reflected efforts at integrating high thermal efficiency, solar heating and lighting, creative cooling techniques, indoor-outdoor connections, and general interests in self-sufficient

living, low-cost construction and maintenance, and/or environmental sensitivity. Thus, the use of such materials, designs and technologies, along with close and respectful interactions with the surrounding natural environment, served to distinguish the homesteads from the conventional mainstream home. For example, many of the homesteads did not have sculpted lawns, but rather allowed for various types of grasses, weeds, wild flowers, and so forth, to grow freely. Having the appearance of a meadow, this wild growth was said to provide valuable habitat for flora and fauna, which is largely lost to lawn mowers, weed-killers, and fertilizers used by many mainstream home-owners and communities. Thus, for many of the respondents, regardless of their urban or rural location, value was placed on having a homestead which was environmentally-friendly in its physical design and respectful to other non-human inhabitants sharing the property or space.

Features of the land also influenced the type and character of the homestead settlement, such as the availability of sources of water and other resources, adequate space for gardening and livestock, scenic vistas and perceived natural beauty, and the proximity of the homestead to neighbors. For example, one homestead was constructed of stone and wood obtained from within the respondent's property. The wood was reported to have been either dead and fallen or selectively cut so as to reduce crowding and allow other trees to grow and develop the forest canopy. Also, one homestead was a 22-foot ketch sailboat, where the respondents' practices of sustainable living on the Tennessee River was reported to have exposed various issues regarding the quality of immediate sources of land and water which otherwise might not be witnessed.

The evolution of the homesteads varied greatly, from those which began many years ago and are considered completed, to others which are reported to be continually evolving. Thus, to the outside observer, many of the homesteads might appear to be modestly-appointed, average-looking homes; uncommonly-shaped and surrounded by varying densities of vegetation; and/or having the appearance of a construction site strewn with debris. Nonetheless, while some homesteaders did make mention of their awareness of the appearance of their homes, emphasis was largely placed on the functionality of the homestead and its ability, by design, to afford a lifestyle characterized by the qualities previously mentioned.

Sustainable Communities

The three sustainable communities examined--Earthaven, Narrow Ridge Earth Literacy Center, and The Farm--were located in rural areas of Tennessee and Western North Carolina. Earthaven, a growing community of some thirty people located in Western North Carolina, is developing and integrating examples of permaculture design; alternative energy technologies such as solar and micro-hydro; eco-friendly housing design and construction including straw bale and cob construction techniques; composting toilets; organic agriculture; and cooperative community living which emphasizes gender equality, and encourages membership diversity. In keeping with its permaculture roots, Earthaven seeks to develop and model sustainable, cooperative ways of living supported as much as possible from the resources available from within their 325-acre land space.

The Narrow Ridge Earth Literacy Center defines and portrays a similar mission to those of the other communities. One community member commented on how the evolution and activities of the Narrow Ridge community reflects a commitment to sustainable living practices, in that "Narrow Ridge is about trying to communicate by the way we live our lives. We are not sustainable but we are working to be sustainable" (Male respondent, mid-50s).

More specifically, the settlement of the Narrow Ridge community is organized within three land trusts communities referred to as the Hogskin, Black Fox, and Log Mountain land trusts. When taken together, the land trusts encompass 351 acres of land (105, 168, and 78 acres respectively), with portions of the land reserved as wilderness areas (10, 108, and 38 acres respectively). Narrow Ridge is actively developing on-site organic agriculture projects with plans to create a large community-supported agriculture (CSA) program able to provide organic vegetables for upwards of 35 families. Also, several entrepreneurial ventures are underway, including a book publishing company (Earth Knows Publications); wood-working crafts and instructional workshops; and college-level, cross-disciplinary internship programs through which students can earn academic credit respective to their fields of study while living and working at the straw bale dormitory.

The third community examined, The Farm, was established in the early 1970's and is the largest and oldest of the three communities. With some 200 residents, the Farm offers working examples of community-wide and individual organic agriculture efforts; small business operations, including an on-site tofu processing company and a

shitake mushroom business; a cooperative food store; and permaculture-related workshops associated with the Ecovillage Training Center (ETC). The Farm, through the ETC, is a member of the Global Ecovillage Network (GEN), which seeks to support the development of sustainable communities world-wide, in an effort to form a network of model communities where each will be different in design and function, offering a range of sustainable living possibilities.

Building on this vision of development, the mission of the ETC reflects, as one respondent commented, "an immersion experience in systems which are harmonious with nature" (Male respondent, mid-40s). For example, the visitor to the Center would witness the viability of alternative renewable energy systems and see in action a one kilowatt solar photovoltaic array in place of the utility grid. This and other systems and components are integrated into the ETC model, including

> three ponds for fish, fire prevention, and frogs; a complete system of capturing the water off the rainfall and channeling it into cisterns and into the garden and into the solar showers, and from the showers into the garden; the building of the straw bale house, and a straw bale composting toilet attached to the house; the building of dome and yurt structures, and the first phase completion of a major garden--a closed garden to keep the deer out; the clearing of the lower field for the planting of a field forest; the creation of a nature trail into the woods and a zone down by the creek for recreation, meditation, sweat lodge, and so forth. (Male respondent, mid-40s)

Thus, in summary, all three communities offer useful examples in their design, development and application of alternative practices for food, shelter, energy, transportation, health, industry, and spirituality. All three communities are reported to be continually evolving in form and function and, although rurally located, seek to maintain connections with other rural and urban communities.

Sustainable Business

Respondents represented a wide range of sustainable business endeavors and occupations including both for-profit and not-for-profit structures. More specifically, respondents represented community organizing and development organizations; merchants of arts and crafts, and eco-friendly household and business supplies; teachers and educational programs and institutions; organic crop and cattle farms; alternative energy and fuel businesses; restaurants and cooperative food stores; community-based and government recycling programs; journalists and multi-media production companies; landscaping, permaculture design and education; and human and animal health professions.

Examples of the types of business and occupations represented included a restaurant business which initiated a program in which its vegetable wastes are composted, and thus, transforming the waste into a welcome soil-building resource while reducing their weekly contribution to the land-fill waste-stream; a merchant of environmentally-friendly household and health-care products which emphasize non-petroleum-based ingredients, animal-free testing, and reduced packaging; educators who have integrated themes of sustainable living into their college courses and workshops,

and who actively model and speak about such themes in the community; farmers who practice methods of organic agriculture by electing to forego the use of pesticides, herbicides, chemical fertilizers, fossil-fueled machinery, and/or monoculture production methods; community organizers whose work involves developing community-based recycling programs, advocacy for the development and use of renewable energy sources, and/or market supports to encourage growth in and consumption of regional organic agriculture products.

CHAPTER 5

A CONTINUUM OF SUSTAINABLE LIVING PRACTICES

- DESCRIPTIVE INFORMATION -

PART 1: SUSTAINABLE HOMESTEADS AND COMMUNITIES

The following section provides information about the respondents' sustainable living practices in food, shelter, energy, transportation, and health. While all of these practices reflect efforts to live more sustainably, none of the respondents had achieved the goal of living sustainably. All of the practices involved a combination of sustainable practices and the acquisition and use of resources which, at least in part, were derived from unsustainable origins. For example, the use of fossil-fuels in the production of necessary materials, hardware, and energies consumed by the respondents compromised their ability to truly live sustainably. Indeed, such a compromise portrays the difficulty which the respondents faced in endeavoring to do what they do.

With this in mind, given the variation across the sustainable living practices of the respondents, it is helpful to consider these practices as part of a theoretical continuum, where the poles represent the extremes of unsustainable and sustainable living. Considering how and where these practices place along such a continuum provides a context for appreciating and evaluating progress towards sustainability.

Food

For many of the respondents, the concept of growing one's own food seemed fundamental, though they acknowledged that not everyone is capable of tending gardens

insofar as to the level that is required to be self-sufficient in food. Nonetheless, as one male respondent in his late 30s commented,

> There are 50 things you can do to save the earth and 45 of them are to grow your own food. So, that starts in your garden; so, rip up your lawn and plant edible landscaping. People say, "Oh, I've got to have my lawn." You can have some of your lawn, but we have more lawn than we have agriculture in this country. (Male, late 30s)

In keeping with this suggestion, many of the respondents maintained gardens and small farms while they or their spouses or partners worked away from home. Where a few indicated their intermittent use of pesticides and/or herbicides, organic approaches to growing food were the predominant choice.

The gardens and farms of the respondents featured a diversity of crops and livestock, representing a departure from the contemporary monoculture methods of agriculture. In doing so, respondents indicated that the natural ecosystems of plants, insects, birds, and other animals could symbiotically maintain balance, and thus, along with the increased vitality of the crops to withstand infestation and infection, losses were minimized while biodiversity thrived. Accordingly, one respondent noted that

> a lot of the things that we grow in our gardens and in our edible landscape is done so to make the whole system healthier, to attract birds, to attract some insects and discourage others. It's all very innovative; so, we grow a lot of things that you wouldn't actually eat, but they're connected to the production of food. (Male respondent involved in permaculture, late 30s)

In short, according to one organic gardener who is able to grow a year-round supply of vegetables, "we have been amazed at how much food you can grow on a little bit of land and how good a climate this is for growing a wide variety of things" (Male respondent, late 30s). However, despite their efforts, none of the respondents were completely self-sufficient in food, with some reporting that it was not possible for them to grow desired foods or raise livestock for animal products, and others choosing to purchase foods out of convenience.

Nonetheless, many reported producing most if not all of their vegetables, with the summer months being the most productive, and supplementing their food supply with purchases made from local supermarkets and food cooperatives; by preserving food through canning, freezing, and/or drying; and/or by consuming season-specific crops. As one male respondent in his late 40s commented,

> there is something always coming out of the garden. Obviously there is a lot more coming out now [summer time], but in the winter we eat kale and Brussels sprouts and spinach until December, and potatoes and carrots under ground, so we have food out of the garden year round. (Male, late 40s)

Also, for those who had access, membership to CSA projects offered some respondents farm-fresh organic produce in lieu of being able to grow their own, all while supporting a small, local farm.

While many of the respondents only grew a small part of their food, efforts to produce a wide variety of crops also served to provide nutritional supplements that some believed could not have been obtained from mainstream food sources. For example, one

respondent commented, "We probably grow about 40% of our own food, but we probably grow about 75%, 80% of our nutrition" (Male respondent, late 30s).

Correspondingly, many respondents reported that they reduced or eliminated their consumption of fast food, due to health concerns as well as objectionable personal views about the conduct of agribusiness and the quality of the food. For example, one respondent reportedly objected to,

> those who go to fast food restaurants where they are producing a lot of waste and where the money is going for low-paid people and much of the profits are being siphoned up by big corporations. . . .The environmental effects of the food being grown for those operations are very bad. And if they are taking a car [to get to and from the fast-food restaurants], there is an objection. (Male, late 40s)

Another person objected to fast-food meat products, noting

> how the animals are raised and of imported beef where, in some cases, animals were raised in inhospitable and inhumane environments. I think of how fast food basically turns something that's a very intimate and special thing into a commodity. I feel that way about vegetables, too. If you look at a tomato you get in the middle of winter, there's no spirit left to that. (Male, mid 30s)

Nonetheless, many of the respondents reported their eating fast-food despite their knowledge of the undesirable effects of doing so, given the convenience of the restaurants in the midst of time constraints; preferences of family members, especially children; and/or the desirability of a fast-food product once in a while.

Moreover, for many, the consumption of purchased goods involved choices and decisions regarding the origin and quality of these products; and the nature of the outlets from which they were purchased. For example, many of the respondents indicated their membership with and/or patronage of community food cooperatives as an alternative to the local mainstream supermarket. One male respondent in his early 30s who shops at a food cooperative asserted,

> We would like to buy directly from an organic farmer, but we don't have that organic farmer available here. Now you can get your organic food from Kroger's, but you don't know how many businessmen it goes through; the farmer probably earns very little in the end. This way I think they are probably getting more from us co-op members. (Male, early 30s)

In short, the food cooperatives were reported to offer organically-grown produce; access to goods in bulk and processed foods with reduced packaging; and a desirable, friendly atmosphere. Also, respondents acknowledged instances where shopping at alternative food stores and cooperatives involved spending more for products than at a supermarket. With this in mind, one respondent commented, "It seems to me if I'm serious about supporting organic agriculture, I should be willing to pay the difference in price. I think that's a connection I ought to make" (Male, late 30s). Nonetheless, many respondents split their shopping purchases between supermarkets and alternative food stores and cooperatives.

Of those who shopped at supermarkets, many critiqued supermarkets insofar as their lack of trust in the quality of the produce found at the supermarkets, including their

displeasure in the perceived liberal use of pesticides, and the supermarkets' affiliation with big corporations and centralized agribusiness. As one female respondent who shops at a food cooperative noted,

> You're giving them your money and you don't know what they're doing with it. The same people that are selling you crackers might be selling guns in Guatemala. You have no idea who you're supporting. So it's nice to shop at a co-op, and a lot of times you're buying food from small businesses. (Female, late 30s)

For some, sustainable food practices involved being vegetarian, due to social and environmental issues identified and associated with the production and consumption of animals. Moreover, respondents indicated the inhumane treatment of animals in the raising and processing of meat products, the adverse environmental effects of this process, including use of enormous amounts of water and the clearing of rainforest land for grazing, as well as economic and human rights issues regarding those involved in the "economy of meat." Thus, for one respondent, vegetarianism offered a desirable alternative:

> I see the consumption of meat products as a completely global economic issue, because I realize that, if you take a plot of land and raise soy for people to eat, you can feed seven times more people than if you graze cattle on it. And with the rainforests being cut down in large part for these beef cattle in South America and so on, that just deeply disturbs me. (Male respondent, late 30s)

For others, sustainable food practices could involve the use and consumption of animals, though in a manner described as different from how the consumption of animals is sponsored by contemporary agribusiness. One meat-eating respondent commented,

> We eat chicken, and would be willing to pay more to eat free-ranging chicken, but you never see that. So that means the chicken is coming from these giant chicken factories where they probably cram all the chickens into very small cages and treat them inhumanely. (Male, mid 30s)

Table 5.1 indicates the number of respondents involved in sustainable food practices organized by the rural or urban location of the respondents.

Table 5.1. Types of Sustainable Food Practices by Rural / Urban Location

Types of Practice	Rural	Urban	Total
Growing their own food.	43	15	58
Involved in a current or developing community-supported agriculture project	8	13	21
Shop with food cooperative, buying club, or at an alternative food store.	35	40	75
Vegetarians	17	14	31
Refrain from eating fast food	5	4	9
Involved in composting efforts	41	23	64
Total *	149	109	258

* Some respondents were involved in more than one of these practices

Shelter

Examples of homestead shelters varied widely in design, construction, size, purpose, and function. In many creative and sophisticated ways, the shelters' design features, interior style and decoration, and space utilization greatly differed from those which might be found in the average mainstream home. For example, one shelter built in an elongated shape, was described as

> long and narrow, with one side facing the south, and that side has more windows, and the other side facing the north with fewer windows. The walls are comprised of 18-inche thick logs, which on the south side absorbs the heat and transmits it into the house, while the north side provides insulation. At the center of the house is the massive chimneys, and with the stone floors, the heat of the fireplaces is retained in the winter. The skylights provide us with a sustainable light source all the time, even on a rainy day like today. (Female, mid 40s, describing the features of her homestead)

Many of the respondents used straw bale or other alternative building materials to construct their homes. Some of the respondents chose to build with straw bales, a material that is renewable, is easy to use and manipulate, and provides exceptional insulation. For example, one respondent chose to build with straw bales because its insulation potential, or R-value, is rated at approximately 40 and 50; whereas the R-value of a contemporary wood-framed house insulated with fiberglass might be rated at approximately 25-30.

Nonetheless, wood-frame shelters were also being designed and built by respondents. However, at least for one respondent using wood as a building material, the means by which these resources were acquired was distinctive:

> We're basically milling all our own lumber here (on-site). We have a portable sawmill, cutting all our trees from our site, and we're making all our own wood for the house. So, just from stage one, it's going to be different than going to Lowes with a blueprint and telling them to deliver. We're basically doing it about as directly as possible, aside from maybe building a log cabin with an ax. (Male respondent, late '30s, describing the development of his rural homestead)

Also, respondents living in both rural and urban areas seemed to equally emphasize the aesthetic qualities of their homesteads, such as the peace and quiet, their location being remote, or the connections which exist between the interior and exterior of the homestead.

The design and functioning of the homesteads served many purposes. Many of the homesteads reflected interests in living in a place which was described as environmentally correct--that is, respectful of the surrounding natural ecosystems; energy efficient; and constructed of natural, low, or non-toxic materials. Strong feelings about the design and function of the homesteads often accompanied the description.

> I look at it and I do get a little emotional because it is important to me. I want it to be a place of peace and quiet for my family to enjoy and also for friends and anybody to enjoy. A kind of place of recovery. (Female respondent, mid 30s, describing her rural homestead)

Many of the homesteads did feature amenities which would likely be found in the mainstream household, while some respondents who were building and moving to their new homestead described changes in lifestyle which involved "reduced living" without the sacrifice of conveniences. With this in mind, one respondent commented that "our intention was to provide basic comfort but to not pad ourselves, not insulate ourselves from the natural rhythms--that is, the sun coming up at a certain time, the rotation of the Earth, and our relationship to those occurrences" (Female, late 40s). As one person described homestead life, "We do things that most mainstream Americans wouldn't conceive of" (Male respondent, mid 30s, describing his rural homestead lifestyle), making reference to minimal heating and cooling, closing part of the house during the winter, using movable insulation such as heavy window curtains, and/or using alternative energy sources.

Several of the respondents indicated that their current shelter was temporary, while their future homestead is being designed and/or built. Nonetheless, they were equipped with desired features, including composting toilets or outhouses, as part of a regimen of responsible human waste management and soil building; greenhouses; and alternative energy systems.

Also, several respondents were involved in designing and integrating concepts of permaculture into their homestead, including the development of zones, as one respondent described them:

> zone one being the area right around your house, maybe from your front door to your car, or the place where you're at all the time, and it goes concentrically out

> from there, and where zone five is, essentially the woods or the wilderness, and that's where you go less frequently because it's a little farther away, although it's nice to bring it in what Christopher Alexander calls "city-country fingers"--where you bring a finger of wilderness almost to your front door, so it isn't an hour drive, and that's where you go to connect with nature, that's where you go to observe nature. (Male, late 30s)

With these connections in mind, many of the shelters, both urban and rural, featured adjoining greenhouses, gardens, ponds, pasture, and green spaces, albeit commensurate with the amount of space available at the particular site.

Levels of competency and experience in designing and building shelters varied greatly, from those with little or no experience, to those who had previously designed and/or built live-in structures. Also, familiarity with alternative building materials, such as those previously mentioned, varied greatly. Of those who endeavored to build with these materials, all had either participated in, or were planning to attend, so-called build-shops or hands-on instructional events in order to learn the fundamentals of the approach. Educational materials and references reported to be helpful to the respondents included the following titles: The Straw Bale House, by Athena Swentzell Steen and colleagues; A Pattern Language, by Christopher Alexander; and Living the Good Life, by Scott and Helen Nearing.

Also, some of the respondents noted that obtaining housing loans from traditional lending institutions (banks) for alternative-type shelters, such as straw bale and cob homes, was difficult due to perceived risks of investing in the not-widely-used

construction techniques. Because of this difficulty, some of the respondents pooled money to build community structures, with intentions to build additional structures as resources became available. Others were saving money for eventual building and indicated time frames of several months to several years before construction would commence or finish.

In addition, anticipated restrictions in available land space and zoning requirements were reported as features which either helped or hindered the building process, with those living in rural areas less encumbered by such restrictions. Table 5.2 indicates the number of respondents involved in sustainable shelter practices organized by the rural or urban location of the respondents.

Table 5.2. Sustainable Shelter Practices by Rural / Urban Location

Types of Practice	Rural	Urban	Total
Living in, building, or considering homes made of straw bales, cob, or recycled materials.	36	18	54
Designing and/or building their shelters.	41	27	68
Having adjoining greenhouses and/or gardens.	43	15	58
Using or considering the use of composting toilets or outhouses.	43	23	66
Total *	163	83	246

* Some respondents are involved in more than one of these practices

Energy

Various types and uses of alternative, renewable energy systems were designed and in use by many of the respondents in both rural and urban locations. Such systems, often referred to as home power systems, involved photovoltaic solar, wind, or micro-hydro technologies, and provided electricity which met part or all of their normal energy needs. Table 5.3 indicates the number of respondents involved in sustainable energy practices organized by their respective rural or urban locations.

Table 5.3. Respondents Involved in Rural / Urban Sustainable Energy Practices

Types of Practice	Rural	Urban	Total
Solar, wind, and/or micro-hydro energy	26	5	31
Alternative heating and cooling (i.e.,, passive solar, biomass, etc.)	23	8	31
Total *	49	13	62

* Some respondents were involved in more than one practice

The predominant, alternative-energy hardware in use was photovoltaic solar, while wind and micro-hydro were used by only a few. These devices varied in size, output, and application. For example, such systems might include

- a micro-hydro generator, driven by water flow siphoned from an adjacent pond, used to generate a supply of electricity for household lights and appliances;

- an array of solar panels mounted atop a house, barn, or shed, producing electricity to operate household appliances, word-working tools, audio-video equipment, and computers;
- a wind turbine, either as a stand-alone, single source or coupled with an array of solar panels to provide a hybrid source of electricity which is less dependent on weather conditions (e.g., cloudy or windless days).

While some of the systems were simple in design, capable of generating a few hundred watts of direct current (DC), typically stored in deep-cycle batteries, and used to power lights, fans, and miscellaneous small electronic equipment, other, more sophisticated systems were in use, capable of producing thousands of watts of alternating current (AC), also stored in deep cycle batteries, supplying electricity for typical household appliances such as refrigerators, audio and video equipment, and computers.

Both types of systems, or hybrids which utilized both AC and DC supplies, were reported to be reliable and viable for replication elsewhere. However, the reliability and viability of these systems for use by mainstream consumers would require, according to most respondents, changes in their energy consumption habits, with an emphasis placed on conservation and efficiency. Such suggested changes in consumption habits included: installing appliances with improved efficiency, use of compact fluorescent lights, taking notice of device power consumption, among other considerations. With this in mind, one respondent noted,

> A lot would depend on what kind of lifestyle you were willing to adopt. I think you could live with some careful conserving energy choices, and still live a

comfortable lifestyle. I do think anyone could live as well as we do, though I don't think it's viable if you're going to have no thought at all about how much energy you're consuming. But if you're willing to make some compromises, yes, I think you can. (Male, late 30s, describing the viability of renewable energy systems for use by others in the mainstream)

Another respondent offered a similar opinion:

I think it's viable, but I'm not sure it's cost-effective. I think it depends on the willingness of the individual to adapt their lifestyle to technology. If you have someone who is willing to do that and maybe has some capital, some money, then I think it is possible. I think the real problem is something that hasn't been done enough by the alternative industry community--that is, trying to address the needs of low income people. It has sort of just been a hobby of middle class people who can basically afford to do it, you know, and it seems to me it is important to link it to broader society. (Male, late 30s)

Respondents were also involved in using passive solar lighting (via skylights) and heating (stored within walls and liquid-filled barrels serving as thermal mass), strategically-located fireplaces and wood stoves, greenhouses, moveable insulation such as heavy indoor curtains and window shutters, solar-powered 12-volt fans, among other devices and techniques. One respondent commented,

We have a house that is designed to get a lot of sunshine in the winter but not in the summer, and during the cooler parts of spring and fall, and in the winter, the sun shines in, and we've designed our house in a way that there is enough

masonry concrete thermal mass to store a lot of the heat that comes in, so the house never goes much below 50 degrees, as long as we keep the windows and doors closed, and even if the wood stove isn't on. So, in that sense, it's a very comfortable house to live in. (Male respondent, mid 50s, living in a rural solar home)

Two obstacles or areas of difficulty, related to the development and use of alternative energy systems, were reported: associated costs and the so-called "learning curve" in becoming familiar with the technologies and, more generally, in becoming a "private utility." First, the costs associated with alternative energy inhibited the design and potential capabilities of those presently using such technologies, rendering the use of the technologies prohibitive, at least for the moment. As one respondent noted, "We definitely want to do solar down the road, it's just very expensive" (Female, late 30s). Also, other respondents spoke of the perceived time that is required to install and learn how to operate and maintain a renewable energy system. On this point, one respondent commented,

I've thought about it. Right now I'm too busy establishing the farm, trying to get that to the point that I can really handle it, but the house would be absolutely tops for solar power. I have a roof at a beautiful pitch, but someone has to work on the roof, and they're all scared stiff. (Male, late 40s)

These obstacles notwithstanding, most of the respondents involved with alternative energy systems designed, operated, and maintained single-source systems, with photovoltaic solar panels being the predominant choice. Others participated in

installation or had their systems completely installed by a hired contractor, though they assumed all related operation and maintenance duties (i.e.,, checking battery levels, cables, fuses, etc.). With this in mind, respondents also commented on their experiences in "becoming their own electrical utility," including the responsibilities of learning about and understanding how their systems worked and performing required maintenance tasks when necessary. While some respondents considered these obligations beneficial and enjoyable insofar as knowing the origin and source of their electricity, others considered such responsibilities as a somewhat undesirable characteristic of life "off the grid." As one respondent noted,

> One of the biggest setbacks of it [home power generation] is that you have to at least be conscious of it; whereas, if you are hooked up to the grid, you don't have to be conscious of it. You know it's always going to be there, unless there is some unforeseen event like a storm or whatever, and then you know it's going to be temporary. (Male respondent, mid 30s)

In addition, many respondents identified valuable sources of information and support which helped them to learn how to begin producing their own energy. Several persons indicated that they participated in TVA programs in the 1980's which emphasized energy efficiency and renewable energy options. Also, reading the appropriate literature, attendance at workshops, and seeing models first-hand were cited as helpful and informative. As many of the respondents were current or former customers and consumers of the TVA, a wide range of critical remarks were expressed regarding the policies and practices of the TVA's power production activities. Such

remarks, regarding TVA specifically or more general thoughts about centralized energy sources, often influenced the respondents' decisions to pursue alternative energy sources. For example, one respondent commented,

> Well, I don't think we want to live without electricity. We don't think electricity is just bad. But we want the source of the electricity to be something we feel good about. So, supporting TVA, if solar came from TVA, we would be all right with that. But if it is coming from coal, nuclear, or dams, I don't think we want any of those sources. (Female respondent, late 30s)

Transportation

Various types of alternative transportation were considered and/or used by many of the respondents, as well as forethought given to distance traveled and car-pooling arrangements. Moreover, respondents reported efforts at walking and riding bicycles to work and around town; reducing the frequency and length of trips requiring the use of cars; using new, fuel-efficient automobiles; maintaining older model cars for optimal performance; seeking and considering the use of cars which use alternative fuels, such as soy, vegetable oil, or alcohol mixtures; learning about the cost and reliability of newly designed electric vehicles; and using mass transportation and car-pooling.

