

**THE UNIVERSITY OF CALGARY**

**Lighter Footprints: Quality of Life Correlates, Mindfulness and  
the Sustainability Movement**

**by:**

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**A THESIS SUBMITTED TO THE FACULTY OF GRADUATE STUDIES  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR  
THE DEGREE MASTER OF ARTS**

**DEPARTMENT OF SOCIOLOGY**

**CALGARY, ALBERTA, CANADA**

**SEPTEMBER 2004**

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*Your file* *Votre référence*

*ISBN: 0-612-97697-1*

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*ISBN: 0-612-97697-1*

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## **ABSTRACT**

Perspectives from popular and academic literature on social movements, sustainability, voluntary simplicity and quality of life are integrated to form the foundations for a story of more sustainable living in three North American communities: Calgary, Alberta, Nelson, British Columbia, and Ithaca, New York. These ideas are explored through secondary data analysis on 134 structured interviews gathered from community currency participants in the Urban Nature/Sustainable Cities Survey 2002-2003. A voluntary simplicity framework and the concept of mindfulness are applied as means of linking sustainability initiatives and well-being. Descriptive accounts are provided for a range of interview responses tapping sustainability issues, including local economy, food and diet, recycling, transportation, and activism among others. Bivariate correlations and multiple regression analysis are then used to further investigate potential relationships between biographical, sustainability, mindfulness and subjective well-being measures. Findings suggest that biographical factors may not represent significant barriers to sustainable behaviour, and further highlight the fact that mindfulness is a key influencing factor for subjective well-being in this sample.

## **ACKNOWLEDGEMENTS**

Bucketfuls of thanks, great big stars and high-fives go out to the following:

- ☆ Jeff and Merlin, for inviting me to participate in their sustainability study, for recruiting me into the program, and most importantly, for their patience and guidance, not only sharing their experience and wisdom on sociology and research, but also on politics, hockey and baked potatoes
- ☆ Dr. Gillian Ranson and Dr. Dianne Draper, for forming part of my committee and providing tough questions and helpful suggestions
- ☆ Minnie, Gillian, and Jean, for their mentorship, support and inspiration through the Gender Equity Project
- ☆ Carol, for the chats, laughs, commiserating and parallel universes
- ☆ My friends and family, especially my folks and their "Are you done yet?" chant
- ☆ Modest Mouse, Gomez, Radiohead, Dave Matthews Band and others, for providing the soundtrack for this work
- ☆ Ophelia and Mandalore, for their typing assistance
- ☆ David, for everything

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## **CHAPTER 1 - INTRODUCTION**

Concern for a sound environment is a common preoccupation in contemporary times, one that is connected to the quality of life of individuals, communities and nations, and also to future well-being. However, the popularity and urgency of environmental matters tend to fluctuate in the social discourse, depending to some degree on current affairs. Despite significant current events, such as terrorism and war, that presently hold public interest, the environment tends to remain near the forefront in the general social consciousness. This is due in part to a largely mainstream acceptance of environmental concern and also because of observable environmental impacts and their implications for long term sustainability. "The basic value of a sustainable society, the ecological equivalent of the Golden Rule, is simple: Each generation should meet its needs without jeopardizing the prospects of future generations" (Durning, 1991: 5). However, there is growing consensus that current levels and patterns of human activity are unsustainable and potentially dangerous, particularly the maintenance of high-consumption lifestyles favoured in North America, and aspired toward in other countries. This thesis seeks to explore some of these issues.

Over the past few years, Canadians have experienced a range of problematic environment-related events, including severe weather conditions, drought, wildfires, bacterial contamination, pollution and disease, as well as the rising cost and privatization of energy. A massive power blackout in summer 2003 affected much of eastern North America and fuelled debate regarding energy supply and conservation. Food and water system crises, such as E. coli contamination of water in Walkerton, Ontario in 2000 and disease outbreaks such as BSE (bovine spongiform encephalopathy or "Mad Cow Disease"), further elicit concerns about potential health implications that stem from modern agricultural, environmental and dietary practices. These events and circumstances strain communities, families and individuals. They also raise critical questions about prospects for future sustainability and the incentives and disincentives that might influence the adoption of more pro-environmental practices.

There is an increasing focus on consumption and the role of consumers as a major source of and prospective solution to many environmental problems: "The world's billion meat eaters, car drivers and throwaway consumers are responsible for

the lion's share of the damage that humans have caused to common global resources" (Durning, 1991: 2). Sustainability challenges cannot be addressed without some consideration of the relationship between consumption and values. If everyone were to adopt the North American standard of consumerism, prospects for a sustainable future would be bleak. Leaving lighter footprints on the planet is becoming less a choice and more an inevitability. Some researchers suggest that consumption-oriented, materialistic values and practices *must* change if we are to survive on this planet: "Individuals must adopt voluntary simpler lifestyles oriented towards less consumption" (Iwata, 1997: 233).