Many of the respondents used public mass transportation, either on occasion or regularly, which included electric buses. Others expressed a desire to be able to use mass transit, though they reported that the relative inconvenience or unavailability (especially in the rural areas) prohibited its use. On this point, one respondent commented,

Where I live, the bus doesn't come out because I live about a half an hour out of the city, about 25 minutes, so it doesn't come out. I probably would ride it more if it came out to where I live, but the bus line doesn't run that far. (Male, late 30s)

Others endeavored to car-pool with the friends and colleagues, reducing the commute to work and/or eliminating some or all of the commute by working at home. One respondent spoke of car-pooling in lieu of ideally using an electric vehicle, whose costs and range rendered it prohibitive at the time.

We carpool when we go to meetings outside of the county with other people who are going. I've said to my family that I would like to be one of the first owners of an electric car. It makes sense since we have a photovoltaic battery charging system already set up. It would be great, and I'm looking forward to a point where the benefits will justify the cost. (Male respondent, late 40s)

However, outside of using alternatively powered vehicles, such as the electric vehicle prototypes developed at The Farm in the early 1980's, respondents indicated that their use of conventional automobiles remains the predominant mode of transport, along with using mass transportation when available. With regard to automobile usage, many respondents commented on their efforts at properly maintaining and extending the life of their vehicles. Such efforts were aimed at ensuring the most fuel-efficient operation of the vehicle, while reducing the need for repairs and replacement. As one respondent commented,

I do drive a 10-year-old car, and I plan to make it last another 10 years, so I'm not supporting Detroit at the rate that it would like to be supported. We've not

> built up the infrastructures that make it safe to really bicycle around a lot or for any long distance, and we don't have as much public transport at a dependable schedule -- this is a small town. (Male, mid 30s)

The use of bicycles for transportation was often considered, though not adopted by respondents, given a variety of obstacles, including road and automobile hazards, costs of bicycles (although less than the maintenance of vehicles), necessity for transporting other people and materials, and inconvenience during inclement weather.

While many respondents reported their awareness of the consequences of extensive automobile usage--including, for example, consumption of non-renewable fuels, the costly extraction and processing of these fuels, and emission issues--many indicated various obstacles which impeded or prevented their integrating alternative transportation means into their lifestyles. For example, one respondent reported,

> Modern life is set up that it is just almost impossible with a family not to have a vehicle. You just could not do certain things. We did do without the car during the Gulf war. [My husband] came home and said "I cannot get in an automobile as long as this war is going on because it is about gasoline, and every bit of gasoline we use is being imported." At that point in our lives, we could. And we did. But most people couldn't. (Female respondent, late 30s)

These obstacles and concerns notwithstanding, several respondents did endeavor to ride their bicycles to and from work and around town. One respondent commented on his view of the practicality and benefits which come from riding a bike, or even walking, in place of a car.

I get about. It seems bizarre to me to join a health club and get exercise and drive there and then drive to all your tasks. Why not do your tasks . . . in the way that requires you to do exercise and then not belong to a health club. So, my idea is just to try to do as many tasks that require me to use my own energy as possible. So, most of the time that I go to the store, I go there by walking or riding my bike. (Male, mid 30s, living in an urban area)

Health

Sustainable health care practices among the respondents were largely characterized by efforts at preventive health care and relying less on over-the-counter medications. Emphasis was placed on healthy diets and consuming nutritious, organically-grown foods; use of relaxation and stress-reduction techniques including meditation; reducing use of air conditioning, thus remaining acclimated to natural indoor and outdoor temperatures; use of alternative medicinals in place of or in complement to over-the-counter medications; and either outright avoidance or discretionary use of physicians practicing western medicine. One respondent commented on the benefits of such practice: "None of us have been sick, and my daughter has not gone to the doctor. She hasn't been sick and needing medicine for two years, and 100% perfect attendance in school" (Female, mid 40s). Correspondingly, another respondent described an emphasis on adequate nutrition and exercise:

I try to eat what I need, and get rest and exercise to keep from having to use medicines. If I am low on vitamin E, or my eyes are bothering me, I'll eat some

carrots or red or orange fruits and vegetables. I try to kind of make my food my medicine. (Female, late 30s)

Other respondents commented more specifically on their use of alternative health care methods in place of western medical practices. Growing and using herbs was a common alternative health care practice of many respondents, in addition to some practicing techniques of homeopathic medicine and/or principles of anthroposophy. Respondents used vitamins, Nettle leaf tea (used for sinus allergies), Nicotiniana attenuata (used ceremonially as well as for bee stings), Catnip, Echinacea, Goldenrod, Goldenseal and Garlic (raw and/or in pill form) for strengthening immune systems against the threat of colds or flu and lowering cholesterol, Astragalus for digestive disorders, and/or herbs and tinctures of Autumn Olive tree fruit, Poke berry and Poke root, Blackberry root, and/or Black Walnut extracts reportedly helpful in irradicating body parasites (i.e.,, worms, flukes) and the treatment of skin rashes. One respondent reported,

I am growing my own medicine. This family here is involved in homeopathic and herbal remedies, and that is our lifestyle. My wife is a cancer survivor, and she survived the cancer by going on a macrobiotic regimen and using herbs, and she is a living example of what herbs can do. (Male respondent, late 30s)

Moreover, respondents emphasized a concept of balanced health care involving both traditional folk and modern methods. One respondent, who reported to occasionally take aspirin for headaches, commented nostalgically on his use of folk medicines while growing up in rural Tennessee:

> I was told to put a knife under the bed to cut the pain in two, so that's part of folk medicine. And we were made to drink sheep shit tea, and that was supposed to break the measles out on you, so that they didn't go internally. . . . There is [also] a lot of healing in herbs and stuff. I used to make my own balm, mashing lard and balm tree buds to make a real healing salve. (Male respondent, late 50s)

This respondent's practice, like that of others, appeared to reflect both a sense of efficacy in the effectiveness of the folk methods as well as a critical and, for some, distrustful view of the predominant use of western medicines.

Other respondents commented on the discriminating use of modern, western-types of medicine, and when and why such practices would be accessed. Some respondents indicated that they used modern medicines, such as aspirin and prescription pain-relievers, anesthetics, and other medicines, to relieve persistent pain and in complement to medical and dental procedures. Doctors were sought for serious injuries and illnesses such as broken bones or prolonged fever.

For those with children, alternative health care practices often involved the use of contemporary western medicines, such as disposable bandages for young children described as prone to cuts and scrapes, and medicines for colds, fevers, or influenza. One respondent commented on the difficult dilemma of accessing health care practitioners who honor the respondent's specific choices in treatment, such as not using immunizations and antibiotics.

> Finding a doctor who would see [respondent's child] without all the immunizations was difficult. We made the choice for him not to have the four

> immunizations, and we lost our family doctor over that issue and couldn't find one for a while. So, it was just finding a doctor who was willing to work with us, which we now have, a wonderful doctor. He will dialogue with me as a human being. And sometimes he will convince me, and sometimes I just have to hold firm about a certain treatment. (Female, late 30s)

For some respondents, taking this type of active and informed consultative role in their family's health care appeared to be a distinguishing feature of their health care practices.

With respect to child birth practices, respondents reported using contemporary western methods as well as alternative methods, including the services of midwifes. One respondent who was a practicing midwife commented on her dissatisfaction with contemporary hospital birthing procedures and expressed her view of midwifery as being a part of sustainability:

> I only do home births, and it's really an alternative to the standard hospital practices. The hospital births are very technological, and it's a real challenge to avoid any of that, even if the birth is going well and there is no extra needs. In some hospitals, it's almost impossible to have a real natural child birth, and in the process the power is taken away from the birthing woman. We had a home birth with a midwife, and I learned to question the medical model, and I've carried that on, not just to birth but to other things. (Female respondent, late 30s)

Other practices included the use of alternative water sources, such as springs, wells, and rainwater catchment systems, where public water service is unavailable or the purity of the public supply is considered poor. Also, alternative purification methods

were used. One respondent indicated the use of an "ultraviolet light system to kill the bacteria instead of chlorine. We have zero bacteria in our water" (Male, late 30s).

A few respondents spoke of their reduced or discontinued use of popular toiletries, such as deodorants, washing detergents, and, in general, products which contain toxic chemicals. As one respondent commented, "I haven't used deodorant in 20 years. I wash my clothes with baking soda and in organic detergents, and I try to limit the use of toxic cleaners and such as much as possible" (Male, mid 30s).

PART 2: SUSTAINABLE BUSINESS

As mentioned previously, the study included organic crop and cattle farmers; human and animal health care professionals; small business owners and employees; primary, secondary, and college-level educators; college students; community organizers and activists; permaculturalists; home-makers; government employees; journalists; and artists (See Table 4.3 for frequencies).

Farmers

The farms varied greatly in size, from several acres to over 100, though all were described as small farm operations. The length of time that the farms had been in operation also varied, from a few years to over 20 years. Using organic methods and approaches which extend the growing seasons, the farmers reported being involved in the production of fruit and vegetable crops, livestock, trees and ornamental shrubbery, flowers, and herbs. Commenting on the success of the organic methods and the use of greenhouses, cold frames, and raised-bed garden techniques, one farmer reported

accomplishments in "extending the season beyond what some people think can be grown in Tennessee. I will grow produce for about 24 weeks this year" (Female, late 20s).

The organic methods used were described as not involving the use of chemical pesticides, fungicides, or herbicides, though the use of diatomaceous earth, for controlling cabbage worm infestations, was reported. Also, the farmers reported using cover crops or "green manures" (such as buckwheat, soy beans, and white clover), which help to fix nitrogen, as means by which to supplement the soil during and in between growing seasons. Also, farmers reported to be involved in aggressive composting practices, whereby organic waste products, including farm culls and spoilage, commercial vegetable food wastes, and human wastes from composting toilets, were collected, processed and eventually applied to the gardens and fields as an effective soil amendment. With this practice in mind, one farmer reported,

> We use cover cropping, and as much of our own barn bedding and poultry litter we can get. We have a hundred chickens, twelve sheep, two cows, and several pigs, and we use what they make plus leaves and hay. Also, our neighbor lets us clean out his dairy cattle barn. So we don't use any chemical fertilizers at all and just try to make the soil fertile by rotating our crops, using cover-crops and heavy mulching, and then getting the animal manure. (Female, late 40s)

Farm products included typical summer vegetable crops and seeds, oils, and soaps derived from these crops; and animal products including organic beef, free-ranging

chickens (those not confined to pens or boxes) and eggs, goat milk and cheese, lamb and pork products, and cattle and fowl raised in an effort to preserve threatened rare breeds.

These products were raised for families; CSA projects; businesses, such as restaurants; and food markets and cooperatives. With respect to community-supported agriculture, one farmer who provided food for a CSA indicated that the farm grew over 100 varieties of fruits, vegetables, herbs, and flowers, in addition to offering educational programs which introduced people of all ages to local organic farming, and explained the origin of commonly consumed food products. With this in mind, one farmer noted that their work was "not just about organic farming and nutrition and all that, but it [was] about making connections" (Female, mid 40s).

The farmers reported that small, organic farming was not without its risks and obstacles. Economic issues related to competition, pricing, and market shares, crop failures due to inclement weather and infestation; and the health and welfare of the farmer to undertake the work were reported to affect the viability of the operations. With regard to economic and financial difficulties of small farming, many of the farmers worked multiple jobs, on and off the farm, in order to diversify their sources of income. One farmer reported that, in addition to raising livestock, he grew shitake mushrooms and operated a custom portable sawmill which was described as "definitely more profitable than most aspects of farming" (Male, late 40s).

Small beef and dairy cattle operations were represented, involving 150 head of cattle, as well as sheep, horses, chickens, and other farm animals, including those of breeds deemed as threatened species. In contrast to contemporary so-called agribusiness

methods of raising livestock, several farmers involved in animal husbandry discussed their efforts in doing so organically, by raising hearty herds which could, in some instances, withstand the rocky, hill-side terrain, and by limiting the use of off-farm products such as grains and medicinals. Also, inclusive grazing methods involving various types of animals were used, reportedly similar to methods used in Europe. One farmer's use of such methods reflected a view that "when the livestock ran together, they all did better than when they were kept separate" (Female, late 30s).

One of the respondents described using a method of raising beef cattle in keeping with conventional methods used for hundreds of years and which were associated with homestead ways of husbandry. Such methods included the use of various animals as part of complementary grazing approaches which helped to control invasive plant species and parasites, such as worms and liver flukes. One farmer introduced chickens and ducks, which reportedly eat snails that serve as hosts for liver flukes, which are parasitic of sheep and cattle. Accordingly, in keeping with the functioning of ecosystems, one farmer noted that her cattle "usually have two or three chickens riding around on the top of them, busy eating little mites and flies and stuff. They work together" (Female, late 30s). Such complementary use of animals was reported to limit or prevent the need for pesticides, and medicinal salves to control infestations and related animal health concerns.

Also, beef cattle farmers described their approach to raising their herds as a departure from contemporary agri-business methods. This contemporary method was reported to involve farmers taking their animals for auction, after which the animals

entered into an agribusiness system, which attempts to fatten them with grains, through strategic placements in pastures and movement-restricting stockyards enroute to the slaughterhouse. Unfortunately, according to one farmer, this system offers farmers opportunities to earn only a small part of the potential revenues. In contrast, one respondent farmer reported taking a "value-added" approach, so that

> instead of us taking our livestock to the auction block where our neighbors will take their calves every year and sell them there, we are controlling the entire process up to slaughter. So, we're raising the mothers with the calves, and then we take the calves away and raise them to the age where they're ready to be slaughtered. So, we're getting a higher retail price for our beef. (Female, late 30s)

Accordingly, this approach was reported to offer an increased retail price-per-pound from 50 cents to more than three dollars per pound.

Another farmer described a focus on preserving rare and endangered breeds of livestock: "We have one old breed of bovine, the red pole. And we have two rare breeds of sheep, and one is probably the rarest breed in North America because it had gone extinct and was only recently re-introduced" (Male farmer, mid 40s). Related to this work, a farmer noted that the steep learning curve, with regard to understanding the subtle needs and characteristics of the animals, made these operations difficult. Also, natural predators, including fox and raccoon, were reported as management issues for the poultry operations.

Government Employees

Three respondents were involved in local government recycling programs, involving both commercial and educational projects. Activities included developing waste management approaches which would honor the respective land-fill reduction mandates for their county; acting as a public liaison between the county and public on issues of recycling and solid waste and developing markets for the materials collected; and developing educational programs and recycling guides for schools, community groups, churches, and county commissioners.

Community Organizers

Respondents involved in community organizing and development activities represented issues and causes related to the health and welfare of the regional rivers and forests; the policies and practices of TVA in an effort to make them, or whoever is delivering energy services to this region, more economically and environmentally accountable and responsible to the citizens and the natural environment; social and environmental justice issues and the integration of sustainable themes into the Catholic church; sustainable economic development; and inner-city community recycling programs.

One respondent, a staff member of a community organization affiliated with the Catholic church, discussed his efforts at integrating concepts of sustainable living into the services and functions of his respective Diocese:

> Churches very often are just ornamental. It is just grass and lawn, on which they are using chemicals. Well, we must also be thinking about how we can use those

grounds not just for the birds, but for the human community for there is so much hunger in this area. There are so many food pantries. Here you can grow on your land at least some food that you can give to the food pantries, or feed yourself, for workshops, or those sort of things. (Male, mid 50s)

Another organization tries to make science and technology responsive to the needs of low-income people in central Appalachia through four programs. First, a sustainable forestry program offers demonstration sites of appropriate harvesting practices; nature trails within the Daniel Boone National Forest, involving self-guided tours that people can take; and as a member of the Appalachian Forest Health Project, a protective forest watch program which is trying to save the Daniel Boone National Forest from unsustainable forestry. In addition, in cooperation with the University of Kentucky, studies of the forest understory are conducted, looking, for example, at earthworms and obtaining counts on those that are in the soils within all of the different sites across five states (Kentucky, North Carolina, Tennessee, Virginia, and West Virginia).

Second, the organization produces a wide range of publications, including calendars and note cards, and sells publications and technical papers. The technical papers cover themes such as rammed-earth construction; Ginseng and how it could be grown in the area; and reports on types of efficient wood stoves, solar ovens, and wood heaters. Third, through an Appropriate Technology Center including an acre and a half of cleared land for intensive certified organic gardening, the organization offers

functioning demonstrations of a solar electric house, three solar greenhouses, and six different varieties of composting toilets.

Finally, a resource assessment service works with retreat houses, camps, parishes, diocese, churches, schools, colleges, and high schools to assess the current range of environmental resources available to them and to suggest how they can best be used in sustainable ways. As one staff person mentioned, this assessment service looks at the range of possibilities "from producing their own food to reducing energy, to looking at their water and ways of obtaining it, to the handling of their wastes, their community relations, even transportation" (Male, late 50s). More specifically, the resource assessment service examines 10 areas, including energy, waste, food preparation, physical facility and interior environment, landscaping, land use, wood, forested areas, water, and community relations.

Another respondent described her organization's work in the interest of the health and welfare of regional rivers and watersheds. Traveling extensively along the water ways of the Southeast, they reportedly attempt to "give the river a voice" (Female, late 40s) and thus improve public awareness of related issues and causes through monitoring and patrolling the region via their 22-foot ketch.

> We keep records of what we see. We keep a log of our movement and what we're experiencing. We also take a great deal of time when we are anchored, to get off the boat and be in a dingy or a kayak, so that we can get a closer feel for the riparian corridor and experience of the life of the water. You can only do that when you're being still and being available to the river. (Female, mid 40s)

Two other community organizing and development groups focused on inner-city recycling. One group reported using reverse vending machines designed to accept recyclable plastic bottles which, in return, reward two-cents per bottle deposited. With this machine, one respondent indicated, "We're encouraging our boys to clean up around the neighborhood and sort of organize so that people will be bringing their recyclables here" (Male, early 30s).

Several rural community organizing and development groups are integrating programs involving youth development and recreation, economic and health care development, and most recently the initiation of small business support and sustainable agriculture programs. These themes are directed at southwest Virginia and the northeast Tennessee mountain areas which, according to one organizer, tend to be the poorer areas of those two states and the origin of many economic and environmental resources, as well as problems faced.

These efforts come as a result of myriad environmental problems reportedly affecting many rural areas, including the social and environmental effects of coal mining, poor agricultural productivity, and 22% unemployment rates in some of the counties. As one respondent commented, "If you had to reduce the origin and nature of the problems to a few words, it would only be a mild hyperbole to say communities have faced a jobs or the environment challenge and have lost on both counts" (Male, mid 40s). Facing these problems, several rural community development groups were reportedly involved in recreating healthier, more resilient and resourceful, and less vulnerable economies in the region. Doing so reportedly involved a focus of developing jobs which are in keeping

with a responsible, sustainable, environmental ethic. According to one organizer, "We have a vision for sustainable development which focuses on using the resources that are here, such as wood, including sustainable wood product development and sustainable forest use, as well as sustainable agriculture and nature tourism projects" (Male, mid 40s).

Another group, located in Southeast Tennessee, focused on watershed and forest protection, including efforts at stopping "the chip mill invasion in the southeast" (Female, early 20s), and a sustainable development and renewable energy project involving plans to locate funding and to transform a typical neighborhood home into a working, living example of how someone can live sustainably in a city. Such a project was described to portray the use of various green technologies, such as solar power, recycling bins, and worm composting or vermiculture methods for handling organic wastes.

Journalism and media production

Six respondents were involved in various media production activities. Three respondents were involved in the production of two environmental newspapers, the Tennessee Green newspaper and the Wild Mountain Times, which reportedly focused on environmental issues throughout the bioregion. The remaining three respondents were involved in video production work.

More specifically, two of the respondents reported that the Tennessee Green newspaper had a quarterly circulation of 12,000 copies distributed across some 200 sites throughout East Tennessee. The newspaper was said to fill an apparent environmental

information void left unaddressed by the regional newspaper companies. Similarly, the Wild Mountain Times publication was reported to have a quarterly circulation of approximately 15,000 and distributed throughout the Southern Appalachian bioregion. Focusing primarily on forest issues, along with aspects of sustainable living and development, the publication focused on issues which were considered to not be adequately covered in the mainstream media.

The video production companies reportedly filled a similar communications void. The work of one producer focused on the development and use of solar energy and renewable resources since, as she claimed, "we don't see any of that information getting out into the mainstream" (Female, mid 30s). Developing full-length feature programs highlighting current technologies and applications for renewable energy systems nation-wide, the video productions were reportedly aimed at cable television audiences and school classes. The remaining two video media producers focused their work on recording and compiling organizing and activist events in an effort to raise public awareness about various socioenvironmental issues in lieu of the mainstream television news media. Both production companies described sophisticated abilities in filming and editing and used state-of-the-art hardware in their work.

Small business entrepreneurs

Many of the retail merchants involved the production and/or sales of sustainable goods and services indicated that their doing so provided an opportunity for their customers to purchase that which they needed to be healthy and to move towards living

more sustainably. One respondent indicated that, in doing so, they "bring nature to the average citizen who maybe normally wouldn't experience that" (Female, early 30s).

Merchandise made available by these small businesses, which were described as items not easily found in other more mainstream stores, included organic, small farm fruits and vegetables; various soy products such as milk and tofu; organic coffees and teas; organic cotton and hemp clothing; alternative health care products such as organic herbal tinctures, blue-green algae products, all-natural skin lotions, shampoos, and tooth pastes which are not tested on animals; a variety of books and magazines offering self-help information on health, sustainable energy, organic agriculture; petroleum-free, citrus-based household cleaning agents; and solar panels and accessories. Moreover, the product lines and the criteria used in the selection of sale items by one merchant "emphasized local products and minimized packaging to reduce waste for our customers as well as our store" (Female, late 30s).

Another respondent described his development of a small business which processed organic waste streams, such as agricultural crop culls and commercial food wastes, into ethyl alcohol or ethanol at 190 proof. The resulting product reportedly could be used as a fuel grade alcohol or could be further refined into a pharmaceutical grade alcohol for the production of medicines and tinctures. This production process was described as a "closed-loop" system, which integrated the use of hog wastes and an on-site digester for the production of methane gas products; blue-green algae used to absorb excess carbon-dioxide created in the distillation process and feed on the slurry

from the methane digester; and tilapia fish, which feed on the algae and can be marketed as an organic crop.