The consumer culture produces an interesting paradox for individuals: personal satisfaction and happiness are perceived and pursued primarily in economic and material domains, despite empirical evidence to the contrary (e.g. Kasser, 2002; Wachtel, 1989). While wealth and fulfilment have become more or less equated in the dominant ideology, increased affluence has not necessarily generated additional happiness for individuals: "The percentage of Americans who report that they are 'very happy' has been relatively stable since 1957" (Durning, 1991: 2). Addressing and amending this problematic link between consumption and satisfaction in the broader cultural framework is becoming critical for the natural environment and prospects for longer-term sustainability.

The study of social movements is one approach that may be used to explore the social and cultural contexts of sustainability and the environment. A *social movement* consists of interacting individuals and attempts to promote, control or prevent social and cultural change (Klandermans, 1989: 3). The environmental movement in North America may be traced back to traditions of preservation and conservation in the 1800s (Brulle, 1996: 64). However, modern manifestations of environmentalism tend to be more enduring legacies with origins in the social and political tumult of the 1960s. Beginning with localized and single-issue cases of environmental degradation, the movement has steadily diversified and broadened its focus toward more complex ecosystem relationships, the role of humans and human activity, and the sustainability of the planet as a whole. More importantly, environmentalism has become culturally entrenched in many countries. In fact, environmental issues are permanent fixtures on social policy agendas for both governmental and non-governmental organizations in North America, as well as key topics of consideration and, at times, dissent, in business and industrial arenas.

Environmental matters have been also taken up in the general cultural discourse, and this trickles down to the level of the individual via the media, systems of education and other outlets. There are two major trends in how environmental awareness and information are diffused:

Education *about* the environment has concentrated upon awareness raising and the provision of knowledge and understanding of environmental issues in traditional curriculum subjects such as geography and science. Education *for* the environment has focused more strongly upon the question of pro-environmental behaviour change and the values that might underpin this. (Ashley, 2000: 131)

There are many segments of the population beginning to tap this second trend, attempting to harmonize ecological ideology and performance in daily life. While sustainability over the longer term will compel new ideas in economics, education, technology and policy, individuals also have the potential to realize significant changes. For example, there are currently those who voluntarily engage in sustainable practices in some or many aspects of their daily lives. Specific behavioural reactions may take on various forms, such as recycling, reducing energy use, choosing "greener" products and services, and participating in boycotts or protests, as well as more extensive lifestyle changes, such as homesteading (going "back to the land"), co-housing or simplifying.

However, certain pro-environmental behaviours may be viewed as diminishing quality of life, for example, running a car for only 30 seconds before driving in winter, instead of allowing it to idle for a half hour to warm up; putting on a sweater rather than turning up the thermostat; or cooking from scratch with whole, in-season ingredients in place of processed and packaged fast-food meals. These activities may be considered not only disruptive to the conveniences of modern living, but also more expensive, uncomfortable, and even unpleasant. Nonetheless, pressing necessity, such as the need to stretch a household budget, can turn a reluctant environmentalist toward more sustainable practices as potentially viable and even rewarding options in daily life.

A loosely defined phenomenon labelled "voluntary simplicity" (VS) characterizes a diverse group of people interested in matters of consumption and quality of life. Also known as simple living, this is one kind of story within the sustainability movement—"an ecological way of living" (Elgin, 1991: 79). In its archetypal and most radical form, VS goes well beyond minor lifestyle tweaking, aiming instead to transform every facet of life with a view to leaving lighter

footprints on the planet. More typically, however, VS encompasses a more moderate range of values and behaviours taken on *within* the complexity and trappings of modern life, rather than in opposition to them. "Simple living does not denigrate the material aspects of life but rather, by attending to quality, it values material things more highly than a society that merely consumes them" (Burch, 2000: 9).

All interpretations of VS involve some degree of changing patterns, practices and views of consumption. In many cases, environmental concern is an important rationale. Voluntary simplicity takes a holistic orientation toward life and living, and thus also entails development in other domains, including spiritual, emotional, intellectual, physical, interpersonal, and aesthetic pursuits, all of which have consequences for personal well-being, as well as that of family, community, ecosystem, and planet. VS promotes critical questioning and a general awareness of thoughts, ideas, choices and behaviours as practical tools in simplifying processes. Mindfulness, a Buddhist-derived variant of meditative practice, helps bring together various elements of simplicity, including changing consumption habits, ecological sustainability, personal growth and well-being, through increased awareness.