Two restaurants were also represented by the respondents, which integrated composting practices in the handling of their vegetable food wastes and the use of locally grown organic herbs and produce. Offering largely vegetarian menus, one of the restaurants indicated that it was their intent to "help support local organic growers and try to have high-quality natural ingredients" (Male, early 40s).

Both of the restaurants' composting practices were part of a larger effort to recycle as much of the large volumes of waste product produced by these businesses as possible, and in so doing, to serve as a model for the larger hospitality industry in general. According to one respondent,

> Restaurants have an awful lot of garbage and waste, and through seeing how much garbage and waste we have, we wanted to do as much as we could to recycle all of our clear, brown, and green glass, and our plastics, cardboard--everything that we can that our local haulers will take. (Female, mid 30s)

Along with composting and recycling, both restaurants were considering the use of alternative energy systems for lighting, solar water heating devices to supplement their hot water needs, and, at least for one of the restaurants, participation in a local "green business" initiative which reportedly seeks to reward businesses which endeavor to operate in an environmentally responsible manner.

Students, teachers, scientists and lawyers

Efforts at integrating sustainable themes into education, research, and law were represented by a small group of respondents. First, six undergraduate and graduate students indicated their interest in and study of sustainable technologies such as solar energy and eco-friendly housing design; sustainable community development; and social and environmental justice themes. Specifically, these students were involved in research studies and/or coursework within the disciplines of philosophy, planning, resource management, sociology, and urban studies.

Also, several university faculty, who represented the disciplines of philosophy, sociology, ecology, environmental science, and an environmental research and development center, reportedly integrated themes of sustainability into their teaching, research, professional writing, and community work. Also, these faculty members had published papers and books on subjects related to sustainable living, urban ecology, and sustainable community development, and they were reportedly involved in projects and organizing efforts which focused on local environmental issues and the development of sustainable living prototypes featuring alternative energy and organic agriculture projects. One respondent described his research work as focusing on pollution prevention through the design of products and processes by way of promoting products that are cleaner throughout their life cycles, as well as manufacturing processes that produce less pollution.

In general, the students and faculty expressed dissatisfaction and/or discontent with respect to the effort which their respective schools were making toward integrating

sustainable practices within their campuses. Despite developing support for and a body of literature which attests to the viability and potential benefits of integrating sustainable practices, their respective universities and campuses reportedly did not reflect such progress. With this in mind, one faculty member commented,

> The university is involved in sustainability as much as anybody else is. Everything that goes on around here, from the lights to the air conditioning, to the inadequate architecture to the lack of adequate recycling on campus, is all deeply embedded in this destructive system that we have, and yet there are smart people here who realize that there are problems. The university is valuable because it gives me a certain amount of authority. I am a professor. So, when I speak people think, "Well, he must know what he is talking about." So, that helps to a certain extent. It also helps to have a lot of people around here with a deep knowledge of the destructive effects of what we are doing. Unfortunately, the university is also very specialized. And so, people who have the knowledge have not talked to one another in the way that they should, or have not been brought together in the way that they should, which could make a coherent picture of all this. (Male, late 40s)

Away from the university campus, other teaching professionals represented a variety of educational programs offering courses and workshops in permaculture. One respondent, a permaculture organizer and village designer, indicated that he undertook the teaching of permaculture courses to "basically begin making permaculture a more

widely known and widely-practiced concept in the region, with the first few courses held at Narrow Ridge" (Male, late 30s).

Evidence of the growth of permaculture in the bioregion was reported by another permaculturalist, who indicated that over 200 people had attended and participated in permaculture courses hosted at The Farm over the past year and a half. These people were reported to be a very diverse section of students, including people who are teaching landscape design; those representing electrical and construction fields in various educational settings; people who are commercial or cooperative farmers, homesteaders and/or are just living out in the country by themselves; people who are involved in satellite mapping and other kinds of computer assisted modeling; people involved in agriculture policy making, inspection, and certification of products; and people who are involved in the healing arts, dance, and music.

In addition to teaching permaculture, others integrated permaculture concepts into other vocations. One respondent described his development of a small business involving the sale of organic seeds, herbs, and herbal tinctures. In describing his "paradise garden" business, the respondent noted,

> To put it in perspective, it might make $1,000 a year. It's just like a little of this and a little of that. I haven't quite got it together to have a catalog yet, though I published and started a seed exchange where a lot of the people can list their seeds. So, that brings in a little money. (Male, late 40s)

Another permaculturalist, commenting on his eclectic interests and activities, reported that he makes his living practicing "poli-culture": "I do a little writing, I do a little

consulting, I teach permaculture a little bit, I'm a bookseller and a back-packer. I do half-a-dozen things to get by and pretty much work for right livelihood and doing the things I enjoy doing" (Male, late 30s).

Several lawyers were represented, all of whom had integrated aspects of environmental law and justice into their work. One respondent spoke of his environmental law practice, begun in the early 1980's, as largely representing small citizens groups and environmental organizations in pursuit of polluters and guidelines violators, while having a few major projects focusing on toxic and hazardous waste disposal practices in Oak Ridge, Tennessee. With this project in mind, the respondent explained that

> the Department of Energy (DOE) was claiming that they were exempt from federal and state hazardous waste laws. The State of Tennessee did not take exception to that, so we filed a citizen's suit against DOE in federal court and won, forcing them to comply with the federal and state hazardous waste laws. And that's now carried forth all over the country. Probably the most influence I've ever had in my law practice and ever will have. (Male, early 40s)

CHAPTER 6

THE PATH OF SUSTAINABLE LIVING

The following section describes the critical events and experiences which appear to have influenced and/or activated the respondents' involvement in sustainable living practices. The organization of this section will provide an examination of Part 1--the present and future aims and purposes of the sustainable living practices, and the early influences and triggering events which appear to have inspired their sustainable living practices; Part 2--the types of supports and obstacles which affected the respondents' ability to sustain their sustainable living practices; Part 3--the respondents' views of the social mainstream; and Part 4--the respondents' efforts at maintaining boundaries between the social mainstream and their non-normal world.

It is important to note that this examination cautiously aims to relate significant events and experiences to the respondents' practices of sustainable living. That is, the examination is governed by an appreciation for the inherent difficulty of truly knowing why people do what they do. Indeed, not only is the researcher at a disadvantage in not being able to accurately account for the myriad possible motivating factors for the practice of sustainable living, but for that matter, the respondents themselves may not know exactly why they do what they do.

PART 1: WHY PRACTICE SUSTAINABLE LIVING?

a. Present and Future Aims and Purposes for Practicing Sustainable Living

Environmental concerns

For many of the respondents, their motivation for practicing sustainable living seemed to derive from a general feeling of concern for the welfare of the planet; how current or future environmental issues can exacerbate social problems; and, in general, the environmental "mess" which future generations will be bequeathed from present-day society. In viewing sustainable living as a social movement, such environmental concerns, on the part of those practicing sustainable living, appear to parallel what Stern and colleagues (1993) have attributed as a motivating factor to the development of the American environmental movement. Also, respondents expressed concern over the limited knowledge which future generations might have about their world by virtue of the limited sources and substance of information developed and heavily influenced by the priorities of corporate-owned mass media, the internet and computers, and/or the narrow content of school curriculum.

With environmental issues in mind, many of the respondents expressed a sense of urgency in living more sustainably, given the range and depth of environmental issues at local, bioregional, national, and international levels. For example, one respondent commented that

> What we are seeing from an historical perspective is a cumulative and extremely rapid degradation of the natural world, to the point where whole ecosystems are collapsing. For example, the Spruce-wood ecosystem is collapsing in the Great

> Smoky Mountains, and the aquatic ecosystem in the Tennessee River is in jeopardy. And so, those types of profound changes are going to make the world a much worse place to live in 20 or 30 years, and that is a matter of urgency. I see it as the greatest crisis that humanity has ever faced. (Male, late 40s)

In addition, several respondents commented specifically that concerns for human survival were secondary to those of protecting and healing intact ecosystems, given current and projected losses of species and habitats.

Also, in extension to their sense of urgency, some of the respondents expressed frustration and/or impatience about the burdens involved in challenging environmental issues and the level of difficulty involved in addressing and helping to change people's attitudes and behaviors. Thus, some respondents chose to make a priority of their individual efforts, in addition to or instead of attempting to tell or teach others about what they are doing and why. Such reasoning appeared to reflect a belief that their limited energies were more efficiently used in this capacity, while the efficacy of their efforts were more dependent on their own actions and commitments than those of others. For example, as one organic farmer commented,

> I see an urgency [sighs], but I think again, being an "environmentalist," I think people get frustrated because there's so much to do, and you get this feeling we've got to do something with urgency, and we get pulled in a million different directions to do things politically, or financially, or educationally. I think what we're doing now is more effective than me being a politician or going to board meetings. I mean those things are important, and somebody has got to do them,

but I think you have to pass it on to someone else. You've got to live it first. (Female respondent, mid 40s)

In general, respondents expressed strong feelings about the importance of the quality of the environment and frustrations with their witness and knowledge of environmental abuse and degradation. Moreover, respondents linked the quality of the environment with the welfare of society and asserted that the path towards the resolution of current social problems begins with and/or involves the healing of the environment. Interestingly, the respondents' expressions of environmental concern appear to correspond with the environmental concern literature insofar as the respondents were well-educated and appeared to be relatively liberal in political ideology. However, the respondents in the present study represented a wide range of ages, with some respondents falling within an age range of fifty to seventy years old, which contrasts with the literature in which younger persons were found to be more likely to express environmental concerns.

In addition, many of the respondents expressed concerns for both national and international environmental issues, as well as for local or bioregional issues (i.e., national rates of population growth; food and fuel consumption and/or air and water pollution; and bioregional issues related to rural-to-urban land conversion, forest clear-cutting, and/or the declining quality of local streams and rivers). This two-fold realm of concern appears to contrast somewhat with deHaven-Smith's (1988) assertion that national and worldwide problems are of concern mainly to young, college-educated liberals and radicals, and that environmental concerns that are relatively local and immediate are of

concern to other groups. In short, it appears that the respondents in the present study held concerns at various levels simultaneously.

Aims of self-sufficient living

For many respondents, attempts to live more sustainably were aimed at establishing and maintaining a sense of security, with regard to their ability to acquire the resources they need to survive. Some predicted calamities and resulting social disarray, where, for example, current centralized agribusiness depletes the sustenance of topsoils and suppresses biodiversity with the over-use of chemical fertilizers, pesticides, and methods of raising monoculture crops. Others expressed reservations about predicting the future, but indicated that they monitor news and research reports and take steps toward becoming more "self-sufficient."

More specifically, for many of the respondents, the practice of sustainable living involved a desire to live more independently of "the system"--a commonly stated metaphor representing the contemporary mainstream social, political, and economic infrastructure. On this point, one respondent noted his intentions to remain independent and self-sufficient as best he could:

> I'll never buy into the system, at least not in the respect of my living-quarters. I mean sure, I have to buy into the system of having a car, since I don't really have a choice if I want to get somewhere. But, you know, I just can't really see living any other way. (Male, late 20s)

Thus, such concerns appear to have triggered interests in developing and modeling ways of living more self-sufficiently; however, the concept of self-sufficiency appeared to be a

malleable one given that self-sufficient living, with respect to the laws of nature, is an impossibility--ecological interdependence is a sustainable requirement.

With this point noted, the concept of self-sufficient living appeared to be an important goal for many respondents, more as an examplification of contempt for the unsustainable system than a desire to acquire and manage all of one's resources for living. What appeared to be the favored alternative, albeit described as self-sufficiency, was a system which could afford a healthy, sustainable lifestyle characterized by interdependent and just connections with others, through which quality resources could be acquired. Also, the respondents' views of self-sufficient living did not appear to favor a return to pre-industrial social living, recognizing that specialization and the social distribution of tasks afford society benefits, though many respondents expressed beliefs that a mix of modern and traditional living would be advantageous.

As one respondent commented, approaching sustainable living as a means by which to be self-sufficient is viewed as empowering:

> It's definitely empowering to know that you don't have to rely on the big machine, the government, or big corporations to survive. And we don't. If the whole economic system collapsed today, I could say that I would be able to get along just fine with the seeds we'll be able to collect from our garden. That is, the main thing is food; if you have food and shelter, then you're fine. (Male, late 20s)

Correspondingly, another respondent expressed a view which emphasized the preparedness of himself and his family in the face of a predicted collapse of systems which currently support society:

> It's more a prophecy kind of thing right now. We're doing this because we think certain things are going to come about, and we want to be prepared beforehand. Like we were talking about developing the garden soil; you can't just go out there in the first year and have an organic garden because it takes a long time to develop the soil and learn the techniques. The time to learn is before you're up against the wall, and so, that's part of what we're doing. I feel very seriously that those kind of changes are going to come about, that we're moving in that direction, and I'd rather have some idea of what I'm doing and know what's going on before I get caught being dependent on a whole bunch of systems that are failing. (Male, late 30s)

At this point, it is useful to note that the translation of concerns and interests into the practice of sustainable living, including aspirations for self-sufficient living, appears to reflect aspects of Flacks's (1988) differentiation between activities of everyday life and those involved in the making of history; whereas, the practice of sustainable living can be considered history-making activity. Correspondingly, the evolution of the respondents' practices seems to reflect the citizen-activist transformation process as discussed by Aronson (1993).

Furthermore, many of the respondents expressed concerns related to the origin and quality of the resources which they consumed, such as their food, delivered primarily via tractor-trailor from far-away places, and their sources of energy also originating from distant locations. Thus, as one respondent noted:

> The food on our table comes from over 1,400 miles away every day. We don't get anything locally. And we are losing fast the old generation who still know anything about farming. There aren't but two or three around in our area, and the children and the grandchildren don't know anything about it, much less folks in the city. We aren't going to feed the world, but we are really hoping to change that by setting up a model. (Female, mid 40s)

On this point, several respondents expressed concerns over an observed "disconnection" between people and their food, where children and adults associate the origins of their foods with supermarkets instead of farms. And, if farms are associated, concern was expressed that the image of farming would largely reflect contemporary unsustainable agribusiness models including large-scale monoculture and cattle production in contrast to the small, decentralized farm which produces a diversity of crops and models ecosystem sensitivities. In short, some respondents were concerned about the perceived disconnections existing between people and their food sources in that people are made vulnerable to manipulation and dependency as a result. As one respondent commented,

> There is a gardening gap. When you don't see how it's grown, or when kids see that things don't come from the ground, but rather from Kroger's supermarket or a factory, once it gets to that point, then the people in charge of the food supply can do anything they want to the food supply, and it is out of your hands because you don't know what they are doing. (Male, early 50s)

With this in mind, such concern may reflect actual or perceived differences in the social construction of reality between the non-normal world view of the respondents and that of the mainstream.

Pursuits of right livelihood

For some respondents, their practices were based on moral and practical notions of what were considered to be ways of living responsibly, in harmony or in balance with nature, and/or non-violently, with some respondents referring to this notion as "right livelihood." On this point, one respondent commented that practicing sustainable living

> feels like it's the right thing to do. It just makes sense to me. But I didn't have my first camping experience until I was in my early twenties, and I'm 35 now, so I haven't been doing this all my life. But I lean this way. I like knowing where my water comes from. I like knowing where my energy comes from. I just don't take it for granted, though I think a lot of us do. (Female, mid 30s)

Others noted that their efforts reflected a value of establishing personal balance within their lifestyle in advance of or in compliment to efforts to facilitate change at a social level. For example, one respondent commented that a person's home is an important point of focus: "One of the things that we environmentalists are guilty of is trying to care for the earth on a regional or bioregional scale, while our own personal life is fighting it and our own home life is out of balance" (Male, late 30s). Correspondingly, another respondent commented that

> Thoreau said he came to the woods to live deliberately; I came to the woods to live directly. I don't want to get a job to make money to buy heating oil. I want

> to cut my own firewood. I don't want to get a job to make money to go to the grocery store or anything else. I want to try to do everything, reasonably, that I can do for myself. (Male, late 30s)

Other respondents offered visions which extended beyond their personal realm and included a host of advocacy and activist behaviors:

> I want to create a new world . . . culture [and] society that lives in balance with nature and tries not to deplete it the way our current culture is doing. I feel the best way to do that for me right now is to try to live in a way that reflects my values of living in balance with nature. But also, to be an activist and advocate, promote and teach people about change. I like to go to conferences and present workshops. I like to set up tables and try to distribute information on recycled or alternative paper or salvage paper, or whatever possible. And I also resist the destruction of the biosphere by doing direct actions and being confrontational in an aggressive but non-violent way. (Male, late 20s)

Here again, an example appears to be made of how individual interests and concerns have translated into what Flacks (1988) refers to as history-making activity and is in keeping with Aronson's citizen-activist transformation process. Also, for many respondents, their respective practices seemed to reflect a belief in and commitment to developing a measure of consistency and continuity, across their personal and social spheres, with respect to modeling sustainable living practices. Such beliefs and commitments seem to resemble features of Milbrath's (1989) conception of an NEP in contrast to the DSP (See Table 2.1--Items 1.C, 4.C, and 6.C).

Joyful living while healing the Earth

Many of the respondents expressed reasons for trying to live more sustainably, which involved satisfaction in the fun and enjoyment of their practices and/or their abilities to contribute to the healing of the Earth in the wake of the environmentally destructive activities and habits of contemporary society. One organic gardener in her late thirties commented that, in addition to her helping to heal the Earth, her effort to grow her own food is a "way of getting me outside, because most of my work is inside, and the more I did it the more I got into it because it is joyful" (Female, late 30s).

Similarly, another respondent involved in producing her own food noted that "the bottom line is that it is fun--quality of life. It is not just doing it because it is the ethically and morally right thing to do" (Female, mid 40s). Thus, for some of the respondents, reasons for their practices seemed to derive more from experiencing a full, enjoyable life than out of fears of system collapse and social unrest. With this in mind, one respondent noted that she and her partner do what they do because, "we're into full living, not because something might happen, or that we're paranoid, or fearful. I think we're very optimistic, and we live a very optimistic life" (Female, mid 40s).

Pursuits of healthy living

Also, for many of the respondents, the purpose of practicing sustainable living involved the pursuit of creating wholistic health, including physical, psychological, social and spiritual elements. Moreover, respondents aimed to create a more healthy lifestyle by growing and/or obtaining organic produce, reconnecting with nature, associating with those who share common interest in aspects of sustainable living, and/or finding spiritual

satisfaction, which, for some, occurred outside of the mainstream church. With this in mind, one respondent commented that her motivation came from "wanting to be healthy, in my spiritual life, in my social life, and physically. So, everything I do is sustained around being more healthy and helping other people be more healthy if they choose to" (Female, mid 30s).

Modeling, telling, and teaching

Many respondents expressed personal motivations for practicing sustainable living in ways which allowed them to model, tell, and teach others about how to live with less, in accord with nature. In general, these attempts were aimed at promoting sustainable life skill competencies--such as recycling, composting, and/or using alternative energy sources--and appeared to reflect what one respondent identified as efforts at creating "a life where what we do in our work meets what we do in our life" (Male, late 30s). With this in mind, one respondent described the purpose of his sustainable living practices, which included conservation of electricity and backyard composting, as being, in part, a need to inform others about these ways of living. The respondent described

> consuming as little as possible, by using as little energy as possible, by living green and with animals to the extent that I can here in the middle of the city, those things are very important to me. I view living in harmony with nature as a quest, and as an expression of some need of mine to tell people. (Male, late 30s)

Also, another respondent indicated a similar desire to assist others by showing and telling about personal sustainable living practices:

My dad had an expression, "You can only keep what you give away, and whatever you give away comes back." I really believe that by giving away information, through handouts or a talk or an interview, and by demonstrating other ways to live that are less consumptive, that I'm planting seeds of ideas in many minds. And hopefully I'll continue to fertilize those and help them grow. (Male, late 30s)

Providing sustainable living models for communities

For many of the respondents, the issues and concerns facing their respective communities influenced their sustainable living practices. Some of the issues included local or bioregional effects of forest clear-cut activity, the energy production policies of TVA, the declining health of streams and rivers, deleterious waste management practices, or the long-standing depressed economies in rural or urban areas. One respondent involved in organic community-supported agriculture expressed with frustration the threat to his family's farm land, and that of others, by encroaching businesses attracted to vacant lands made available as a consequence of a poor small-farm economy and the subsequent desperation of small farmers who must choose between their families' survival and their land holdings. In an effort to convey the familial context of this dilemma, one respondent commented, "The farm has been in my family for four generations. The farm has sustained our family, and for others, there's a relationship between land and family which is deeply ingrained in the folks in this area" (Male, mid 30s).

In view of these problems, many of the respondents were involved in community-based efforts which aimed to provide sustainable lifestyle alternatives for themselves and their communities. For example, one respondent commented on the motivations behind the development of their community:

> What we're interested in is simple technologies and simple building systems that don't require high levels of skill. Also, community-based economics because we don't want to function as a commuter community where people have to leave the land to earn a living. And we want to make an attempt to at least have some of our lifestyles be built around biological systems, and to make conscious our interdependence. One of the things that I think that has happened in the larger societies is that there has been a strong push for a long time to be independent and to not be dependent upon either other people or other things for our existence. And, in effect, what that has ended up doing is isolating us. A truer state, and a more ecological perspective on the human condition, is that we are interdependent with all life forms on this planet. And the sooner we can bring that to the people's consciousness, maybe the more quickly human beings will become a little more humble and begin to shift their lifestyles a bit. (Male, mid 40s)

Furthermore, many of the respondents endeavored to offer their communities educational opportunities from which to learn about sustainable living and working alternatives. For example, an organic biodynamic farmer indicated that his work at developing a community-supported agriculture model derived from dissatisfaction with

current subsidized agriculture and concerns over the resulting social and environmental effects of such practices. Thus, his personal energy was devoted to developing models through which people could learn how to accept more responsibility for the production of their food.

> Our goal is to create an environment where kids can come and have a one-week, two-week, three-week experience of what it is to live on a farm, and where your food supply is right there where you can see it. Through the community-supported agriculture program, we are really creating community-supported education through agriculture. In finding people in the city who are willing to be a part of the farm, or who want to own a share in the farm, what they are also doing is buying a share in educating children as to what our relationship really is to nature. We have to reconnect humans to nature. We have to plug people back into the planet so that they realize our responsibility to heal this planet. Because we have made a mess out of it. (Male, early 40s)

Setting such an example also appeared to be a motivating factor for one respondent who, in developing a small restaurant business, identified how integrating recycling and composting practices as a means by which to manage and redirect the volume of wastes away from the landfill was viewed as serving the interests of the community:

> We only seat 75 people here, but we make 3,500 to 4,000 pounds of waste per week. I guess that's the point I'm trying to prove to people; even though we're a

small business, recycling it makes a difference. It keeps it from going into the landfill. (Female, late 30s)

b. Early Influences and Triggering Events

Participation in the environmental movement and awareness of environmental issues

Many respondents indicated that their involvement in sustainable living activities was born out of their early involvement in or awareness of the first Earth Day in 1970. As one respondent noted, "I don't know why, but I think we have been driven by a mission to protect the environment since we were about nine years old, and since the first Earth Day. And it's what brought us together from different parts of the country, and it's what we live our life for" (Female, mid 30s).

Other respondents spoke of the influence which the evolving environmental movement, beginning with Earth Day, had on their professional development. One respondent commented that his professional roots began on or around this time:

> I started undergraduate school in 1970, and that was really the dawning of the environmental movement with the first Earth Day. Environmentalism really became very popular in 1970 and 1971, and that's what convinced me to direct my chemical engineering career towards pollution control and pollution prevention. Then, I was probably among the last wave of my generation to go to law school and try to save the world, which was in vogue in the mid to late 1970s. You don't see that so much now. I teach in the law school some, and environmental law is popular, but the students in general who go into

environmental law are more interested in it because it's a field they can make money in, working for corporations. (Male, early 40s)

In addition, specific environmental issues appeared to compel many of the respondents to begin doing what they do. Some of the respondents spoke of memories of wildlands converted to parking lots and shopping centers; forest clear-cuts; the burning of the Cuyahoga River in Cleveland, Ohio; or more recent political frustrations around perceived conservative anti-environmental efforts as being significant influences on their lives and to their sustainable pathways. More specifically, for example, one respondent commented on the deterioration of the water quality of the Tennessee River and how the disrespectful relationship existing between people and the river motivated his actions:

> With the dams and levees and canals, a sense of confidence has emerged that nature has been locked in a cage, and that everything is under control. And by trapping it and not seeing it in its different moods and its different seasons, we tend to forget that it is even a river and that it is a living thing. And so, we poison it and use it as a handy place to dump a lot of shit. This is our drinking water source! We are watching a culture that is acting insanely, and we are standing somewhere on the sidelines blowing the whistle and saying, "Whoa, wait a minute, excuse me!" (Male, late 40s)

Parental role models and family experiences

Many of the respondents commented on the example and influence of their parents on their current sustainable living practices. For some of the respondents, their

parents portrayed the value and importance of being politically active and compassionate towards the poor, as in the case of one respondent who spent part of his life in the Philippines:

> My parents were very much involved in the Filipino revolution in the early part of this century. They were jailed for their beliefs, my father many times. So, I grew up in a family that was interested in serious issues. My father was always critiquing the homily as were all of us, and there was a great feeling towards the poorest people. My father would say, "There is a poor person being buried today, go to the funeral," even though I didn't know the person. (Male, late 50s)

Similarly, another respondent commented on her memory of her mother's compassion for others and, subsequently, how connections made between the quality of human life and the quality of the natural environment influenced her practice of sustainable living:

> I have a real compassion for humanity and for the heart of the human soul. I think I get a lot of that from my mother. She was the kind of woman that loved raising and caring for children, building their self esteem and nurturing their soul, not just doing what seemed to be the thing to do as a parent. I think I just grew up with a real tender heart. So for me, that is where my "walking softly" comes from. (Female, mid 30s)

Other respondents spoke of the influence that the financial limitations of their families, and subsequent provident lifestyles, had on their current lifestyles, as one noted,

> My Dad always would repair things. We couldn't go out and buy things, so he'd repair it. And I took that philosophy, that whole way of living, into myself, right

from when I was young. Even the way he'd wash his hands; when he'd be washing his hands, he'd have just a very fine trickle. He wouldn't have it on full-blast, so I learned to conserve water, from when I was very little. So I grew up with it. And I've been in different places where I've been uncomfortable with the way things get thrown out. You'll go to a picnic and they'll fill a 55-gallon barrel with plates and garbage they're throwing out. That just tears me up. Just to throw all that stuff out, it hurts. I'm saddened by it. I don't think it's a way to live. (Male, early 70s)

In general, for many respondents, their learning about differences between the lifestyle of their family, which for most was described as a "typical mainstream" experience, and the lifestyles led by others motivated their eventual adoption of sustainable living practices. For example, one respondent commented on her experience:

I came from a very mainstream family. My husband had been in the woods before I ever met him. I was living a fairly mainstream lifestyle, but it always bothered me; something always seemed wrong. I'd learn something, getting bits and pieces, and I'd say, "that's just not right. It shouldn't be like that." Then, going to Asia and seeing these people who had nothing, but they were smiling, and seeing how much we had that we didn't need, influenced me. (Female, late 30s)

Some of the respondents commented on pleasant childhood memories involving activities with parents and siblings in the outdoors, such as fishing trips or hiking and camping. For example, one respondent spoke of his memory of trips with his father, noting that, "My father used to take me fishing once a year. We'd take a week and go up

to Northern Ontario and Quebec, way out in the back woods. I used to love that. It was my initiation in the wilderness experience, and it was the only time I ever really talked to my Dad" (Male, late 40s). In addition, this respondent commented on how the effects of over-fishing and human population growth impacted this annual event and exposed him to an environmental issue at an early age: "Everywhere around us was fished out, which was kind of an ecological lesson to me. We had to go up to Northern Canada, and then we could get big fish, but he couldn't catch them in the lakes around us" (Male, late 40s).

In general, these types of experiences were cited by respondents as influential to their reasoning for practicing sustainable living. Some of the respondents indicated that their knowledge and observations of how the places they once visited to fish, hike or camp, for example, had changed for the worse compelled them to develop their practices. More specifically, respondents commented on how, for example, current issues of water quality contrasted with pleasant memories of clean streams and rivers in which one could swim or fish, or how urban land conversion trends have changed the physical characteristics and appearance of the neighborhood or community they knew in their youth. For example, one respondent commented,

> I grew up next to West Town Mall, and when I was a kid we lived way out in the country, and I watched it turn into what it is now. I remember they cut down this beautiful tree; it was huge and beautiful, and one day I stood out at the end of this one street and the sun was setting on it and I thought, "Wow, that's beautiful" and the next day I went back and it was gone. And I just stood there and cried. And I wasn't but 10 or 11 then. And nobody had ever talked to me

about any of these things, and so I really feel like it's just a real part of me; I don't really know how it got there. But some things you just watch. Things have changed so much in our lifetime. Things used to be pretty nice in West Knoxville, and now look at it. (Female, mid 30s)

Travel Experiences

Many of the respondents spoke of travel experiences, either throughout the bioregion, across the United States, and/or around the world, as being influential to their rationale for practicing sustainable living. Several of the respondents were returned United States Peace Corps Volunteers, having lived and worked in foreign countries for extended periods of time, while others were travelers. Comments about traveling experience included thoughts and feelings about human conditions in other countries, issues related to population growth and resource consumption, as well as insights and lessons learned from the example of different ways of living.

One respondent, who is a returned United States Peace Corps Volunteer, indicated that his travel and work overseas informed him of the differences and disparities in lifestyle when comparing how most people in the United States live and consume to those who live elsewhere, especially in developing countries. He stated, "I spent 5 years in the pacific and saw how most of the world has lived over most of human history. I realized that 'My god, the way we are living [in the United States] is an aberration.' I know we are living high on the hog" (Male respondent, late 30s).

Similarly, another respondent spoke of his travels to Asia, from which he expressed feeling compelled to reflect on the apparent disparities in lifestyle and,

interestingly, how those he witnessed having less material wealth appeared to be happier than his observation of contemporary Americans who acquire and consume tremendous amounts of resources. With this in mind, he offered a suggestion for how the disparity might be corrected:

> To see these people who had nothing compared to what I had, and thinking that I didn't have that much, I came home realizing that I had more than I needed, and that I was taking more than I needed. [With] 5 billion people or so on the planet, both of us feel that all we're really entitled to is one 5 billionth of the resources. (Male, mid 50s)

A few respondents indicated that their travels also showed them innovative and time-tested methods of sustainable architecture and agriculture, and for one respondent, who traveled to the Tibetan Plateau, an opportunity to witness the blending of various traditional ways of living with modern solar energy technology: "It's a mountain desert region where they have real extreme winters, though it's sunny all the time. They're using solar technology as a way to maintain their lifestyle while having some of the amenities of modern living" (Male, mid 50s). Such an experience provided insights as to the viability of alternative energy technologies as a complementary element to existing and evolving sustainable living methods.

Several respondents spoke of their travels across the United States, and how their journeys influenced their views about mainstream habits of food consumption. One respondent commented on how his witnessing the size and condition of cattle lands in the western parts of the country influenced his adoption of a vegetarian diet:

> I saw how much public land was barbed-wired and fenced off for cattle. I was just starting to become a vegetarian at that time, and now I don't buy any meat. Occasionally, I'll catch and eat some fish, but I won't go in the store and buy any beef or anything like that. I was disgusted at seeing how much land was being trashed by cattle, with their feces in the water and eroding the banks. Seeing that helped me out a lot. (Male, early 30s)

Similarly, another respondent commented on how her travels led her to think about learning urban survival skills, in view of the difficulty she experienced at affording and acquiring food and accommodations during her trip across the United States. Such skills, she noted, could be useful to explore as a means of helping people to become more self-sufficient and less dependent on centralized sources (i.e., how and where to locate food, shelter, miscellaneous supplies, etc.).

Finally, one respondent, a waste management and recycling professional, and a master composter, spoke of her favorable impression of the recycling habits of New York City residents, and her hope that Knoxville residents could adopt a similar ethic:

> I'm real impressed with New York City. People in apartment buildings recycle. They separate it, and they set it by the incinerator shoots, and the only thing that goes down the incinerator is garbage. They recycle cans and bottles and plastics. And when they can, they compost, and teach composting in the schools. People have taken vacant lots and turned them into garden sites, little neighborhood parks or community gardens. It's just a wonderful thing. Then you come to

Tennessee and it's like, these people still don't get it. We're just starting to catch on here in Tennessee. (Female, mid 40s)

PART 2: SUPPORTS AND OBSTACLES

Family Relationships

Many respondents indicated that family relationships, including those with spouses, parents, siblings, and extended family, were significant supporting influences in their development and practice of sustainable living. Some respondents reported to enjoy warm and supportive relations involving an adequate level of understanding about why the respondent was practicing sustainable living. For those who enjoyed this type of support, it was generally attributed to the families' prior and/or current involvement in sustainable living practices, having an appreciation for and an interest in broad social and environmental issues, and/or a general interest in learning about new ideas.

However, not all of the respondents reported to enjoy the support of others in the practices. Some respondents indicated receiving only an accommodating "arm's length" view of their practices by family members, accompanied with minimal inquiry, dialogue, or consideration. One respondent spoke of her family's reaction to her practices and her feelings of frustration resulting from these reactions:

> Except for my children, I have had to recreate a new family. My father once told me, "I'm 62 and too old for new information. Don't try to change my mind now." Well, he lived a lot longer than that. He had to carry around outdated precepts and concepts for 30 years! Geez, what a waste! (Female, late 40s)

Similarly, another respondent involved in teaching and designing permaculture expressed feelings about his family and friends related to choices and beliefs:

> Basically, I feel in my heart that what I'm doing is the right lifestyle, that it's less consumptive than that of other people, and that I'm more mindful of my impact on the world. I'm pretty secure with my lifestyle and way of living. I guess my parents are probably the most painful ones that I can't convince that what I'm doing is right. And they go through cycles of acceptance and then, you know, after a certain amount of time they say, "Well, why don't you get a real job?" sort of thing. And after a while that goes away, and then a year later the same thing. I try to educate them without being pushy, and tell them that I'm basically doing what I want to do, living where I want to live, and living at the pace of life that I want. I continually have to face it, but as I start to get more of a reputation for what I've been doing, it gives me a little history. (Male, late 30s)

One respondent, describing an aspect of her childhood, suggested that her experience of minimal family support was related to her somehow being "different," though she did not seem to know why:

> Early on, I perceived that I was considered a black sheep because I didn't want to come indoors. I belonged outdoors, and I was rebellious in that way. My parents made a lot of money, and I refused early to stay in my cushioned bedroom. I later found out my parents thought that was pretty cool and they respected it, but I didn't feel respected because they always forced me to come in

and fit in. And it still has been one of the most jarring differences between me and others. (Female, mid 40s)

With these examples in mind, variations in the nature of the support derived from family relations seems to reflect issues of negotiation with respect to how the respondent's non-normal behaviors are viewed and understood by non-practicing family members. (Further discussion of negotiation issues, pertaining to the maintenance of boundaries between the respondents' non-normal behavior and the mainstream world will be discussed at Section D.)

Community Support

Some of the respondents commented on the support derived from their affiliation or membership to a community or group and how attributes of common interest, mutual respect, and close proximity allowing for regular interactions were contributive. More specifically, one respondent spoke of his participation in the development and evolution of The Farm community and how practices featuring frugality and ingenuity helped to maintain his sustainable living practices:

> We were willing to live on less and work hard. We didn't have all the frills like television. We didn't even have electricity; we were just burning kerosene, and we had lots of people living together. We were very good at doing a lot with a little. Many of the buildings here on The Farm were built with salvaged materials. We would go take down a building that otherwise would have been bulldozed and salvage the materials. And one of our biggest developments, which we're the most well known for, is our vegetarian diet. (Male, mid 40s)

In addition to these activities and accomplishments, this respondent also noted that the development of The Farm community involved interpersonal skills and processes which allowed for conflict resolution, shared problem-solving, and the shared acceptance and affirmation of individual differences. With this in mind, this respondent noted that this experience made apparent the point that

> anything that's going to be sustainable will not be just economically and environmentally sustainably, but also emotionally and socially sustainable. So I think you need to have mechanisms whereby individuals can sort out their differences with each other, and get to at least a point of where they can tolerate each other, for something to be sustainable. (Male, mid 40s)

This point seems to dovetail with Wenz's (1988) treatment of environmental justice, as well as aspects of Barber's (1984) Strong Democracy theory, where sustainability, according to this respondent, must involve "mechanisms" (democracy) which allow for and protect a just and inclusive coexistence.

Respondents also indicated a variety of sources of food and building material supplies, money, and information, as external support in their practice of sustainable living. Sources of information included family, friends, neighbors, colleagues and involvement in community organizations; training courses and selected readings; and financial support from public and private sources.

More specifically, many of the respondents indicated people close to them who helped them secure resources such as food contributions and exchanges, and whom they helped reciprocally, which were vital to their efforts. For example, one respondent,

whose homestead is a boat on the Tennessee River, mentioned their receiving food from friends and communities residing along the River, given that they cannot grow their own, as a gesture of support for the water quality work in which he and his wife are involved:

> What we've had to do is develop a community of people along the river who assist us in our sustainability. Our life and our sustainability is dependent on a community which is not fixed in one place, but along thousands of miles on the river. (Male, late 40s)

PART 3: VIEWS OF THE SOCIAL MAINSTREAM

Respondents generally expressed critical and largely unfavorable views towards the mainstream of American society and reported that their practices provided them with a sense of relief from their dissatisfaction or frustration with the unsustainable, environmentally unfriendly character of contemporary society. On this point, one respondent commented that, in his view,

> The environment is everything. The environment is our life support system, it's our quality of life, it's our history. I see man's impact on the environment as being many levels higher than it ought to be. I'm a bit enamored with more local primitive cultures that were less consumptive on the world as a whole. My activism involves the southern forests, especially the old growth forests. There is a spiritual quality about these areas that I can't describe. I can take people and help them share it. I see these places as important reservoirs to our deeper selves, where as we spend time in old growth forests, we can begin to realize the

intricacies and interlinking of life. There's a reverence that develops that is very important to me. I can tell people about the inter-webs of life and the stability, diversity, and the habitat of old growth forests, but it's much better to take them there and let them start sensing it, and kind of remember their place in that overall scheme. (Male, late 30s)

Moreover, many of the respondents described their views as pessimistic with respect to beliefs about if and when social sustainability would ever be achieved. Such pessimism and, in general, critical views of mainstream society appeared to involve contempt for (a) attitudes and behaviors which subordinate environmental stewardship and concepts of responsible, sustainable living to economic growth and contribute to social complacency and the maintenance of the political and economic status quo; (b) a lack of leadership within business, education, politics, and religion; and (c) general habits of unsustainable consumption and waste production. In short, one respondent commented that "as you live like this, you start looking around and seeing things in a different way" (Female, mid 30s).

With this in mind, one respondent commented on what his experience as an environmental activist has taught him with respect to the challenge of reaching those in the mainstream with a social-change message:

I think that there is and always has been a small segment of society that tends to focus on the future and challenges individuals to look beyond the current short-term interest. My interest is to try to take some of the sustainable ideas and move them into the mainstream. Unfortunately, I think so much of the time many of us

> are preaching to the converted and we are more or less ideologically viewed on the fringe of society. We tend to forget that there are many people who are not thinking about or operating on the same paradigm that we are. So part of the challenge politically is to see if there are ways to bring these ideas into the mainstream of people's consciousness and have them become the standard thought--the paradigm which we all operate out of. Unless we get more people in decision making structures that can actually provide leadership and guidance to the larger population, my sense is that these ideas will never take hold fast enough and permeate thoroughly throughout society. They will never really have the impact that is necessary to reverse some of the negative trends we are experiencing on the planet. (Male, mid 30s)

Another respondent indicated a belief that social change towards achieving sustainability is possible when taking responsibility for one's individual lifestyle becomes a personal priority and socially-encouraged behavior. On this point, the respondent argues that

> It is the way that we are living which creates a demand for the products that are used by the industries that cause the pollution that degrades the environment. So, if you start with the consumer or the person who is living in this culture, and that person stops demanding those products, that seems to me to be the most effective way to cut it all off. (Male, late 40s)

More specifically, many of the respondents articulated critical views of the influence of business corporations, TVA, and television on mainstream behaviors and attitudes. One respondent remarked that "corporate culture" and its marketing effort

"which tries to convince people to consume more and buy products they don't need is definitely a big influence" (Male, late 30s). Similarly, another respondent described unsustainable mainstream America as exhibiting characteristics of addiction, where the continued voracious consumption of resources, despite knowledge of the adverse effects of such behavior, shows a similarity to an alcoholic who takes a drink in face of the physical or familial consequences.

Another respondent commented on several undesirable features of mainstream living in contrast to the qualities of the lifestyle led within The Farm's community. Nonetheless, this respondent, among others, acknowledged the difficulty in overcoming obstacles or avoiding so-called compromises which inhibit, if not prohibit, efforts to live sustainably:

> What's easy about living in suburbia? You have to have two jobs for a family. You have to trust your kids to a school system that you don't have any control over. Your fighting traffic all the time. And, if you are hip to the lifestyle and what it means, you realize that everything your doing is pretty much hurting the environment. Out here, we're far out so we have to drive since there is no public transportation. So, every family pretty much has to have a couple of cars, you know, and that's one of the compromises, but you know, it couldn't be any easier, certainly it would cost more. (Male, late 30s)

Views about Education

Many respondents also presented critical views of contemporary mainstream education, where, with regard to university systems, many respondents felt such systems

could be more effective in teaching and modeling sustainable living practices. One respondent observed that sustainable living practices are largely absent from the university classroom and campus:

> Universities are some of the most unsustainable institutions we have in the nation, if not the world, and for that reason, they're not capable of thinking in this way. They can't think homesteading. I mean, go out and interview a homesteader and then interview somebody at the university; do the same interview and watch what happens. One can do it because all they've got to do it with is themselves, where the other would have to involve a team of 20 or 30 people because not one of them could go beyond their own specialty. (Male, mid 30s)

Respondents who were currently university students indicated their dissatisfaction with their respective institutions not addressing the viability of organic agriculture, the minimal recycling efforts, the use of unhealthful defoliants and herbicides, the predominant use of air and noise polluting grounds-keeping machinery such as lawn-mowers and leaf blowers, and the minimal use of energy-efficient lighting.

With this in mind, one respondent expressed his view of the potential for one university, the University of Tennessee, to be a model and promoter of a healthy, sustainable vision. More specifically, this respondent, an environmental activist and alternative energy advocate, noted that, by utilizing the resources of the University of Tennessee, the Oak Ridge National Laboratory, and TVA, an alliance could be created among them that would be analogous to the Research Triangle in North Carolina.

Subsequently, an East Tennessee Triangle could focus on advances in energy technologies, such as fuel cells, renewable energies, and efficient technologies, and then use this work to lure cutting-edge industry to the region to build and produce these materials, where TVA could then be used as a marketing mechanism. Such a concept, according to this respondent, is

> something that is not only necessary within this region, because it has been sorely neglected, but also across the country and internationally. But because of bad decision making in the past, and because of a present lack of leadership, none of these institutions are really reaching out to each other to make that happen. It is unfortunate. (Male, mid 30s)

On this point, one university faculty member made reference to information which explores the relationships between universities and corporate America, and how one tends to reflect the other:

> There is an excellent book called Leasing the Ivory Tower, and it shows the way in which corporations have been able to buy out both faculty as well as administration, in funding certain kinds of research endeavors and not others, and getting the university to lend its name to research which is really an agenda for corporations. It provides a whole catalog of things like that which universities have been doing for 30 years now. (Male, early 60s)

Nonetheless, another university faculty member indicated that, despite inadequate university-wide initiatives towards broadly integrating sustainable living themes into the

curriculum and campus infrastructure, his coursework offers students opportunities to consider alternative, sustainable lifestyle choices:

> My job is to inspire students with a sense of what they can do about it. That is, we know the problems are there, now here are the directions of change to make things better. And, while we need to change society, we don't have the power to do that. But we can change ourselves, individually, and hopefully have an influence on those around us and ultimately transform society. (Male, late 40s)

Interestingly, this view of social change beginning with the change of individuals, seems to reflect a perceived limited locus of control with regard to whether social structures can be influenced or changed. An alternative view might hold that both individual and structural social change is possible and required.

Comments about consumption

Consumption trends were considered by many to be an area of concern and focus, with an emphasis on the perceived disconnection between consumers and the origin of their consumables. More specifically, many respondents expressed concerns about the rate at which precious finite resources were being consumed, in the face of forecasts which predict undesirable consequences of this behavior (i.e.,, global warming, pollution, habitat loss, etc.). With this in mind, one respondent used the analogy of a monkey trap to describe his interpretation of why this behavior is maintained:

> In places where they have monkeys, they're regarded as food animals. To catch them, the peasant hunter-gatherer populations have devised a simple monkey trap where you take the inner part of the shell a coconut, bore a hole in it, and put a

piece of ripe fruit in it, and then tie it to a tree. Monkeys are kind of like mice in that they run all over the place checking out food sources. When one of them comes up on this trap, and finds fruit in there, he'll grab it and he wont turn loose--he'll sit there and try to fight the hunter with one hand, but he wont turn loose cause he's defending his piece of fruit--"Its mine, I found it first, you can't have it." The hunter just whacks him on the head and throws him in the bag. Does it seem like an analogy? (Male, early 50s)

In short, the analogy suggests and reflects society's will to continue to claim and consume what is perceived to be rightfully theirs for the taking, despite the potentially tragic consequences of their actions.

In addition, with respect to unsustainable consumption of energies, many respondents expressed displeasure and frustration with the unsustainable and environmentally-damaging energy policies of TVA, referencing specifically the economic and socioenvironmental costs of its coal, nuclear, and hydro energy programs. On this point, one respondent, who used solar photovoltaics to generate electricity at home, made mention of his view that all energy sources are solar and should be considered as such, though what is distinctive about types of energy is when and how they are consumed.

Everyone lives on solar. Most of them live on fossil solar, which is by definition unsustainable, but there is no other source. I don't care if it's nukes, rivers, coal-fired, gasoline-fired or wood-burning, it's all solar. The question is are you living on today's solar (i.e.,, within your income), or are you living on your

grandfather's bequeath, or have you stolen from your grandchildren? (Male, mid 50s)

Correspondingly, many respondents reported taking measures to reduce their consumption of resources, such as energy and fuels, while reducing their production of waste products. For one respondent, such an effort reflects and is motivated by an observation that the consumptive reality of most westerners is fundamentally different from his and for many who live in other parts of the world: "Its a reality based on an artificial world created sometime in the 1940s and '50s that provides all needs of energy, food, and natural resource inputs that is not only unsustainable but already past the point where they're in decline" (Male, mid 40s). Interestingly, this comment also appears to serve as support for the boundaries which distinguish and separate the reality of the mainstream from the respondent's non-normal world (See Section D for further discussion).

Respondents also offered various perspectives about trends in recycling. Some people viewed recycling as an important activity of collecting waste materials and getting those materials to processing facilities towards the development of new products and uses. While the benefits of this type of recycling process were broadly acknowledged, with most people participating in recycling in some fashion, some respondents took issue with popular recycling trends, suggesting that "recycling is a limited viewpoint on sustainable living" (Male, early 40s). More specifically, recycling was viewed as short-sighted in that by focusing only on methods of recycling and not on the types of products bought, and the means by which they are produced, "it may actually be doing more harm

than good" (Male, early 40s). Consequently, this respondent held a view that the mainstream may consume more in believing that their wastes are being managed properly; whereas, the actual consumptive behavior is not addressed. Accordingly, one respondent involved in the study of product life-cycles, commented, "I think recycling was invented by the one-way packaging people as a way to save their butts, particularly plastic packaging. A lot of the talk about recycling plastics is still window-dressing because it's still very sporadic, and it's very difficult" (Male, early 40s).

Use of Technologies

In extension to views on resource consumption, respondents also offered commentary on the development and integration of new technologies. One respondent commented that "there is appropriate technology and inappropriate technology" (Male, early 60's), making reference to the positive contributions which alternative energy technologies have made. In addition, this respondent shared a view that, while technologies can produce undesirable effects, such as the pollutants involved in the production of photovoltaic solar panels, trade-offs regarding the types and extent of these pollutants need to be considered: "There is a bit of a stumbling block there as far as silicone or some of the chemicals that are used, but there again, until we can come up with something better, it is a far better cry than coal-powered steam plants or nuclear power" (Male, early 60's). Nonetheless, others held different views of technology; for example, one respondent described his family's discriminate use of technologies:

> We have a policy at our house that if an electronic item breaks, we don't replace it unless it is by a hand item. And we deliberately have gotten rid of our electric

dryer, for example, so we only dry with solar power. We still have an electric washer. We have no television and no VCR. My wife thinks the television images are very bad on the moral and spiritual development of young children. My objection is largely an aesthetic and economic one. It is a device for getting you to buy products, and I don't like that in my home and don't appreciate commercials and so on. I probably don't have as much of an objection to public television, but I am happy to be without it. (Male, late 40s)

Still, another respondent commented on the conditions under which technologies should be critiqued, including moral consideration with regard to which technologies are accepted into our society.

I don't think bioengineering, for instance, is one that by and large we should accept. It's people playing God. We've been trying to play God for a long time, and we don't do a very good job of it. There are cultures that have had access to technology, and have chosen not to use that technology or have limited their choices to the technology. Technology should really be a servant rather than the driving force. We're very blessed right now to have access to fossil fuels and to some of the technological miracles. If we can use that technology now to build a sustainable culture for the future, then I think that's a justifiable use of technology. (Male, mid 40s)

How might the mainstream change?

Many respondents offered commentary about how mainstream society might become more aware of and involved in sustainable living practices. Citing an analogy of

taking care of one's self, one respondent commented on how and when society will ultimately begin to take responsibility for itself.

> I think that health and the ecology issue will go hand in hand. Because if people don't respect their bodies, it's really hard for them to respect anything else, especially the ground that they're walking on. So if they're out of balance and they are not in touch with how they feel, and if they're putting a lot of pollution and toxics into their body, and drinking four or five Cokes a day, and smoking cigarettes, it's really hard to talk to them about the planet because they're polluting their own planet. (Female, mid 30s)

Another view was offered by a respondent, involved in the practice and teaching of permaculture, who expressed confidence in the methods of permaculture as a source of insight towards a sustainable future, though he indicated that an understanding of the complex principles of this practice requires study and discipline:

> I realized that it takes your whole life to really master anything like that. You don't get it in a weekend course or by reading a book or two; you have to do the course work, read the books, and get what Tom Brown calls "dirt time," with our hands in the dirt working it out. (Male, late 30s)

Views of Religion

Many of the respondents indicated that spiritual beliefs underpinned their practice of and interest in sustainable living, and for some, their spirituality included their attendance at contemporary Christian church services or temples of other religions. However, for many of the respondents, spirituality did not translate into attendance at

weekend church services. For example, one respondent, a university undergraduate sociology student, commented that

> My spirituality has always been something that I try to do every day instead of on the weekend. So, if I'm going to do it every day, which is by being active in fighting against some things that I think are spiritually, physically terrible, like racism, sexism, and destroying the Earth, then a lot of times I have to do my homework on Sunday, or I have to clean the house, or I'm working on another project. And I think that's more spiritual than going to church. (Female, early 20s)

In short, many found contemporary Christian denominations to be "out of touch" with the social and environmental issues of the day. For example, a respondent involved in a small environmentally-friendly business, reported that, in her view,

> western Protestant Christianity has tended to emphasize human dominance of the Earth and the temporariness of Earth as a dwelling place, as opposed to the permanence of the place in heaven. So, the real value is not here. We can screw this place up. We're going on to another place anyway, so we don't have to worry about it. And I think that view is utterly wrong and is leading us down a very bad path. (Female, mid 30s)

Correspondingly, whereas the church acts as a central social institution for many communities, many respondents indicated their belief that it reflects and participates in many of the socially and environmentally unsustainable behaviors of mainstream society. Alternatively, some respondents suggested that churches could begin, for example, to

serve as a vanguard of sustainable living, offering working models of organic agriculture to help feed the hungry and/or facilitate the use of solar power to produce electricity for the poor, and, in general, promote the use of alternative, sustainable products and services. This commentary appears to dovetail with what Kearns (1996) described as emerging Christian eco-theologies and may further suggest how spiritual and religious circles are moving to embrace and integrate themes of the natural world.

Nonetheless, the failure of the contemporary Christian church to project a sustainable vision appeared to be frustrating to many respondents, and according to one respondent, could be traced to its early historic roots:

> Unfortunately, there have been a lot of things preserved in the Bible that I believe were intentionally put there to distract us from that truth. I think the truth is this: The point at which it was determined that Jesus had to be killed, that he had to be eliminated, was when he went into the temple to overthrow the money-changers, who were in the temple converting money, this symbol for exchange that is brokered by the government or the empire into a medium that represents the spirit for the local people. When Jesus sought to overturn that system, that's when they sought to kill him. The message here that is key is that organized religion has continued that tradition of sacrifice in its interpretation of his life, in the sacraments of the church, and in particular, communion. If one can be made to believe that the death of God be ordained as exchange, as a trade for one's sin, one can be made to believe just about anything. If we can sacrifice God for our own betterment, then we can sacrifice the ecosystem, anything. I think that

> sustainability ties into it in a sense. The relationship between matter and spirit that Jesus was holding forth is sustainable, but whereas I think the relationship that was professed by the Pharisees, and Rome, and their modern counterparts perpetuates a system that's not sustainable in the sense that we would see is sustainable. (Male, mid 30s)

This respondent's view seems to reflect a belief of conspiracy with regard to the historical and contemporary functioning of the church and society. Accordingly, such an attribution may lend credence to the applicability of Glock's (1988) commentary about how the world works.

Alternatively, many of the respondents reported to find alternative multi-denominational religious gatherings in which to participate and/or have found the outdoors to be a more spiritually satisfying sanctuary than a church or temple. Accordingly, a respondent involved in university academics, reported,

> I never felt comfortable in a church, but when I go out into the mountains, there is something that really affects me very deeply, and I think of it as spiritual. You can use what term you want, but it seems to me that I am closer to God in the mountains than I have ever been anywhere else. I think the mountains are my church, and you don't desecrate your church, and that is part of what keeps me going. (Male, late 40s)

PART 4: STAYING ON THE PATH - NEGOTIATING BOUNDARIES

Understanding how the respondents participate in and negotiate between the mainstream and their non-normal worlds is of particular interest. That is, in view of the boundaries which seem to distinguish the respondents' practices of sustainable living from the social mainstream, understanding how these boundaries are maintained is important. This is particularly salient given that none of the respondents were completely self-sufficient and thus required and/or desired interactions with those not involved in the practice of sustainable living. With this in mind, the following section examines the supports and obstacles involved in task of maintaining these boundaries.

Learning how to live sustainably

The respondents' desires and abilities to "do for themselves," typically described as self-sufficient alternatives to relying or depending on others for services, appeared to be a commonly shared aspiration. Thus, many of the respondents noted the value of their participation in training programs and workshops, such as those held at The Farm and elsewhere, which taught them various skills including building with alternative materials, such as straw bales and cob; using composting toilets; employing methods of organic agriculture and permaculture; and designing and applying alternative energy systems, in addition to current information about socioenvironmental issues across the bioregion.

Also, many books and miscellaneous reading materials were cited as helpful to their learning and practice of sustainable living. Interestingly, some of the respondents appeared to relate their learning endeavors to a belief that free will is an active control agent, in complement to Glock's (1988) work, and that social change towards

sustainability is related to individual effort and commitment. For example, one respondent noted,

> I figured if we're going to survive, we've got to find a way to live sustainably. I eventually came upon the permaculture book called Introduction to Permaculture, by Bill Mollison. I devoured that thing and had to have more. I then went to the next book, which is this big thick designer's manual published in 1990 by Mollison, and started reading that. That's like reading the Bible, you know; it takes a long time, and you can't read too much of it in one shot because you have to digest it. (Male, late 30s)

The following list represents books and journals cited as helpful reading references in support of the respondents' sustainable living practices:

- Ishmael, by Daniel Quinn;
- Down To Earth, by John Nolt;
- Ecology of Social Problems, by Sam Wallace;
- Diet for a New America, by Tom Robbins;
- Silent Spring, by Rachel Carson;
- The Closing Circle, by Barry Commoner;
- Soft Energy Paths, by Amory Lovins;
- The Solar Electric Independent Home Book, by Fowler Solar Electric Inc.;
- Ancient Futures: Learning From Ladakh, by Helena Northberg Hodge;
- Menopause for the Wise Woman, by Susan Weed;
- Faces from the Bottom of the Well, by Derek Bell;

- Four Arguments for the Elimination of Television, by Jerry Mander;
- The Unsettling of America, by Wendell Berry;
- Walden, by Henry David Thoreau;
- Solar Today;
- Home Power Magazine;
- Home Energy Magazine;
- Katuah Journal;
- Plain and Simple;
- Organic Gardening Magazine;
- The Permaculture Activist; and,
- the Knoxville Community Food Co-op newsletter;
- The Green Pages Directory.

Family relations

As mentioned previously, many of the respondents did enjoy the support and participation of family members, friends, colleagues, and community members in their practice of sustainable living. Nonetheless, many of the respondents did report experiencing difficulties in their negotiation with family members and others unrelated to them who were unreceptive and did not practice sustainable living themselves. The difficulties were largely attributed to differences in lifestyle regarding, for example, the handling of wastes where relatives do not recycle or compost; the wasteful use of energies such as electricity and auto fuels; or, more generally, consumptive habits viewed as excessive and frivolous.

Respondents also indicated that differences in political orientation, exposure to new information, and differences in age and generation had or could potentially strain interpersonal relations. Such difficulties reflected a broad range of interpersonal dynamics including outright disregard for the sustainable living practices; passive-aggressive behavior where the respondent might agree to support or participate in the practice, though fail to follow-through with their commitment; and hostilities involving subtle and obvious verbal abuse and sabotage. For example, a respondent's self-assuming practice of recycling aluminum cans or composting kitchen scraps would be spoiled by someone else's purposeful non-recycling behavior. For some respondents, this type of sabotage, whether obvious or subtle in effect, appeared to tax the respondents' abilities to invest personal energy in their practices or their willingness to maintain their boundaries amidst an "agreeable atmosphere."

In view of these difficulties, the respondents appeared to use a variety of coping strategies to manage and maintain their practices while reducing the recurrence or the potential experience of disagreements or anxieties over differences in lifestyles between respondents and their families. How such strategies were used appeared to be based more on the proximity of the family members to the respondent, and the subsequent frequency of contact with those persons, rather than the nature of the relationship. Of the respondents who reported having minimal interactions with family and relatives, for some, such interactions were characterized as unsatisfying and largely governed by an unspoken "don't ask, don't tell" arrangement during visits and conversations.

Also, where these types of arrangements involved family members living elsewhere, such as parents or siblings, respondents indicated that they generally made infrequent visits for holidays or special occasions and/or, in general, pursued their chosen lifestyle outside of these relationships. While these strategies might be considered less-than-satisfying, in terms of the type of relationship desired, the minimization or prevention of real or potential strain appeared to be a worthy trade-off.

Where the respondents reported to live with spouses or siblings, or at least in close proximity, relations were similarly described as being purposefully superficial, with communications excluding potentially anxiety-provoking topics. For most of the respondents, such tactics were successful in achieving and maintaining the boundaries between themselves and their families. Nonetheless, despite their relative successes at "staying on the path," respondents appeared to feel constrained with respect to their abilities to live the way they desired. One respondent commented about his struggle in coping with the mainstream world: "I feel angry a lot. When I drive to west Knoxville, I feel angry at all the superhighways and the cars and the fancy restaurants. I don't know how to handle it. I just try to come home and ride my bike or go to my garden" (Male, late 30s). Here again, the respondent's experience suggests the level of difficulty involved in the maintenance of boundaries between non-normal or deviant views and behaviors and the mainstream social world.

Professional Experiences

Many of the respondents mentioned professional work and training experiences which were indicated and/or appeared to be useful to their practice of sustainable living.

For example, one respondent indicated the utility of being a veterinarian as well as an energy utility reform advocate, giving him the ability to understand and legitimately argue for the importance of protecting biodiversity within the context of his advocacy work. Other examples include a journalist who composts and thus offers first-hand experience to the ease and benefits of this practice; university faculty members who use solar energy, and thus offer their students and colleagues insights about the value of learning and using this energy source; and a professional psychologist and urban homesteader who has successfully assumed what might be considered a contemporary career through commuting while pursuing self-sufficiency in food at her home.

Common interest as a source of community support

Also, for many respondents, support for the maintenance of their boundaries came from their associations with people in their community. With this in mind, one respondent spoke of the support received from the examples of others in their community which invested in them a belief that sustainable living practices were possible for them to undertake, and which instilled feelings of confidence in her own ability to show others as well:

> What we do are, for the most part, things that we have been led to believe are possible through some other person. I don't think we do anything that's entirely original. And just being around other people that have the same kinds of concerns allows us to do these sorts of things. I would like to think that some of our friends look at us and say, "Well, they can do that, so we can too." (Female, late 30s)

Similarly, another respondent commented on the support he received from those who lived with him at The Farm, as well as the physical land attributes which afford balance between social interaction and personal space for solitude and privacy:

> We're a big community. You drive in the gate and there's 200 people who are all cool. We may disagree about stuff, but basically, we all live here and nobody is going to get weird with each other. We have enough friends around here that we feel pretty secure that way. We have a kind of a buffer; this is a sanctuary and a haven where we can come back to. (Male, late 40s)

Correspondingly, respondents indicated that differences in values and beliefs not only affected the relationships with family and friends, for example, but for some, contributed to a social transition where friends who did not share common interests were "weeded-out," while new friends of common interest were embraced. To this point, one respondent, an organic farmer, spoke of how her relationship with a close family friend had changed:

> Well, as you get older, you sort of weed out friends that don't think like you. So, friends that we have now are fairly similar in values of what's important, though maybe not in their exact lifestyle. We have a friend who is a bank president that my husband has known from his college days. He's really a go-getter, but we talk to him every now and then, and when we hang up from talking, we just think, "Gosh, you know I really love him, but I just don't think I could stand to be around him very long because our lifestyles are so different, even though he's a

wonderful person." We just do such different things, which is why we just kind of weeded him out. (Female, mid 40s)

Other respondents spoke of how their practices affected their communications and relationships with others. For example, one respondent commented that a once-close relationship with a friend changed as a result of increasingly apparent differences in values and beliefs:

> We love each other obviously, but her political beliefs and her directions are entirely different than mine. She is starting to see that there might be alternatives, and I'm beginning to understand the people we're having to communicate with to make a difference environmentally. I'm beginning to understand a whole new mind set. (Female, late 30s)

Inconvenience versus Consistency

In general, many of the respondents spoke of the inconvenience, and subsequent difficulty, of their practice in comparison to the habits of mainstream America. For example, taking responsibility for using less electricity requires mindfulness of when, where, what, and for how long lights are on; or choosing to walk or ride a bicycle, even in inclement weather, versus using a car, appeared to reflect the difficulty experienced by some respondents in negotiating their boundaries in the midst of choices and opportunities to interface with and use mainstream resources. In short, respondents appeared to consciously and continually review objective and subjective considerations of their actions with respect to whether or not they are in keeping with their consistent practice of sustainable living.

For example, one respondent expressed this sentiment with respect to the lifestyle led by her family, yet noted that inconveniences appear to be mollified by the worthwhile example which she believes such a lifestyle offers to her children:

> It's a lot of work. Cutting and splitting the wood, and then bringing it in and burning it is work. And it's an inconvenience, sometimes, when we have to heat up our water for a shower. When my kids go to their friends' house, they have an instant shower, so there's a bit of negotiation around here about whether the shower is ready or if I am going to have a shower in the morning before I go to school. Also, raising all your own food is a lot of work, but I feel, in terms of lifestyle, it's probably the most radical and revolutionary thing that we could do to help the world, just by being an example of how to live simply. I hope that my children don't rebel too much, and I hope that they can continually refer back to their childhood and the way that they grew up and lived, and that this can be a seed for the future of their families. It's not easy, but I feel like its important to do. (Female, late 30s)

Correspondingly, other respondents spoke of the perceived effects which their endeavors had on their children. Where most of the respondents who had children described them to be receptive and supportive of their sustainable, albeit at times inconvenient, practices, other respondents indicated their children struggled occasionally with how their lifestyle differed from those of their agemates. For example, one respondent who is the mother of a young daughter indicated that she and her daughter have had success in maintaining continuity with respect to the family's vegetarian diet

and the foods available at the school lunchroom or those which are offered during birthday parties.

Nonetheless, while this example reflected a degree of success in integrating lifestyle choices into a routine of external systems, such as schools or that of another family, not all attempts at integrating personal choice were reported to be so successful. For example, this same respondent indicated some difficulty in communicating to her daughter's school teacher her desire to not have her daughter view television programs in class, in keeping with the family's decision to not watch television. In short, this request was honored, with the daughter given an alternative activity, though the negotiation process was viewed by the mother as indicative of an educational routine which reflects a larger mainstream norm of viewing such programs in the absence of a critical or divergent perspective on the medium.

Building on this example, respondents with children generally expressed an interest in providing their children with models and choices of responsible living. With this in mind, one respondent, an environmental activist and homesteader, noted his belief that "you don't get the children you hoped for; you get the children you model for. I have three children, and none of them are high and heavy consumers" (Male, early 50s).

CHAPTER 7

SUMMARY

The purpose of this study was to examine the ways and means of how people living and working within East Tennessee and the Southern Appalachian bioregion attempt to do so more sustainably and, by extension, responsibly.

The 94 respondents in this study lived and/or worked in the bioregion, and were involved in the development of sustainable homesteads, sustainable communities, and/or sustainable businesses and occupations. Of the 94 respondents, 52 were male, and 42 were female. The majority of the respondents were white-Caucasian (91), while three were African-Americans.

Data for the study were collected by the investigator via interviews which were conducted using an interview guide serving as a question pool reference for the investigator. This procedure was followed in the interest of providing some direction to the interview while allowing adequate dialogue latitude so that a broad range of relevant data could be obtained. Questions within the interview guide were organized across three areas of inquiry: (1) What types of people are practicing what sustainable living method, how, and where? (2) Why is the sustainable living method being practiced? (3) How was the practice learned and developed? The interviews were tape-recorded and subsequently transcribed for analysis.

Results of the data analysis indicated that the sample group, and the respective locations of their homesteads, communities, and/or business activities, afforded balanced representation of rural and urban settings throughout the defined bioregion. Also, the

respondents represented a wide range of occupations and vocations, providing valuable insights about the applicability and challenges of integrating concepts of sustainability to specific work scenarios.

The educational backgrounds of the respondents varied greatly, with some respondents having only high school educational experience, while others had attended and/or completed college. Many of the respondents had earned advanced graduate degrees, including doctoral degrees in the social and natural sciences and humanities.

The results also indicated a wide range of evolving and sophisticated models and examples of sustainable homesteads, communities, and businesses. More specifically, many innovative alternative techniques of food production, shelter design and construction, alternative energy production, transportation efforts, and health care practices, were reported. Most of the respondents expressed confidence in the viability and applicability of such models if replicated and integrated to other urban and rural settings. Many sources of self-help and instructional learning were indicated as valuable and readily available, including topical workshops, specific reading references, and first-hand experiences with other existing and evolving models and practices.

With the development of their models, respondents also reported a wide range of circumstances involving the presence, absence, or some combination therein of family, community, and collegial support. More specifically, whereas many of the respondents enjoyed the support and resources made accessible to them by those they lived or worked with or near to, some respondents expressed difficulties in securing such support, and often attributed such experience to the respondents' rural location and the

physical and/or philosophical distance between family members and others.

While all of the respondents' pathways to sustainable living differed, a host of reasons were reported for why the respondents chose to live and/or work the way they did. Many attributed their choices in living and working to family experiences and the mentoring examples of parents, relatives, friends, and teachers. Other respondents reported strongly felt convictions of reverence and stewardship for the earth, which often involved strong spiritual connections with the natural environment, and which, for many, did not involve participation in organized religious practices. Also, many of the respondents cited the influence of travel experiences, which included both domestic travel as well as widely varied overseas travel, with many of these experiences having durations of extended periods of time. Many of the respondents indicated that such experiences created in them or further strengthened their concern about contemporary consumption trends of natural resources, comparative quality of life standards, and the variety of lifestyle examples existing in other cultures.

Respondents also offered sophisticated, critical interpretations of the origin and future of contemporary social behaviors and attitudes attributed to the mainstream of America. Circumstances surrounding current trends of resource consumption and waste production, population growth, the influence of big business corporations and television, the rapid development and pervasive use of technologies, and contemporary growth-oriented economics, among many others, were cited as important and in need of redress and/or wise use if social and environmental sustainability is to be achieved.

DISCUSSION

This study provides new information about practices of sustainable living and, by extension, how these practices reflect and promote linkages between social welfare and environmental quality. Through their practices, people involved in the development of sustainable homesteads, communities, and businesses offer many examples of how social and environmental problems can and are being addressed and resolved. With these examples, including bioregionally-mindful changes in diet and resource consumption; the development of sustainable economic enterprises; the affirmation of respectful and just relations with humans and non-humans alike; and the restoration of rich cultural histories into present day living, many people could learn from and employ the efforts of these vanguards for themselves and with their communities.

Given the state of the bioregion as described by Nolt and colleagues (1997), and the many influences and motivations which seem to shape the respondents' practices of sustainable living including, for example, environmental concerns, life experiences, and/or aspirations to strive for so-called right livelihoods, it seems appropriate to consider the practice of sustainable living as a new social movement, albeit in its infancy. The many achievements made by the respondents to date at growing local organic foods, generating home-made electricity, or building with alternative materials, for example, are worthy of study and consideration.

Taking note of how respondents described their personal histories and motivations, and the distinctive qualities of their practices in comparison to those within the social mainstream, several important points should be emphasized. First, the purpose

and aims of the respondents' practices appear to involve a desire to respond to the contemporary socioenvironmental challenge, as well as to provide the means by which they, and their families and communities, and those of future generations, can lead healthy and secure lives. The practices appear to be triggered by some combination of past life experiences, present-day accounts, and subsequent calculated views of the future. Moreover, their efforts to develop and model practices of sustainable living appear to reflect a sophisticated and sensitive understanding of the human/non-human relationship which seems to parallel Milbrath's (1989) conception of an NEP. Furthermore, some of the respondents' translations of personal experiences and beliefs into their practices of sustainable living appear to resemble Flacks's (1988) notion of history-making activity as differentiated from activity of everyday life, as well as the citizen-activist transformation process discussed by Aronson (1993).

Second, the maintenance of boundaries which separate the non-normal practice of sustainable living from the mainstream world appears to require some combination of external support and inner strength. Many of the respondents reported to have sources of support, including family, friends, neighbors, and colleagues, which appeared to basically consist of those people who share common interest and/or who respectfully accommodate the non-normal practices. Where respondents indicated that some people were not supportive of their practices, including those who would minimize, disregard, and/or sabotage the practices, the respondents' physical proximity to those persons, rather than the nature of the relationships, seemed to modify how this non-participation was managed. Thus, for relatives living far away, infrequent visits would occur; for those

living with the respondents, such as spouses and siblings, or colleagues at the workplace, efforts would be made to minimize the potential for altercations and/or anxiety-provoking situations through avoidance or superficial conversation.

Lastly, the sophisticated world view of the respondents appears to be largely one of contempt for the unsustainable behavior and attitudes of the social mainstream. In their witness of past and present social and environmental issues, contributing to feelings of concern, frustration, and anger, the respondents expressed views of both hope and pessimism with respect to whether sustainability will ever be achieved by the mainstream, given their view of how the world works. Respondents' beliefs about how social change towards sustainable living would take place varied; some attributed changes in individual behavior and attitudes as the source of resolution, while others perceived that changes to the social infrastructure of society through effective leadership and political action would be a viable target. On this point, an application of Glock's (1988) discussion of control agents seems useful to consider with what appears to be variation within the realms of perceived locus of control, the distribution of power, and views about the "system."

Respondents described themselves as spiritual, though for many of the respondents, this did not translate into religious practice within contemporary mainstream denominations. Moreover, many respondents disagreed with and were frustrated by the mainstream Christian church's perceived predominant "man-over-nature" (Hand & Van Liere, 1984) theology. Subsequently, many respondents sought and participated in alternative religious practices, seeking spiritual connections directly

with nature. With the development of Christian eco-theologies, as discussed by Kearns (1996), the potential seems to exist that respondents could find satisfaction within contemporary religious institutions in the future.

Furthermore, the respondents' deviant, non-normal sustainable living practices seemed to generally reflect an inclination towards democratic self-governance and an equitable distribution of power and resources as an alternative to the unsustainable and unjust character of contemporary society. Here, then, parallels can be made with Tatum's (1996) observations and application of Barber's (1984) Strong Democracy theory, as the respondents' practices appear to demonstrate efforts at expressing how and in what ways our democratic society can and should function better (i.e.,, progressive higher education, effective leadership, responsible business, etc.).

The respondents' lifestyles, pathways, and critical views of mainstream society reflect an interesting and diverse set of reasons and justifications for their sustainable living practices. Variation seemed to exist with respect to what were acceptable compromises of their practices (i.e.,, use of fossil fuels, consuming commercial produce and fast foods, the humane production and slaughter of animals for food, etc.) and what were not (i.e.,, non-recycling behavior, mainstream consumption and waste production trends, unjust social and environmental implications of mainstream lifestyle, etc.). For example, while many of the respondents generated their own electricity, or planned to do so in the future, their reasons for doing so varied. Some desired renewable energies as an alternative to the undesirable policies and practices of TVA; others simply viewed

renewable energies as an important element of personal security or a more cost-effective source in view of anticipated utility deregulation and subsequent rate increases.

To offer another example, some of the respondents were vegetarian due to strong feelings about the quality of meat products, the availability of adequate protein supplies from vegetarian diets, and/or the inhumane treatment and environmental consequences of raising cattle and chickens in commercial "factory farms." However, many of the respondents did report consuming animals for food, including commercial meat products, and justified this practice as acceptable given the requirement for animals to maintain ecosystem balance, the availability of meats derived from humane production and slaughter processes, and/or where the respondents viewed their sustainable living practices to be more effectively focused on other aspects of living (i.e.,, renewable energy, scholarship). Thus, in short, just as the practices of sustainable living by the respondents in this study varied tremendously in their purposes and functioning, so did the respondents' views of when and why a compromise to their practices was acceptable.

A remarkable common characteristic of the respondents was their broad base of knowledge and life-skill competencies. That is, the respondents articulated and modeled insights about their social worlds, or socially constructed realities, and exhibited learning abilities and skill competencies which enabled them to grasp, organize, recall, and utilize a tremendous variety of information--regardless of formal educational experiences. It was not uncommon to find respondents who had basic as well as advanced competencies at, for example, organic gardening, carpentry, various creative arts, and/or professional

writing. This finding parallels Tatum's (1996) observations of lay / expert skills and competencies of those involved in the home power movement.

In general, the respondents' knowledge appeared to derive from some combination of information drawn from various media, books and magazines, formal and informal educational experiences, and life experiences. These sources appeared to contribute to the development of critical and insightful world views which distinguished their priorities and behaviors (boundaries) from those of the mainstream. For example, respondents involved in organic gardening and farming provided sophisticated commentaries about the history and current state of national and world agriculture systems or portrayed an understanding of their home power systems, the alternative designs and constructions of their homestead shelters, and/or views and insights about corporate business and political systems, which here again appears to complement Tatum's (1996) observation of minimized novice/expert distinctions.

Many of the respondents, regardless of their rural or urban proximities, spoke of and achieved varying success in developing and learning about methods and techniques of producing and preserving food; generating and storing energy; maintenance and repair of common household devices; and approaches to preventive, holistic home health care. Thus, in short, for those involved in sustainable living practices, their distinctive qualities, which seem to set them apart from the social mainstream, appear to derive not simply from what, how, and why they do what they do, but also from the wisdom accrued from their skills of critical thinking, active learning, and information comprehension.

Accordingly, much can be learned from the experience, knowledge, and wisdom of those involved in this study and others engaged in similar practices. In light of their examples, it seems reasonable to assert that all people can and should take responsibility for learning, developing, practicing, and modeling sustainable living efforts, if not for themselves now, then for those who will eventually inherit the world. But, to be reasonable, allowances must be made for *how* people can fulfill such a responsibility, though not necessarily *when*--living more sustainably can begin at any time. Here, then, an argument can and should be made of the importance of transition.

As evidenced in the examples of those involved in the study, learning to live and work more sustainably seems to be a personal evolutionary process of experience, knowledge-building, and integration, involving changes in behavior and awareness along the way. Common sense would suggest that such a process takes time, though it does not necessarily inform us of how much time it should take. Thus, given the nature of the challenge, and the relative level of difficulty in learning new ways to live and work, it cannot be reasonably expected that all people can and should *fulfill* their responsibility for sustainable living at once. However, it is reasonable to expect that all people begin their *transition* towards sustainable living at once, though not necessarily marking achievements at the same time, rate, or in the same way. With this in mind, it is apparent that contemporary society has a tremendous transitional task ahead of it. The following section introduces implications and recommendations for professional social work in the interest of effectively assisting and participating in this process.

IMPLICATIONS AND RECOMMENDATIONS FOR SOCIAL WORK

The social work profession, according to Hoff and Polack (1993), has the theoretical base and practice skills to respond to the social dimensions of environmental issues at the local, national, and international levels. Thus, it would seem impossible for social workers to acquiesce, whether by indifference or ignorance, "to a continuation of an international order which continually intensifies both the impoverishment of disadvantaged nations and groups and the depletion of the resource base" (McNutt & Hoff, 1995, p. 298).

Furthermore, according to Wenz (1988), we, as a society, have an obligation to become better informed, to be open to change, and to work in our public and private roles toward a world that is increasingly environmentally just. On this point, social work can serve as a professional role model in this regard. With this in mind, the following four-element framework offers possible guidelines for integrating sustainable living practices into professional social work education, research, and practice.

Framework for Integrating Sustainable Living Practices into Professional Social Work

1. **Making social, economic, and environmental justice a priority.** All of society is affected by the quality of the natural environment; however, with the widening economic gap between the rich and the poor, these effects are disproportionately distributed among those in society, with people of color, women, and the poor experiencing them most acutely. Thus, the contemporary economic order is viewed

as unjust given that economic rewards are not shared by all, are not in the best interests of all, and are derived largely from the structured maltreatment and manipulation of many humans and non-humans, both directly and indirectly, by a small number of people.

Consequently, people who are less powerful (in that they do not enjoy economic rewards which lead to the acquisition of social power) are caught in a three-dimensional bind: (a) disenfranchised, they are forced to participate in the unjust, unsustainable economic system in order to acquire resources for survival; (b) consequently, they must participate in activities which exploit, exacerbate, and perpetuate their current disadvantaged status; while (c) sharing with the rest of humanity a responsibility to learn, adopt, and adapt sustainable living practices. With this in mind, professional social work must respond by arguing for and actively demonstrating that social, economic, and environmental justice is a top priority within practice, research, and education arenas.

2. **Integrating sustainable living themes into community practice and policy arenas.** In reference to the above discussion, and in accordance with the viewpoints of Fellin (1995) and Weil (1996), integrating sustainable living themes into community practice, policy development, organizing, and administration arenas would serve to address the matrix of social, political, economic, technological, and environmental contexts at local, bioregional, national, and international levels. For example, educators, researchers, and students could participate in community development initiatives which incorporate elements of ecovillage design similar to

those being developed by the respondents in this study. One approach recently considered for urban Knoxville, Tennessee, would link a church outreach program and a non-profit environmental group to form an after-school youth development program with the purpose of providing recreational and educational activities for local youth. Such a program would offer an alternative to gangs and drugs, while providing exposure to examples of sustainable living practices such as solar energy, permaculture design, and small business training opportunities. In short, the program was conceptualized by social workers, clergy, and community residents as a means by which to reach and inform today's youth toward becoming contributing members of a developing sustainable society.

Also, social work is positioned to assertively critique and challenge policies with respect to how race, class, gender, and environmental concerns are addressed. Doing so seems in keeping with Milbrath's (1989) notion of designing government and politics to be effective in promoting social learning towards sustainability.

3. **Personal modeling of sustainable living practices:** Social workers can model aspects of sustainable living by learning about and incorporating the practices of others in view of how these practices can be useful to society. However, such efforts must reflect sensitivity to the circumstances which influence how sustainable living practices are to be learned and incorporated by others. In light of the bind which disenfranchised people face, learning and adopting sustainable living practices may be ineffective, if not unachievable. It is important to distinguish between people who are able to exercise their choice to practice sustainable living and those who are not;

even the best examples of sustainable living are incomplete if the context of its application does not take into account the requirements of social, economic, and environmental justice.

On this point, social workers can advocate and foster social change by declaring that sustainable living is not an exercise of sacrifice, but rather a life-long vocation of redefining what can be referred to as "the good life." For example, many people are currently engaged in a contemporary notion of the "good life" which includes mainstream amenities such as fuel-inefficient luxury automobiles, dependent suburban homes, chemically-fertilized and manicured lawns, meat-based diets, and/or year-round ambient climate control at home and work. Unfortunately, these types of social benefits enjoyed by some are acquired and maintained on the "backs of others," reflecting what Wenz (1988) discussed as the unfair distribution of benefits and burdens (i.e., social and environmental costs of extracting and refining oil for fuels [Rosenbaum, 1991]; the centralized production and distribution of food [Berry, 1986]; the production and consumption of beef [Rifkin, 1992]; and lifestyles which produce disconnections between humans and the outdoor natural world [Nolt, 1995]). Through their practice of sustainable living, social workers could serve to model a responsible, just lifestyle which accounts for how they acquire and consume their resources in ways that are satisfying and responsible (e.g., use of renewable fuels and energies, consumption of local, organic foods and adoption of vegetarian diets, increased non-violent interaction with nature, etc.).

4. **Making personal and professional connections within an interdisciplinary, bioregional context:** Professional social work education, research, and practice, across micro and macro-practice levels, should be informed by personal experience in practicing sustainable living. Making connections between the personal and professional spheres allows social workers to offer their clients, students, and colleagues first-hand insights about the viability and availability of such practices, and its salience to professional social work. Otherwise, social workers run the risk of contributing to the maintenance of unsustainable, unhealthy, and unjust social systems which they are trying to change.

Expanding on the example posed by those involved in this study, social workers could integrate and model similarly innovative principles and methods of sustainable living within their agencies, offices, classrooms and communities. For example, social workers could go one step further than the popularized recycling of paper, by investing in the use of alternative paper products, such as tree-free Kenaf, and thus help to protect valuable forest lands, whether they be located in their bioregion or elsewhere, while offering parallel support to new sustainable industries. Or, social workers could become knowledgeable of the functions and benefits of renewable energy systems, such as solar and/or wind power, and begin to model personal responsibility for the origin of the electricity which powers their office, classroom or clinic. (See Hoff & McNutt, 1995; Hoff & Polack, 1993; Nolt et al., 1997 for more information.)

In complement to these types of activities, efforts should be made to advance

interdisciplinary perspectives and critical thinking skills towards a complex and operative view of how our interdependent social, political, economic, and environmental systems function (See Gibbs & Gambrill's [1996] Critical Thinking for Social Workers). Doing so can potentially produce a level of understanding among educators, researchers, and practitioners which is accurate and insightful with respect to how the social world functions amidst the influences of these systems. Thus, for example, clients, students, and colleagues would be exposed to new perspectives and information, especially with respect to understanding the relationship between social welfare and environmental quality, via interdisciplinary classroom curriculum, research projects, the critique and development of social policies, and/or community practice initiatives.

The concept of bioregionalism can also serve as a useful rubric for people to inform their study and work. For social workers, researching and learning the socioenvironmental characteristics of a bioregion can be helpful to the design and application of individual and community-based interventions, while providing a context by which to determine whether and in what ways the interventions are effective. For example, the diagnosis and treatment of mental health conditions would take into account a sophisticated and dynamic understanding of the bioregional person-in-environment fit, including the manifestation of psychosocial problems and stressors resulting from the predominantly disjointed and unjust human/non-human relationship.

Thus, the intervention would be aimed not only at treating the condition of the

individual (i.e.,, psychotherapeutic techniques, medications, etc.), but would also explore whether such a condition reflected a fundamental socioenvironmental health issue, within a bioregional context (See What Have We Done?, Nolt et al., 1997, Chapter Ten). Admittedly, this bold approach is a departure from the contemporary interpretation and treatment of the human condition. Nonetheless, such a departure can and should be considered. (On this point, see Ives [1995] for a discussion of Ecopsychology with Theodore Roszak.) Doing so will insert the human/non-human relationship into intervention strategies as a keenly appreciated variable. Furthermore, a bioregional "lens" could serve to place socioenvironmental issues at local, national, and international levels in a context which is sensitive to the unique needs and circumstances of all bioregions and their inhabitants.

CONCLUSION

The linkages that exist between environmental issues and social welfare are of vital importance to the social work practitioner, researcher, or educator who endeavors to be insightful and effective. As time moves by and the current collage of social problems becomes further exacerbated by the pressures of acute environmental degradation, population growth, and resource depletion, the preparedness and competency of social work's response will be given its ultimate test. On this point, according to McNutt (1994), the world faces the greatest challenge it has ever faced:

> The destruction of our resource base can spell the end of humanity. The movement toward sustainability is essential if our civilization is to survive. Social

> welfare policy was born of an earlier age. Many of our traditional paradigms and modes of analysis are no longer relevant. They are based on assumptions about society, the economy, and the resource base that are no longer viable. They give us flawed explanations of the policy situation and incorrect prescriptions for change. They do nothing to support societal progress toward sustainability. (pp. 48-49)

With this in mind, the respondents' practices of sustainable living offer evidence that viable, sustainable lifestyle options exist and are readily available and applicable.

In short, this study provides exposure to the work of a small group of people whose efforts were generally aimed at rehabilitating and realigning their relationships with both the human and non-human world. In light of the growing body of socioenvironmental literature, and the ways in which it informs us of our human obligation to live more responsibly, the study and replication of these and other sustainable living practices, within and beyond professional social work, is strongly recommended. Perhaps the lesson and challenge for social workers to be drawn from these and other sustainable living examples is that professional social work would be wise to come to terms with its own unsustainable ways, if not for its own sake then for that of those it serves, while it has the opportunity to do so.

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BIBLIOGRAPHY

BIBLIOGRAPHY

Arcury, T.A., Scollay, S.J. & Johnson, T.P. (1987). Sex Differences in Environmental Concern and Knowledge: The Case of Acid Rain. Sex Roles, 16(9/10), 463-472.

Barber, B. (1984). Strong Democracy: Participatory Politics for a New Age. Berkeley: University of California Press.

Bartlett, R.A. (1995). Troubled Waters: Champion International and the Pigeon River Controversy. Knoxville: University of Tennessee Press.

Becker, H.S. (1963). Outsiders - Studies in the Sociology of Deviance. New York: The Free Press, 4-8, 9-11, 14-16.

Benson, D.E. (1992). Why Do People Believe in a Just World?: Testing Explanations. Sociological Spectrum, 12(1), 73-104.

Berger, R.M. (1995). Habitat Destruction Syndrome. Social Work, 40(4), 441-443.

Berger, R.M. & Kelly, J.J. (1993). Social Work in the Ecological Crisis. Social Work, 38(5), 521-526.

Berry, W. (1992). Sex, Economy, Freedom & Community. New York: Pantheon Books, 19-26.

Berry, W. (1986). The Unsettling of America - Culture & Agriculture. San Francisco: Sierra Club Books, 17-26, 39-81, 84-86.

Blocker, T.J. & Eckberg, D.L. (1989). Environmental Issues as Women's Issues: General Concerns and Local Hazards. Social Science Quarterly, 70(3), 586-593.

Borden, R. & Francis, J. (1978). Who cares about ecology? Personality and sex differences in environmental concern. Journal of Personality, 46(1), 190-203.

Broadened Horizons Riverkeeper Project (1992). A Citizen's Guide to Pollution in the Tennessee River, Knoxville, TN: Foundation for Global Sustainability.

Brown, L.R., Lenssen, N. & Kane, H. (1995). Vital Signs 1995: The Trends That Are Shaping Our Future. New York: W.W. Norton & Company, 15-16.

Brown, L.R., Durning, A., Flavin, C., French, H., Jacobson, J., Lenssen, N., Lowe, M., Postel, S., Renner, M., Starke, L., Weber, P. & Young, J. (1993). State of the World - 1993: A Worldwatch Institute Report on Progress Toward a Sustainable Society. New York: W.W. Norton & Company, 3-21.

Brown, L. (1981). Building a Sustainable Society. New York: W.W. Norton.

Bullard, R.D. & Wright, B.H. (1992). The Quest for Environmental Equity: Mobilizing the African-American Community for Social Change. In R.E. Dunlap & A.G. Mertig (Ed.), American Environmentalism: The U.S. Environmental Movement, 1970-1990, Washington, D.C.: Taylor & Francis New York, Inc., 39-49.

Butchart, T. (1996). Natural Building Materials, The Permaculture Activist, 35, November, 42,

Buttel, F.H. & Johnson, D.E. (1978). Dimensions of Environmental Concern: Factor Structure,Correlates, and Implications for Research. Journal of Environmental Education, 9(2), 49-64.

Cable, S. & Cable, C. (1995). Environmental Problems - Grassroots Solutions: The Politics of Grassroots Environmental Conflict. New York: St. Martin's Press, 3-4, 10-15, 25.

Cable, S. & Shriver, T. (1995). The Production and Extrapolation of Meaning in the Environmental Justice Movement, Sociological Spectrum, 15, 419-442.

Capek, S. (1992). Environmental Justice, Regulation, and the Local Community International Journal of Health Services, 22(4), 729-746.

Cole, N. & Skerrett, P.J. (1995). Renewables Are Ready: People Creating Renewable Energy Solutions. White River Junction, Vermont: Chelsea Green Publishing Company, 232.

Combs-Orme, T., Helzer, J.E. & Miller, R.H. (1988). The Application of Labeling Theory to Alcoholism. Journal of Social Service Research, 11(2/3), 73-89.

Commoner, B. (1992). Making Peace with the Planet. New York: The New Press, 10-11, 14, 171-172.

Commoner, B. (1974). The Closing Circle - Nature, Man, & Technology. New York, N.Y.: Alfred A. Knopf, Inc., 17-18, 109-110, 192-193.

Conner, T.R. (1994). Justice in Facilities Siting: An Illustration of Community Involvement. Department of Sociology, University of Tennessee, Knoxville, 1-3.

Corson, W.H., Ed. (1990). The Global Ecology Handbook - What You Can Do about the Environmental Crisis. Boston: Beacon Press, xiii, 100-107, 156-170, 246-259, 267-280, 316.

Cutter, S. (1995). Race, Class, and Environmental Justice. Progress in Human Geography, 19(1), 107-118.

deHaven-Smith, L. (1988). Environmental Belief Systems - Public Opinion on Land Use Regulation in Florida. Environment and Behavior, 20(3), 276-299.

Dunlap, R.E. & Mertig, A.G. (1992). The Evolution of the U.S. Environmental Movement from 1970 to 1990: An Overview. In R.E. Dunlap & A.G. Mertig (Ed.), American Environmentalism: The U.S. Environmental Movement, 1970-1990, Washington, D.C.: Taylor & Francis New York, Inc., 1-10.

Dunlap, R.E. & Scarce, R. (1991). The Polls--Poll Trends - Environmental Problems and Protection. Public Opinion Quarterly, 55, 651-672.

Dunlap, R.E. & Val Liere, K.D. (1984). Commitment to the Dominant Social Paradigm and Concern for Environmental Quality. Social Science Quarterly, 65(4), 1013-1028.

Fellin, P (1995). Understanding American Communities. In Strategies of Community Intervention. Third Edition, Edited by John E. Tropman, John L. Erlich & Jack Rothman. Itasca, Illinois: F.E. Peacock Publishers, Inc., 114-116.

Flacks, R. (1988). Making History - The Radical Tradition in American Life. New York: Columbia University Press, 1-7.

Foundation for Global Sustainability (1995). What Have We Done? - A State of the Region Report. Proposal Summary.

Foundation for Global Sustainability (1992). Citizen's Guide to Oak Ridge. Knoxville, Tennessee: Author.

Freudenburg, W.R. (1991). Rural-Urban Differences in Environmental Concern: A Closer Look. Sociological Inquiry, 61(2), 167-198.

Fugazzotto, P. (1994). Angling for Environmental Justice. Earth Island Journal, 9(3), 19.

Gibbs, L. & Gambrill, E. (1996). Critical Thinking for Social Workers - A Workbook. Thousand Oaks, California: Pine Forge Press.

Gilman, R. (1995). Definition of an Eco-village. In Communities Directory - A Guide to Cooperative Living. Langley, Washington: Fellowship for Intentional Community. 109.

Glaser, B.G. & Strauss, A.L. (1967). The Discovery of Grounded Theory. Chicago: Aldine Publishing.

Glock, C.Y. (1988). The Ways The World Works, Sociological Analysis, 49(2), 93-103.

Gore, A. (1993). Earth in the Balance - Ecology and the Human Spirit. New York: Plume, 162.

Greene, G.J.; Jensen, C. & Jones, D.H. (1996). A Constructivist Perspective on Clinical Social Work Practice with Ethnically Diverse Clients. Social Work, 41(2), 173.

Hackett, P.M.W. (1992). The Understanding of Environmental Concern. Social Behavior and Personality, 20(3), 143-148.

Haenke, D. (1995). Bioregionalism and Community: A Call to Action. In Communities Directory - A Guide to Cooperative Living. Langley, Washington: Fellowship for Intentional Community. 117-120.

Hand, C.M. & Van Liere, K.D. (1984). Religion, Mastery-Over-Nature, and Environmental Concern. Social Forces, 63(2), 555-570.

Harte, J. (1995). The Green Fuse - An Ecological Odyssey. Berkeley: University of California Press, 150-151.

Hoff, M.D. (1995). Environmental Foundations for Social Welfare: Theoretical Resources. In The Global Environmental Crisis - Implications for Social Welfare and Social Work. by Hoff, M.B. & McNutt, J.G., Aldershot: Avebury, 12-35.

Hoff, M.D. & Polack, R.J. (1993). Social Dimensions of the Environmental Crisis: Challenges for Social Work, Social Work, 38(2), 204-211.

Home Power Magazine, P.O. Box 520, Ashland, OR 97520.

Ives, S. (1995). The Greening of Psychology - A Conversation with Theodore Roszak. Land and People, 7(1), 23-26.

KP Products (1995). Growing Kenaf on a Small-Scale for Hand Papermaking, PO Box 4795, Albuquerque, NM 87196, p. 1.

Kearns, L. (1996). Saving the Creation: Christian Environmentalism in the United States. Sociology of Religion, 57(1), 55-70.

Kluckhohn, F. & Strodtbeck, F. (1961). Variations in Value Orientations. Evanston, Illinois: Row Peterson, 13.

Kohler Riessman, C. (1994). Preface: Making Room for Diversity in Social Work Research in Qualitative Studies in Social Work Research by Kohler Riessman, C., Editor. Thousand Oaks: SAGE Publications, vii-xx.

Kowalewski, D. & Porter, K. (1993). Environmental Concern Among Local Citizens - A Test of Competing Perspectives. Journal of Political and Military Sociology, 21, Summer, 37-62.

Krause, D. (1993). Environmental Consciousness. Environment and Behavior, 25(1), 126-142.

Lerner, M.J. (1980). The Belief In A Just World. New York: Plenum Press.

Levine, K. Gordy & Lightburn, A. (1989). Belief Systems and Social Work Practice. Social Casework: The Journal of Contemporary Social Work, 70(3), 139-145.

Mander, J. (1991). In The Absence of the Sacred - The Failure of Technology & the Survival of the Indian Nations. San Francisco: Sierra Club Books, 257.

Marien, M. (1992). Environmental Problems and Sustainable Futures - Major Literature from WCED to UNCED, Futures, October, 731-757.

Melosi, M. (1987). Energy and Environment in the United States: The Era of Fossil Fuels. Environmental Review, 11(3), 167-188.

McCormick, F. (1994). Institute for International Training in Sustainable Development, Program Brochure, Knoxville: University of Tennessee, Department of Ecology.

McKinney, M.L. & Schoch, R.M. (1996). Environmental Science - Systems and Solutions. Minneapolis \ St. Paul: West Publishing Company, 23.

McNutt, J.G. (1994). Social welfare policy and the environmental crisis: It's time to rethink our traditional models. In The Global Environmental Crisis - Implications for Social Welfare and Social Work. by Hoff, M.B. & McNutt, J.G., Aldershot: Avebury, 48-49.

McNutt, J.G. & Hoff, M.B. (1994). Conclusion: Dilemmas and challenges for the future of social welfare and social work. In The Global Environmental Crisis-Implications for Social Welfare and Social Work. by Hoff, M.B. & McNutt, J.G., Aldershot: Avebury, 297-304.

Milbrath, L. (1996). Becoming Sustainable: Changing the Way We Think. In Building Sustainable Societies - A Blueprint For A Post-Industrial World. Dennis C. Pirages, Editor, Armonk, New York: M.E. Sharpe, 275-297.

Milbrath, L. (1989). Envisioning a Sustainable Society: Learning Our Way Out. Albany: State University of New York, 118-134, 232-254.

Milbrath, L. (1984). Environmentalists: Vanguard for a New Society. New York: State University of New York Press, 7-10, 22.

Miller, J. (1993). The Wrong Shade of Green - Orthodox economics puts profits before sustainability. Dollars & Sense, April, 6-9.

Mohai, P. (1985). Public Concern and Elite Involvement in Environmental Conservation Issues. Social Science Quarterly, 66(3-4), 821-838.

Mollison, B & Slay, R.M. (1995). Introduction to Permaculture. Tyalgum, Australia: Tagari Publications, 1.

National Association of Social Workers (NASW) (1990). National Association of Social Workers code of ethics. Silver Spring, MD: Author.

Neufeldt, V. & Guralnik, D. (Eds.). (1988). Webster's New World Dictionary of American English, New York: Author.

Nolt, J.; Bradley, A.L.; Knapp, M.; Lampard, D.E.; & Scherch, J. (1997). What Have We Done?: The Foundation for Global Sustainability's State of the Bioregion Report for the Upper Tennessee Valley and Southern Appalachian Mountains. Washburn, Tennessee: Earth Knows Publications, 2-4, 243-246.

Ochre, G. (1996). Community Glue. Permaculture Magazine, 12, Summer, 12-14.

Perlmutter, H.V. & Trist, E. (1986). Paradigms for Societal Transitions. Human Relations, 39(1), 2-3.

Pirages, D.C. (1977). Introduction : A Social Design for Sustainable Growth. In The Sustainable Society. D.C. Pirages, Editor. New York: Praeger, 1-13.

Ponting, C. (1991). A Green History of the World: The Environment and the Collapse of Great Civilizations. New York: Penguin Books, 346, 396-398, 407.

Potts, M. (1994). Independent Living in Solar Living Sourcebook: The Complete Guide to Renewable Energy technologies and Sustainable Living, Schaeffer and colleagues, White River Junction, Vermont: Chelsea Green Publishing Company, 7-10.

Potts, M. (1993). The Independent Home: Living Well with Power from the Sun, Wind, and Water. Post Mills, Vermont: Chelsea Green Publishing Company, 3-4,

Qualitative Solutions and Research (1996). NUD-IST Non-Numerical, Unstructured, Data - Indexing, Searching, Theorizing. Thousand Oaks, CA: SCOLARI-Sage Publications Software.

Rifkin, J. (1992). Beyond Beef: The Rise and Fall of the Cattle Culture. New York, New York: Plume, 159-160.

Ritzer, G. (1996). The McDonaldization of Society - An Investigation into the Changing Character of Contemporary Social Life. Thousand Oaks, CA: Pine Forge Press, 9.

Rogge, M. (1994). Environmental Injustice: Social Welfare and Toxic Waste. In The Global Environmental Crisis - Implications for Social Welfare and Social Work. by Hoff, M.B. & McNutt, J.G., Aldershot: Avebury, 53-74.

Rosen, R. (1994). Who Gets Polluted? The Movement for Environmental Justice. Dissent, Spring, 223-230.

Rosenbaum, W.A. (1991). Environmental Politics and Policy - Second Edition. Washington, D.C.: CQ Press, 243-246, 300-322.

Rubin, H.J. & Rubin, I.S. (1995). Qualitative Interviewing - The Art of Hearing Data. Thousand Oaks, CA: SAGE Publications, 238-351.

Rubington, E. & Weinberg, M.S. (1973). DEVIANCE - The Interactionist Perspective, New York: MacMillan Company, p. vii.

Samdahl, D.M. & Robertson, R. (1989). Social Determinants of Environmental Concern - Specification and Test of the Model. Environment and Behavior, 21(1), 57-81.

Schaeffer, J & The Real Goods Staff (1994). The Real Goods Solar Living Sourcebook: The Complete Guide To Renewable Energy Technologies and Sustainable Living. White River Junction: Chelsea Green Publishing Company, 5.

Schahn, J. & Holzer, E. (1990). Studies of Individual Environmental Concern: The Role of Knowledge, Gender, and Background Variables. Environment and Behavior, 22, 767-786.

Scherch, J. (In-press). Eco-village Development: A Report from Southern Appalachia. In Sustainable Community Development: Case Studies in Economic, Environmental & Cultural Revitalization. Edited by Marie D. Hoff.

Schnaiberg, A. & Gould, K.A. (1994). Environment and Society: The Enduring Conflict. New York: St. Martin's Press, 22-41.

Sherman, E. & Reid, W.J. (1994). Introduction: Coming of Age in Social Work - The Emergence of Qualitative Research in Qualitative Research in Social Work, Sherman, E & Reid, W.J., Editors. New York: Columbia University Press, 1.

Smith, A. & The Student Environmental Action Coalition (SEAC). (1993). Campus Ecology: A Guide To Assessing Environmental Quality & Creating Strategies for Change. Los Angeles: Living Planet Press.

Social Impact Foundation (1992a). Additional Actions for Sustainable Living. Impact, 27(5), May, 22-25.

Social Impact Foundation (1992b). Principles for Sustainable Living. Impact, 27(5), May, 16-21.

Southern Appalachian Man and the Biosphere Cooperative (SAMAB) (1996). Summary Report. Southern Appalachian Assessment. July, Figure 1, 4.

Soliman, H. (1993). Factors that Influence Family Response to Contamination of Water Resources: The Case of the Pigeon River. (Doctoral dissertation, University of Tennessee, 1993) Dissertation Abstracts International, 54(10), 11, 80-81, 187-188.

Stern, P.C., Dietz, T. & Kalof, L. (1993). Value Orientations, Gender, and Environmental Concern. Environment and Behavior, 25(3), 322-348.

Szaze, A. (1994). Introduction: Environmental Crisis and the Search for a Politics That Works. In Ecopopulism, Toxic Waste, and the Movement of Environmental Justice. Minneapolis: University of Minnesota Press, 1-7.

Tatum, J.S. (1992). The Home Power Movement and the Assumptions of Energy-Policy Analysis. Energy, 17(2), 99.

Tatum, J.S. (1996). HOME POWER: A Model for Participatory Democracy in Technology Decision Making. (NSF Grant Number SBR-9511857). Washington, D.C.: Ethics and Values Studies Program of the National Science Foundation. November.

The Tennessee Conservationist (1994). State of the Environment: Preview. Nashville: Department of Environment and Conservation.

The Farm (1995). Frequently Asked Questions [On-line]. Available: http://www.gaia.org/farm

The Wilderness Society (1996). Tennessee's Mountain Treasures, Washington, D.C.: Author, 74.

Tognacci, L., Weigel, R., Wideen, M. & Vernon, D. (1972). Environmental Quality--How Universal Is Public Concern? Environment and Behavior, 4(1), 73-86.

United Nations Commission on Environment and Development (UNCED) (1992). Rio Declaration.

Van Liere, K. & Dunlap, R. (1981). Environmental Concern: Does It Make A Difference How It's Measured? Environment and Behavior, 13, 1-30.

Van Liere, K. & Dunlap, R. (1980). The Social Bases of Environmental Concern: A Review of Hypotheses, Explanations and Empirical Evidence. Public Opinion Quarterly, 44, 181-197.

Wenz, P.S. (1988). Environmental Justice. Albany, N.Y.: State University of New York Press, xi-xii, 2, 5, 310-335.

Weil, M.O. (1996). Community Building: Building Community Practice. Social Work, 41(5), September, 485.

Witkin, S.L. (1991). The Implications of Social Constructionism for Social Work Education. Journal of Teaching in Social Work, 4(2), 38-39.

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APPENDIXES

APPENDIXES

APPENDIX I

INTERVIEW GUIDE

I. Identification of Sustainable Living Practices

1. Does your production and/or consumption of food reflect a purposeful sustainable living method?
2. Would you say that your home, community and/or place of business is a symbol of your interest in and commitment to sustainable ways of living?
3. Do you use sustainable methods to produce and store your own energy?
4. Do you use sustainable transportation methods (i.e., bicycles, electric cars, etc.)?
5. Do you produce and/or use alternative medicines and health care products?
6. Would you agree then that your method falls within at least one (if not more than one) of the five categories of sustainable living as referenced in this study (i.e., food, shelter, energy, transport, health)?
7. How much money was invested in the method(s)?
8. How much time has been invested in the method(s) (i.e., development, maintenance, training, etc.)?
9. Can you name at least two additional persons who are practicing methods of sustainable living with whom an interview can be conducted? If yes, who?

II. Descriptive Information about the Sustainable Living Practices

A. Sustainable Homesteads and Sustainable Communities

- **Food**

1. Describe how involved you (and perhaps others in your family, community, etc.) are in producing your own food.
2. How did you get started?
3. What methods of growing and harvesting your own food were/are you thinking about?
4. What types of crops are grown?
5. Is wheat, corn or other land-intensive crops produced?
6. Are the crops organically grown?
7. If yes, how do you define organic?
8. Is permaculture practiced?
9. What types of fertilizers (if any) and pest-control methods do you use?
10. How long have you been raising these crops?
11. Describe your crop rotation schedule and your rationale for this?
12. Are animals raised? If so, what animals and how many?
13. Do these animals compliment each other with regard to grazing habits, insect

control, protection from predators, etc.?
14. How are the animals consumed? What animal products are used?
15. How are the animals fed and cared for?
16. What types of medications, ointments, medicinal herbs, etc. are used?
17. What is the approximate annual fruit and vegetable yield?
18. What methods are used to preserve fruits and vegetables?
19. Are multi-use non-food crops (such as Kenaf, soybeans, etc.) produced?
20. If yes, what non-food crops are these and why?
21. What becomes of excess yield? (Cooperatives and local distribution?)
22. How are meals prepared (cooking methods, heat sources, etc.)
23. What becomes of various household wastes?
24. Is recycling considered to be an important component to this lifestyles, workstyle?
25. What composting methods are used?
26. What handtools are used in harvesting crops and maintaining grounds and structures?
27. Do you design and/or construct your own tools?
28. Are you or any members of your immediate family vegetarian?
29. With regard to #19, why or why not?
30. In retrospect to your personal development of sustainable food practices, what would you do differently?
31. Have you sacrificed any aspects of your previous diet?
32. Are you or any member of your immediate family a member of a group from which you receive support, guidance, and/or instruction for your sustainable food efforts?
33. What external sources of information or support are utilized (i.e., government agencies, cooperatives, etc.)?
34. Do you shop at the food co-op?
35. Do you shop exclusively at a food co-op or do you also shop at a local supermarket?
36. Do you eat fast-food?
37. Why endeavor to grow your own food?
38. What obstacles have you encountered regarding your food production?
39. Do you collect seeds? If so, why?
40. What do you think about current agri-business practices?
41. With regard to this line of questioning, was anything missed?

- **Shelter**

1. Describe the appearance, design characteristics, remarkable qualities, etc. of your shelter.
2. What is the purpose of the shelter(s)?
3. If you did not design or build the structure, how and why did you choose it?
4. What types of design features have been integrated into the structure (i.e., straw bale / passive solar homes, geodesic design, compacted-Earth, recycled-materials, efficient windows, etc.)?
5. If you did design and/or build your structure, why did you choose the current design?
6. What types of research and experimentation were conducted prior to designing the

structure?

7. How did you learn about the shelter \ design?
8. Who built it, and describe the process.
9. How much did it cost?
10. Was \ is it financed?
11. What resources were used (building materials, assistants, etc.)?
12. Where were these resources obtained?
13. How much did the resources cost?
14. In reference to overall and monthly costs of the structure, how does the performance of the structure compare to the types and degree of environmental benefits?
15. What would be done differently if another structure were to be built?
16. How is the property on which the structure stands maintained?
17. What materials and tools are currently used to maintain the structure (i.e., non-fossil fuel mowers and shredders, hand tools, etc.)?
18. Where are materials and tools obtained and stored?
19. What tools have you made yourself?
20. Have land trusts been considered or utilized?
21. What would you do differently?
22. Describe your land/property and any remarkable features.
23. With regard to this line of questioning, was anything missed?

- **Energy**

1. Describe how involved you (and perhaps others in your family, community, etc.) are in producing your own energy.
2. Did you design and/or install your own so-called "home power" system?
3. If yes to #2, would you say that you were already knowledgeable of designs and methods of home power systems from which to model or did you learn as you went?
4. Did you attempt to improve / maximize energy efficiency before developing a renewable energy system? If yes or no, please explain.
5. Is your system cost effective in comparison to "utility" power? If so, how and why?
6. Do you consider your home power system to be environmentally sensitive?
7. Elaborate on what motivates you in seeking to produce your own power.
8. Describe to what extent variables such as affordability and attractiveness influenced your decision to develop your home power system.
9. What are the types and sources of energy produced and consumed?
10. Identify and describe the appliances and various uses which currently draw from your home power system.
11. With regard to your system components, what type of inverter, charge controller, PV panels, wind machine, hydro etc. do you use?
12. Who manufactures them and what are their specifications?
13. What influenced you to choose these components?
14. With regard to the energy produced, specifically what is involved in this process; how is it stored and delivered to your components?
15. Have solar photovoltaic, solar thermal, wind, small scale hydro and geothermal and fuel cells technologies been used or considered? If so, how?

16. If used, what are some examples of biomass fuels that are being used?
17. What methods of efficiency are reflected in the normal use and consumption of these energies (efficient motors, appliances, lights and windows, etc.)?
18. In the interest of hearing from you your views of current energy consumption, usage and production trends, describe what you know about local, bioregional, national and/or international energy trends.
19. Briefly describe your knowledge of and views toward current Tennessee Valley Authority (TVA) energy policies.
20. In your view, does TVA policy adequately reflect energy efficiency and renewable energy options?
21. What, if any, records do you keep of your system?
22. If you have one, describe you energy budget.
23. If you do not have an energy budget, why not?
24. Describe how you (and your family, business, etc.) benefit from your use of an energy budget.
25. Who is principally responsible for the maintenance of the system, or how are these duties shared?
26. How has your family, community, colleagues, etc. responded to your "alternative lifestyle"?
27. If beginning again, would you choose to do what you have done?
28. With regard to producing your own energy, what would you do differently?
29. How has accessibility and availability of resources (i.e., construction materials, appliances, fuel, etc.) influenced your home power system design and functioning?
30. Why pursue alternative energy sources?
31. Are all sources of alternative energy viable for use in this region?
32. How do you cool or heat your home alternatively?
33. What educational references have been helpful to you?
34. Are you pleased with the performance of your system?
35. Do you consider alternative energy to be expensive?
36. What prevents impedes social use of alternative energy?
37. With regard to this line of questioning, was anything missed?

- **Transportation**

1. Describe your current and perhaps predominant mode of transportation.
2. What do you know about the range and current developments of alternative vehicles and fuels?
3. Is such knowledge being used insofar as exploring ways of integrating alternative transport into the normal activities of daily living?
4. Do you use mass transit? Why or why not?
5. Are you a member of any organizations or clubs which focus on methods of sustainable transportation?
6. How much of the weekly expenses account for transportation costs?
7. Are bicycles and/or other types of human-powered modes of transport utilized?
8. Are you knowledgeable and/or supportive of Greenways and/or other forms of green urban planning for safe bike and foot travel (greenway interconnects)?

9. Do you support regulations protecting and encouraging alternative transportation?
10. Describe what you know about the historical evolution of transportation in the United States and what significance (if any) this has on your pursuit and use of alternative transportation methods?
11. What effect has your pursuit and use of your transportation method(s) had on your relationships with family, community, colleagues, etc.?
12. What books have you read about alternative transportation, and what have you learned?
13. What \ who influenced you to modify your lifestyle in this way?
14. What would you do differently?
15. What obstacles exist which inhibit or prevent you from using alternative transport as you would like?
16. In what ways have you changed your means of transporting yourself?
17. With regard to this line of questioning, was anything missed?

- **Health**

1. Describe your motivation for producing and/or using alternative medicines?
2. Describe the ways in which you, your family and/or your community benefit from the use of alternative health care methods.
3. How do you define organic medicines?
4. What types of organic medicines do you use?
5. How are these medicines produced?
6. When and why would "modern medicines" be used?
7. Where are they obtained?
8. What process is used to determine / decide whether "modern medicines" are necessary?
9. Are alternative health care products / toiletries used? If so, what?
10. Are alternative household products and services used? If so, what?
11. When, where, and how often are purchases made from "department stores" for personal health and hygiene products?
12. What is known about composting toilets? Are composting toilets used?
13. How did you learn about such toilets?
14. With regard to health and/or life insurance, do you currently have a policy?
15. Does this decision to have insurance or not reflect your confidence in the benefits derived from your chosen methods of personal health and hygiene?
16. What would you do differently?
17. Do you grow your own medicinal herbs?
18. What alternative health practices have you incorporated into your lifestyle?
19. With regard to this line of questioning, was anything missed?

- **Future of prototype \ methods**

1. What comes next?
2. How will your current methods change?
3. Who might you work with in the future to further develop your method?

B. Sustainable Business

Who is practicing what sustainable business and where?

1. What type of business is being operated? What type of work do you do?
2. How did the business get started?
3. Who started the business?
4. Is the current location the original location of the business?
5. If no, where the business originate?
6. How is business?
7. What types of products and/or services are provided?
8. Do you select other companies with whom you do your business?
9. What is you criteria for selecting your suppliers/products?
10. What, if any, products do you produce yourself?
11. Where/how do you acquire the resources to produce your products?
12. Why have/operate this type of business?
13. How receptive have people been to your business?
14. What "niche" does your business fill?
15. What obstacles to your business development have you encountered?
16. How did you learn to do what you do?
17. What personal benefits are derived from your method/approach to business?
18. Generally, what is involved in operating you business?
19. Who are your customers/constituency?
20. What keeps people from using your business?
21. What would you do differently?
22. How long have you been doing what you do?
23. Do you use the products you sell?
24. Can anybody do what you do?
25. In what ways does your workstyle reflect your interest in sustainability?
26. How/where does your business fit into the larger community?

III. Pathways to Sustainable Living

Why is the sustainable living method being practiced?

- **Life experience**

1. What aspects of your family background do you feel contributed to your desire and ability to live sustainably?
2. What aspects of your community have contributed to your interest and ability in sustainable living?
3. What aspects of the bioregion have contributed to your interest and ability in sustainable living?
4. What cultural and/or religious considerations have influenced your decision to live sustainably?
5. What travel experiences have contributed to your interest and ability to live

sustainably?

6. What aspects of your work / professional life have influenced your interest and ability in living sustainably?
7. Why do you do what you do?
8. Have environmental concerns contributed to your desire to live/work more sustainably?
9. Describe the transition you have undergone towards living more sustainably?
10. Do any references come to mind which have been especially helpful?
11. Do you see/feel an urgent need for people to live more sustainably?
12. Define/describe what you mean by sustainability.
13. With regard to #4, do you attend religious services?

- **Undesirable aspects of previous unsustainable lifestyle**

1. What types of products were previously consumed?
2. What aspects of the products consumed were / are considered undesirable?
3. What types of waste products were produced?
4. What types of services were previously used / needed (e.g. medical, dental, etc.)?
5. What types of electronic equipment do you no longer use?
6. Do you own a television?
7. If yes, do you watch television and how many hours per day?
8. What influence do you feel television has / had on your lifestyle?
9. What are some of the undesirable aspects of lifestyle which you have attempted to address?
10. What are your thoughts, if any, about the social consumption of technology?
11. What is your view of the so-called mainstream?
12. Comment on/critique higher education.
13. In what ways have you become a more conscious consumer?
14. How might the mainstream become more involved in sustainable living?
15. What do you think about TVA or other government agencies?

- **Environmental benefits**

1. Describe the achieved and potential benefits of your sustainable living lifestyle.
2. Are wildlife sightings a part of your measure of these benefits?
3. Is land usage and soil quality a part of your measure of these benefits?
4. Is water quality a part of your measure of these benefits?
5. Is air quality a part of your measure of these benefits?
6. Is aesthetic (visual) appeal a part of your measure of these benefits?
7. Is environmentally-sensitive consumption and waste management a part of your measure of these benefits?
8. Is energy efficiency a part of your measure of these benefits?
9. Is modeling, teaching and learning sustainable living methods a part of your measure of these benefits?

How was the practice learned and developed?

1. How long have you been working / attempting to live sustainably?
2. What types of training have you had (i.e., formal and informal sources of instruction and education)?
3. What source of familial and community support have you received?
4. Is this support current?
5. Do others generally accommodate your "different" lifestyle?
6. Do others accept your "different" lifestyle?
7. What issues have surfaced between your choice to do what you do and those who choose not to?
8. What major obstacles or difficulties did you encounter during the development of your homestead or as a member of a sustainable community?
9. Was your family, community, friends, etc. receptive to your initiative?
10. How could your experience have been made easier?
11. What could others learn from your experience?
12. What advise could/do you offer others in the interest of living more sustainably?
13. What have you learned from the experience of others?
14. Do you tell others about what you do?
15. How and in what ways have you reduced your consumption and waste levels?
16. How do you tell others about what you do/believe?
17. Are you a current or past member of any environmental groups or organizations?
18. How did you learn to do what you do?
19. What have you learned from your experience?
20. What would you do differently?
21. Can anybody do what you do? Is it viable for others?

- **Costs \ effects associated with sustainable living conversion and practice**

1. Describe the costs you have incurred as a result of your decision to pursue a sustainable lifestyle (i.e., individual costs, multi-dimensional reputation, familial / social / political relations, etc.).
2. What has helped you to persevere during difficult times?
3. What drives or motivates your desire to live sustainably?
4. What effect has your choice / change had on marital, family, community and relations?
5. What financial costs have been incurred (i.e., retrofitting, purchases, investments, specific debt, etc.)?
6. What emotional / psychological costs have been incurred (i.e., loneliness, fear, stress, etc.)?
7. What professional costs have been incurred (i.e., needs for retraining and continuing education, resignation from existing job, lack of peer supports and understanding, etc.)?
8. What are sources of frustration, anger, etc.?
9. How might/do you respond to moments of frustration?
10. What effect has your sustainable living activities had on your children?

- Is there anything that I have not asked about which you would like to comment?

IV. Characteristics of People Practicing Sustainable Living

- **Race**

1. Caucasian (white)
2. African-American
3. Hispanic
4. Native American
5. Asian
6. Indian
7. Other:

- **Religious affiliation**

1. Protestant
2. Catholic
3. Jewish
4. Muslim / Islamic
5. Other:

F. Class / socio-economic status of (subject).

- **Annual Income**

6. $0 - $10,000
7. $11,000 - $15,000
8. $16,000 - 20,000
9. $21, 000 - $25,000
10. $26, 000 - $30,000
11. $31,000 - $35,000
12. $36,000 - $40,000
13. $41,000 - above

G. Gender of subject(s).

1. Male
2. Female

H. Educational background

1. Years of education completed.
2. Highest degree completed.
3. Educational discipline pursued.

APPENDIX II

MAJOR THESES OF WENZ'S (1988) CONCENTRIC CIRCLE THEORY

1. Closeness is defined in terns of the strength and number of one's obligations to others.

2. The obligations arise in the context of actual or potential interactions. These relationships of interaction are tied by commonly respected justifications to the obligations in question. So the closeness that (I) am discussing is not formally tied to emotional attachments or to subjective feelings of closeness.

3. The generally respected justifications for obligations include, but are not limited to, the following: I have benefited from another's kindness or help; I am in a particularly good position to help the other; another person and I have undertaken a project together; the other person and I are working to realize the same goal, foster the same ideal, or preserve the same traditions; I have unilaterally undertaken a commitment to another; my actions have a particularly strong impact upon the other; and I have perpetrated or benefited from a past injustice toward the other, or a past injustice which adversely affects the other. These relationships, and others, give rise to a complex set of moral considerations to which the concentric circle perspective adds some order, without imposing a rigid hierarchy.

4. Mere biological relatedness does not justify obligations, so the concentric circle approach does not endorse racism or specieism.

5. Other things being equal, I have stronger and/or more numerous obligations to satisfy the preferences of others as they occupy closer concentric circles.

6. Other things being equal, I have strong and/or more numerous obligations concerning the positive rights of others as they occupy closer concentric circles.

7. Other things being equal, I have a greater obligation to respond to positive rights (defined as those rights which secure the necessities of life for all people) than to the satisfaction of preferences, even when those whose positive rights are in question are more remote from me than are those whose preferences are at issue.

8. Non-human animals do not have positive rights, except in cases in domestic and farm animals (whose dependence is caused by human beings).

9. Negative rights apply to all subjects-of-a-life, regardless of placement on a concentric circle. But such rights are not absolute. They can in some cases be overridden by other considerations.

10. Nonsentient constituents of the environment do not have rights, but we have an obligation to ameliorate the destructive environmental impact of our industrial civilization. We have some obligation to work for the preservation of evolutionary processes that tend to increase biotic diversity. This includes working to preserve endangered species and remaining wilderness areas.

APPENDIX III

SAMPLE LETTER OF INFORMED CONSENT

Dear Friend,

I am currently collecting data for my doctoral research towards a degree in Social Work from the University of Tennessee and I would value your participation in this research. In short, we will discuss how you practice methods of sustainable living at your homestead, within your community and/or at your place of business. Generally, the purpose of this research is to examine the ways and means of various sustainable living practices in the East Tennessee and Southern Appalachian bioregion. More specifically, given that a growing number of people in the bioregion have chosen to adopt methods of sustainable living which embody and promote environmental sensitivity, ecological integrity and individual self-sufficiency, this study will examine what efforts are being made, where, by whom, and why.

Study Method

Through the course of an interview which I will schedule with you, I will be asking you a series of questions in an attempt to get as full a description of what you do as possible. A guiding principle for this interview is that you should feel free to disclose as much or as little as you want. Ideally, the interview will take place at either your homestead, a designated place within your community, or at your place of business. The interview will have a duration of approximately one and a half (1.5) hours.

I ask that you permit me to take both written notes and an audio-tape recording of the interview session. The notes and recordings will be coded by number, preserving confidentiality, and securely stored in a locked filing cabinet at my home office. Access to these materials will be provided to both myself and a hired Research Assistant who will be assigned the task of transcribing the audio-tape recordings. These notes will be used solely for the purpose of assisting me in recalling important details to the individual interview in the interest of clarity and accuracy. The Research Assistant will not have access to any information which might identify you in any way.

Participant Responsibilities

If you agree to participate, you will have three responsibilities:

1. To be available at the time, date and place agreed upon and scheduled, and to participate in the interview. If for whatever reason you are unable to participate, you will notify me in advance of the interview so that I might plan accordingly.
2. To review, comment on (if necessary) and return one signed copy of this Letter of Informed Consent, using the enclosed self-addressed stamped envelope. The second enclosed copy is for you to keep.

The University of Tennessee defines "Informed consent" to mean the knowing consent of an individual or his/her legally authorized representative, so situated as to be able to exercise free power of choice without undue inducement of any element of force, fraud, deceit, duress, or other form of constraint or coercion (45 CFR 46.116)

3. If possible, identify two (2) additional subjects believed to be practicing some type of sustainable living method, to be contacted at the discretion of Mr. Scherch for possible participation in the study.

Potential Risks and Benefits

Given the nature and purpose of this study, no foreseeable risks or discomforts to you or others, of any kind, is anticipated. This view is built upon the following definition of minimal risk as specified by the University of Tennessee: "Regulations define "minimal risk" to mean that the risk of harm anticipated in the proposed research are not greater, considering probability and magnitude, than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests" (45 CFR 46.102). Anticipated benefits of your participation in the study might include: increased knowledge of sustainable living methods in the bioregion, and experience gained through participating in this research process.

Please note that all participation is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled, and you may discontinue participation in the study at any time without penalty or loss of benefits to which you is otherwise entitled. Should you at any time have concerns regarding my conduct, credentials, etc., I will furnish you with the names of appropriate individuals whom you may contact regarding these concerns.

If you have questions about the study, please feel free to ask at any time. I have provided my address and phone number should you need to contact me about this research project.

Jonathan M. Scherch, M.S.W.
2743 Wimpole Avenue
Knoxville, TN 37914-5958
Tel: (423)-524-4053

Informed Consent

I have read and understand the above Information and Consent Form. I understand that my participation in this research project is completely voluntary on my part, and I may withdraw at any time from further participation. I agree to participate in this project.

Signature: _____ Date: _____

Witness: _____ Date: _____
Jonathan M. Scherch

APPENDIX IV

PRINCIPLES OF THE ECOLOGICAL CREDO FOR SOCIAL WORKERS (Berger & Kelly, 1993)

1. Social work is not only concerned with the interactions between people and their social environments, but with the full range of interconnectedness among all systems within Earth's biosphere.

2. Social work promotes self-determination and respect for individuals within the context of the individual and community respect for nature. Self-respect and respect for nature are inseparable.

3. Social work believes in global equality, that is, in the right of all people of the world to share equally in Earth's bounty. It recognizes that global harmony cannot exist when a minority of people in developed nations consume a disproportionate share of global resources.

4. Social work seeks the establishment of social and economic policies that promote human welfare. Human welfare is understood to include not only short term needs for consumption, but also the needs of future generations. Therefore, social work supports only those social and economic policies that promote sustainable use of Earth's resources.

5. Social work has the responsibility to promote social, political, and economic systems that respect the integrity of the biosphere. This support extends to new means of economic, social, and political organization that will reverse current practices of ecological damage and resource depletion.

6. Social work is confident of the integrity of the natural ecosystem. At the same time, social work acknowledges the caring capacity of the biosphere and respects the limits of that capacity.

7. Social work values the principle of diversity. The diversity of ecological niches and life forms that form the biosphere is reflected in the diverse races, ethnic groups, cultures, and values of people. Such diversity is valued for the resilience it brings to all systems.

8. Social work assumes a global and universal perspective. Humans are not separate from, nor superior to, other parts of the biosphere. Rather, humans are but one aspect of a vast universe in which every aspect is interconnected.

9. Social work promotes stewardship of the Earth's resources by its human inhabitants.

10. Social work acknowledges the obligation of its professionals to speak out when they have knowledge of damage to the environment that will adversely affect the quality or sustainability of life for current or future generations of living systems.

11. Social work believes that humans have the moral capacity to apply their intelligence and technology to create ecologically sound, humane, and sustainable lifestyles.

12. Social work believes in the essential goodness of people. The people of Earth will voluntarily live in harmony with Earth's resources when afforded the opportunity to assume ecologically responsible lifestyles.

In addition to these principles, Berger & Kelly (1993) posit the concept of stewardship as central to social work's integration of this expanded ethical base. Stewardship recognizes humans as inseparable from nature. At the same time, it acknowledges that the evolution of human intelligence places our species in a unique position in the ecological community, in which our activity can help or harm the biosphere. Stewardship is based on a notion of moral responsibility to live harmoniously within the biosphere, with full responsibility to care for the planet as we would care for a beloved parent. In keeping with such a concept of stewardship, it would be timely and useful for social work practitioners to more formally explore and embrace principles and methods of sustainable living.

APPENDIX V

FOUNDATION FOR GLOBAL SUSTAINABILITY

ORGANIZATIONAL OVERVIEW AND VISION STATEMENT

Organizational Overview

Founded in 1988, the Foundation for Global Sustainability (FGS) is a non-profit organization that addresses environmental concerns throughout the Great Southern Appalachian Ecosystem and the Upper Tennessee River Valley. Its purpose is to protect, and in some cases to help restore, the ecological health of this bioregion, for the benefit of all its inhabitants, both human and non-human. FGS operates through research, public education, and legal and direct action. FGS assumes a proactive mission of disciplined research, advocacy, and public education. Project areas include: the *Oak Ridge Education Project*, which educates the public about the nuclear history and activities of Oak Ridge and advocates for an end to nuclear weapons production, environmental restoration, and the protection of worker and public health through government and public participation; the *Southern Appalachian Biodiversity Project*, which highlights the status of Southern Appalachian biodiversity and forest bioregions within the Great Smoky Mountains National Park and surrounding public lands.

Program areas include: the *Energy Program*, which monitors and challenges the Tennessee Valley Authority to explore efficiency, conservation, and renewable energy technologies in place of current and future fossil-fuel and nuclear power plants; the *Clean Water Program*, which monitors the health and welfare of the headwaters and tributaries of the Tennessee River system; the *State of the Bioregion Report*, which facilitated the production of What Have We Done? The Foundation for Global Sustainability's State of the Bioregion Report for the Upper Tennessee Valley and Southern Appalachian Mountains (Nolt et al., 1997), and with this serves to provide an integrated written narrative summary of information from academic researchers, environmental organizations, and government regarding the ecological health of the bioregion; and the *Sustainable Living Program*, which assists people in learning and adopting new living methods through a system of modular programs of personal living "building blocks" focusing on food, shelter, energy, transportation, and health.

The Foundation's projects are self-supporting, obtaining their funds from various combinations of membership fees, donations, and foundation grants. The Foundation itself is funded through individual donations and an administrative overhead fee charged to the projects. Operations of the Center for Global Sustainability are supported largely by donations from its sustainers' program, and also to some degree out of the general administrative fund of the Foundation. Three of its projects have published extensive reports in their specific areas: A Citizen's Guide to Pollution in the Tennessee River (FGS Clean Water Program), A Citizen's Guide to Oak Ridge (FGS Oak Ridge

Education Project, now in its second edition), and Southern Appalachians Wildlands Proposal (FGS Southern Appalachian Biodiversity Project in conjunction with SouthPAW) and the Wild Mountain Times bi-monthly journal (FGS Southern Appalachian Biodiversity Project). In addition, the Energy Program has done and continues to do intensive research on Tennessee Valley Authority (TVA) energy policy. Furthermore, in December, 1994, FGS as a whole completed and presented to the TVA Board of Directors a report entitled Blueprint for TVA Environmental Leadership, which assesses TVA's environmental record and makes recommendations for improvements. FGS coordinated the writing of this report, to which ten other bioregional environmental organizations contributed, and did the editing and production work.

FGS Vision Statement

Broadly, the FGS vision grows from personal convictions, educated and influenced by late 20th century environmental thought. This vision favors conservation of wildlands, stabilization of human populations, soft energy paths, sustainable agriculture and economics, source reduction of waste, and (wherever appropriate) decentralized, low-impact solutions.

In this vision, both human and non-human populations are stable and in equilibrium. The economy has matured, and production, and consumption have ceased to grow in quantity, though they continue to advance in quality. There are vibrant urban centers; but there is room as well for rural life and the family farm. Much food is produced locally for local markets. There are large, interconnected areas of wilderness, in the Southern Appalachian highlands and on the Cumberland Plateau, where human activities are confined to those that respect the land and its creatures. These wilderness areas are surrounded by buffer zones which admit wider, but still limited, human use. Technology, science, and education continue to flourish, but the focus has shifted from the production of weapons and power to the creation of the advanced devices for energy efficiency and conservation, from technologies that centralize power to those (like solar power or the personal computer) that distribute it.

FGS is committed to nonviolence and respect for cultural, racial, ethnic, and gender-based diversity. Furthermore, FGS recognizes non-human needs as well: the need of the black bear for a broad range of undisturbed wilderness, the need of neo-tropical migratory birds for continuous stands of deep forest, the need of river and stream ecosystems for vegetated riparian corridors and adjoining wetlands. These needs, we assume, take precedence over frivolous human desires, though not over genuine human needs.

APPENDIX VI

EXCERPT

What Have We Done? The Foundation for Global Sustainability's State of the Bioregion Report for the Upper Tennessee Valley and Southern Appalachian Mountains (Nolt et al., 1997)

Characteristics of the Bioregion

Through the center of the valley flows the Long Man, the Tennessee River, impounded by the Tennessee Valley Authority (TVA) into four large reservoirs: Fort Loudoun, Watts Bar, Chickamauga, and Nickajack. The river is plugged up, like the circulatory system of a coronary patient, not only by these four dams, but by a total of forty-five dams, most of which lie along its tributaries. A century ago the free-flowing Tennessee harbored the greatest diversity of fresh-water mussels in the world. Today the mussels are mostly gone from its silted, polluted, anoxic waters, many species of fish are going or gone, and unlimited recreational boating and private development along the banks has seriously eroded the wetlands and riparian zones crucial to the stability of the ecological fragments that remain.

Once the river flowed past flourishing farms in rich bottomland. Many of these farms now lie inundated by the deep, permanent flood of the reservoirs. But many more have been claimed by urbanization, suburbanization, and the relentless economics of efficiency. The farms that remain grow hay, cattle, tobacco, and little else; and the valley, once inhabited by some of the sturdiest and most independent farmers on earth, can no longer feed itself, but must depend on a constant influx of tractor-trailors from the Midwest, California, and just about everywhere else.

West of the river, to the Long Man's right, lies the Cumberland Plateau. The pleasantly undulating skyline of the mountain tops is marred by strip mines and clearcuts. Much of this land is owned by coal and timber companies. Near Chattanooga, the once impressively straight lines of the Plateau's edge are now studded with private residences, conspicuously perched atop the escarpments.

East of the river, to the Long Man's left, the valley rises to scenic hills riven by deep coves which harbor remnants of the cove hardwood forests, the richest forest ecosystems in eastern North America. But these foothill and valley systems are increasingly degraded, especially in Blount and Sevier counties, by the glitter and glitz of tourist traps. Further east, the slopes mount to the highlands of the Great Smoky Mountains National Park. Acidified soils and streams, ozone-damaged vegetation, traffic snarls, diminished visibility, and overuse threaten the last beleaguered remnant of the wilderness that inspired Bartram's rapture. At the crest of the Park, the unique spruce-fir forests are dying, and the entire Park is under mounting attack by invasive fungi, insects,

and weedy plants introduced by human disturbance.

To the north, the Long Man reaches into western Virginia, branching into a multitude of headwaters: the Powell, Clinch, Holston, French Broad, Nolichucky, and Pigeon Rivers. Along the Holston at Kingsport and on the Pigeon at Canton, North Carolina, lie two of the nation's most notorious corporate polluters: Tennessee Eastman and Champion International Corporation. Both, despite genuine improvements (undertaken with much resistance) and extensive image-polishing (undertaken with a will), continue to damage water, land, and people.

To the south and east towards the Long Man's feet, the watershed includes the Hiwassee valley and mine-ravaged Ocoee valleys in northern Georgia and southeastern Tennessee. At Chattanooga, the toxic waters of Chattanooga Creek, the region's most polluted stream, run (as do many of the most polluted waters) through the heart of low-income African-American communities.

And beneath the Long Man's feet from out of Mississippi and Alabama, a new wave of deforestation is arising that threatens soon to engulf the entire region. Multinational corporate giants, pitted against one another in a fierce competition for wood, have set their sights on the region's forests, which they plan to export, mostly as chips for paper pulp, down the Tennessee Tombigbee Waterway to markets as far away as Korea and Japan. (pp. 3-4)

APPENDIX VII

SYMPTOMS AFFECTING BIOREGIONAL HEALTH

from What Have We Done? The Foundation for Global Sustainability's State of the Bioregion Report for the Upper Tennessee Valley and Southern Appalachian Mountains (Nolt et al., 1997)

- The air, though generally improving in quality, is still polluted with particulate matter, ozone, sulfurous haze, and a host of toxic chemicals. Indoor air is often more poisonous than the air outdoors. The noise of human activity is ubiquitous and inescapable. Our enormous emissions of greenhouse gases are gradually changing the climate—and perhaps contributing to increasingly violent weather. The deterioration of the stratospheric ozone layer is exposing most life-forms to increased ultraviolet-B radiation. We are slowly decreasing the oxygen content of the atmosphere.

- Many native plants and animals are in decline or already extinct. The main causes of these losses are habitat destruction, pollution, and the introduction of invasive species. Multinational lumber and paper operations, converging on the region's forests as forests elsewhere are being rapidly depleted, are likely to accelerate this loss of biodiversity. On a larger scale, we are witnessing the homogenization of nature; delicate, rare, and local species are increasingly being replaced by tough, "weedy," and globally-dominant species.

- We can no longer, as a bioregion, feed ourselves. Our food is mostly grown far away. Many of the processes used in growing, processing, and transporting it are petroleum-intensive, unsustainable, and unhealthy for both people and land. Our diet is unhealthy, not, generally, because of deficiencies, but because of the things we eat in excess: fats, meat, highly processed foods, artificial chemical additives, and pesticide residues.

- The electricity we consume (often wastefully) is produced mainly by the burning of strip-mined coal. Coal-fired powerplants are largely responsible for the smog and haze that veil the mountains and valleys and turn the sky white in the hot summer months. They also contribute substantially to global warming. Much of the rest of our electricity is generated by nuclear fission, which creates long-lasting radioactive wastes and poses the small, but real, risk of a catastrophic nuclear accident. TVA's nuclear program has, moreover, accumulated an enormous debt, under the burden of which the agency has abdicated its leadership in energy conservation and begun to push for still more energy consumption.

- We waste far too much. Litter pervades the landscape. Our landfills, already grown to the size of mountains, continue to grow. Mine waste, industrial waste, and nuclear

waste contaminate large tracts of land.

- Our transportation system runs on petroleum, which, though economically cheap, is socially and environmentally expensive. Roads and parking lots continually displace neighborhoods, farms, and forests. Driving deprives us of needed exercise, fouls the air, and makes us dependent on foreign oil. Excessive traffic frays nerves and increases stress. Accidents in the transportation system kill or injure thousands of people and millions of animals each year.

- Population is growing rapidly across our region, compounding all the problems mentioned above. Exceedingly rapid development is destroying or degrading agricultural land, shorelines, and the Great Smoky Mountains National Park.

- Our current growth economy also exacerbates these problems. It is linear in structure, taking virgin materials as input and creating enormous quantities of waste as output, rather than recycling materials and minimizing waste, as a natural system does. Through advertising, the growth economy stimulates us to desire ever more, consume ever more, and waste ever more—hardly a prescription for health. (pp. 244-245)

APPENDIX VIII

GLOSSARY OF TERMS

- **Alternating Current:** "an electrical current in which the current periodically reverses its direction of flow. Most household electrical systems use ac current rated at 110 volts and 60 cycles per second, where 1 cycle refers to 2 complete reverses in direction of the flow" (Home Power Magazine, P.O. Box 520, Ashland, OR 97520).

- **Anthroposophy:** "The process of opening up to the various spiritual realms connected with human life through our conscious understanding as coined by Rudolph Steiner. It can enable the individual human being to find an orientation in life, and brings new impulses to all areas of our culture and civilization. Through this, many significant persons have found the means to give new and fruitful dimensions to their cultural accomplishments and social works. The achievements of Anthroposophy in education, special education, medicine, agriculture and architecture have met with world-wide recognition (The Anthroposophical Society, 1997, On-line: http://www.goetheanum.ch/english.htm).

- **Cob building material:** a traditional English cottage material comprised of a mixture of clay-sand-soil, and straw, which is formed into angular or rounded loaves (cobs), then "stacked and worked together to form a monolithic structure. . . . Cob is perfectly fireproof and earthquake resistant. . . . [it] is an excellent insulator, running about 1.8 R per inch" (Butchart, 1996, pp. 42-43).

- **Composting:** "a natural process by which food scraps, landscape debris and other organic materials are collected and allowed to decompose under controlled conditions into a rich, soil-like substance called compost." (Nolt and colleagues, 1997)

- **Cover crops:** "Plants grown to protect soil from erosion and provide organic material. Cover crops are usually grown in young orchards, gardens, and cropland during the cold season, and are sometimes turned under before flowering and setting seed" (Mollison & Slay, 1991, p. 201). Cover crops may also be referred to as green manures.

- **Diatomaceous earth:** used by organic gardeners and growers for pest control. A soil substance comprised of the fossilized remains of one-celled plants called diatoms. When soft-bodied invertebrates come in contact with diatomaceous earth "the material is absorbed by the oily, waxy outer coating of the exoskeleton and causes loss of body fluids. This dehydrates and eventually kills the organism" (Organic Corner, 1997, On-line: http://lep.cl.msu.edu/msueimp/htdoc/modc1/40194011.html).

- **Direct Current:** "An electrical current which flows in one direction only" (Home Power Magazine, P.O. Box 520, Ashland, OR 97520). The type of electrical supply produced by home power systems.

- **Homeopathy/Homeopathic medicine:** "a system of medical treatment . . . based on the theory that certain diseases can be cured by giving small doses of drugs which in a healthy person would produce symptoms like those of the disease" (Neufeldt, V. & Guralnik, D. , 1988).

- **Kenaf:** "a 4000-year old 'new' concept with roots in ancient Africa" (The Wilderness Society, 1996, p. 74). An annual crop, and a member of the hibiscus family and related to cotton and okra, ". . . it is a multi-use crop. Besides papermaking, other potential uses include animal forage and bedding, cordage, packing material, particle board, and carpet backing" (KP Products, 1995, p. 1).

- **Micro-hydro:** a small-scale "home power" source of renewable energy involving the storage and/or controlled release of water, which is used to turn an electricity-generating turbine. Of those in use, streams and ponds are typical water sources, and pipes deliver the supply to the down-stream turbine.

- **Monoculture:** "the reliance on a single kind of crop, or at most a small group of crops. Monoculture is economically efficient in the same way that factory mass production is efficient, but it is also risky. A single crop can be destroyed by a single kind of insect, a single disease, a single shift in climate or precipitation" (Nolt and colleagues, p. 107).

- **Organic agriculture:** farming which avoids the use of artificial pesticides and fertilizers by using compost, animal manures and cover crops to build soil quality, and crop rotations and other techniques for natural pest control.

- **Passive solar:** the use of the sun as a primary or secondary energy source typically for lighting and/or heating interior spaces in buildings, and as a heat source for solar ovens, and/or heating solids, liquids, and gases.

- **Permaculture:** "a design system for creating sustainable human environments. The word itself is a contraction not only of permanent agriculture but also of permanent culture, as culture cannot survive for long without a sustainable agricultural base and landuse ethic" (Mollison & Slay, 1991, p. 1).

- **Photovoltaics:** "refers to any device which produces free electrons when exposed to light. When these electrons are properly gathered, a potential difference (voltage) may be produced by the device, for example, a solar cell produces approximately one half volt in full sun" (Home Power Magazine, P.O. Box 520, Ashland, OR 97520).

- **R-value:** "resistance value, usually of materials used for insulating structures. Fiberglass insulation three inches thick has an R-value of 13" (Cole & Skerrett, 1995, p. 232).

- **Straw bale building material:** "uses only annually-renewable waste material to form the walls of (a) building. . . . Compared to other methods . . . straw bale is the quickest and best insulated. [One] can raise the (unplastered) walls of a 1,000 square-foot building in a day with six people (Butchart, 1996, p. 42). Straw bales are stacked, pinned with bamboo or tobacco-type stakes, and sealed with stucco (exterior) and earthen or gypsum plaster (interior). High fire resistance and R-value (R-45 to R-50).

APPENDIX IX

Christian-related Eco-theological Ethics among Organizational Proponents in the United States (Kearns, 1996)

Characteristic:	Christian Stewardship ethic	Eco-justice ethic	Christian Spirituality ethic
Starting Point	biblical mandate	social justice	cosmological physics
Theological Appeal	evangelical	mainline Christian social justice	liberal/unchurched ecumenical
Images of God	transcendent authoritative	transcendent God of liberation	immanent pantheistic
Images of Nature	Old Testament Land fecundity; God's creation	human environment natural resources	eco-system; creation as cosmos; universe
Human-Nature Relationship	gardener/caretaker aesthetic	sustainable use of natural resources for human betterment	proper human place in bio-system
Roots of Environmental Crisis	human sinfulness & disobedience to God	injustice/inequality; economic systems	dualism; anthropocentrism; human alienation from nature
Environmental Issues	resource depletion; degradation of land & culture; agriculture	toxic/hazardous wastes; health; pollution; agriculture	wilderness preservation; species extinction
Prescribed Response	correct doctrine; restore Christianity as guide; balance Bible and biology	correct praxis; government regulation; grassroots organizing	correct being/spirituality; new worldview
Social Change Orientation	homocentric = change individuals	sociocentric = change society	homocentric = change individuals
Intellectual Tools R = religion S=science	R = Bible S= biology	R = libertation theology S= social sciences	R = medieval mysticism S = evolution; physics
Worldview	anthropocentric; pre-modern = religion as sacred canopy	anthropocentric; modern = most at home focus on rights & justice	biocentric; post-modern monism

VITA

Jonathan Matthew Scherch was born in Delaware County, Pennsylvania, on November 28, 1964. The son of a public elementary school teacher and a Lutheran minister, he attended and graduated from public elementary, middle, and high school in Montgomery County, Pennsylvania. In 1984, he entered the Department of Human Services at Montgomery County Community College, eventually earning an A.A.S. in Human Services, cum laude. In 1986, he entered the Department of Social Work at West Chester University of Pennsylvania and eventually earned a B.A. in Social Work, cum laude. In 1990, he entered the School of Social Work at the University of Pittsburgh where he earned an M.S.W. in Social Work. After graduating, he joined the United States Peace Corps, and served for two years as a social work administrator for the Community Development Sector of Peace Corps Jamaica. In Jamaica, his primary assignment allowed him to work with inner-city Kingston children, youth, adults, and families as part of a multi-program non-governmental social service agency. As a secondary assignment, he served as a voluntary lecturer in the Department of Sociology and Social Work at the University of the West Indies, Mona. In 1993, he began his doctoral studies at the College of Social Work at the University of Tennessee, Knoxville. Soon thereafter, he began working with the Foundation for Global Sustainability and eventually began serving as Coordinator of the organization. At the time if this writing, Mr. Scherch has co-authored the book What Have We Done? The Foundation for Global Sustainability's State of the Bioregion Report for the Upper Tennessee Valley and the Southern Appalachian Mountains (Nolt et al., 1997); written a book chapter

entitled "Eco-village Development: A Report from Southern Appalachia" for Sustainable Community Development: Case Studies in Economic, Environmental & Cultural Revitalization (M. Hoff, in-press); and composed a book review of The Global Environmental Crisis: Implications for social work and social welfare (Hoff & McNutt, 1994) published in the Journal of Community Practice (Volume 4[1], 1997). He is currently adjunct-faculty in the Department of Social Work at Lincoln Memorial University in Harrogate, Tennessee.

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