Assuming that concerns about environmental degradation and their links to consumption are valid, sustainable behaviour is becoming increasingly desirable and the need for it is growing. Thus, using a sample of community currency participants, this thesis seeks to explore intersections between worldviews, behaviour, and well-being in a sustainability context, including the socially conditioned forces that shape and mediate these matters. The primary objective of this work is to move toward a sociological description and understanding of the nature and practice of ecologically sustainable behaviour and its prospective connections to quality of life. The study objectives hinge on the following guiding questions:

- 1. Are there social factors that influence the propensity of individuals to choose sustainable practices in their day-to-day lives, often at the expense of convenience or cost?*
- 2. Is holding ecological views linked to engaging more frequently in sustainable practices? How do select voluntary simplicity ideas and practices, such as mindfulness, fit in?*
- 3. Is sustainable behaviour associated with a "good" quality of life? Are individuals who voluntarily engage in sustainable practices generally happy and satisfied with their lives and choices?*

The findings of this research will provide a perspective on the collision of idealism and reality, as individuals attempt to reconcile their ideology with their behaviour and choices, against a powerful consumerism backdrop that embodies much of North American society. This story also represents a contribution to the environmental policy debate, specifically regarding means of effectively encouraging sustainable behaviour via better understanding how sociological variables and ecological views may be translated (or not) into sustainable practices and choices. The study has potential educational and motivational implications for policy makers, governments, planners and teachers. The quality of life angle suggests that it should be not only practical and reasonable, but also spiritually, psychologically, or otherwise beneficial for people to leave lighter footprints on the planet by choosing more sustainable practices in their daily lives. Finally, this project ultimately will impart greater sociological insight for future research on environment, sustainability and quality of life issues, as well as work regarding the interface of social variables, values, and behaviour.

Beginning with a context-setting overview of the individual and the consumer society in Chapter 2, this thesis then delves into some of the social scientific literature on social movements, environmentalism and sustainability. These ideas are linked using voluntary simplicity, which is applied primarily to contextualize ecologically sustainable behaviour, consumption and quality of life for a community currency sample. The notion of mindfulness is introduced to bridge simplicity, ecological sustainability and well-being. The chapter concludes with a heuristic model that identifies the major concepts and puts forth some potential relationships to be explored. Chapter 3 specifies details of the research design and structured interview data on which this study is based, including descriptions of the data set and sample, analytical procedures and concerns, and measurement processes. Following this is a presentation and discussion of the study findings in Chapters 4 (descriptive) and 5 (bivariate and multivariate analyses), including profiles of the communities involved in the study. Finally, a review of the main results in relation to the guiding questions and theoretical context is included in Chapter 6, along with suggestions for future research.

## **CHAPTER 2 – LITERATURE REVIEW**

In this chapter, a theoretical framing is assembled from an array of academic and popular literature, and is used to explore well-being in the context of sustainability. The story begins with an overview of the consumer-driven social backdrop against which environmental concern and sustainability initiatives ostensibly rest. This is followed by a summary of common sociological approaches in the study of social movements, including Biographical Availability, which probes social bases for movement support and participation, and the New Social Movements (NSMs) perspective, which captures the quality of life focus of the movements under investigation. The broader movement discussion is then narrowed with descriptive accounts of three groups that intersect in this work. The sustainability movement may be considered a subset of environmentalism that includes elements of anti-globalization, social justice, and other threads. The community currency movement, with its range of local initiatives, is the source for study participants. The movement segment culminates with voluntary simplicity (VS). Spirituality and the Buddhist-derived notion of mindfulness are important simplicity tenets and they are used to link ecological views, behaviour and well-being. An outline of quality of life literature, specifically, subjective well-being, also is included. The chapter concludes with the presentation of a conceptual model, an heuristic device that ties the key concepts together, as well as relevant hypotheses to be tested in the research.

### **2.1 CONSUMER SOCIETY, THE INDIVIDUAL AND THE ENVIRONMENT**

The context for this work begins with a particular interpretation of "society." In Daniel Quinn's *Ishmael* (1992), similarly conveyed by Burch (2000), society is *an enactment of a story* that people tell themselves about themselves, the world around them, and how things come to be as they are. From this perspective, to enact a story is to live so as to make the story a reality. Extending these ideas, what does the story of contemporary North American society tell us? The doctrine of consumerism is a principal component in modern capitalist economic systems, and it is taken here to represent a strong belief in the benefits of consumption for both individuals and the economy. Consumerism tells us that "the purpose of human existence is to find meaning, pleasure and identity through consumption" (Burch,

2000: 7). This transcends products like shoes and cars. Instead, it is about identity, lifestyle, hopes, wishes, and sought after qualities like strength, individuality and happiness. Many material goods, and brand names in particular (see Klein, 2000 for an extensive discussion of brands and branding), link individuals quite compellingly to arrays of meanings and ideas, values and beliefs, dreams and desires—and, ultimately, to personal identities.

Values, choices, and behaviour in a consumer culture are defined, manipulated and regulated to some extent by competition and social policing along the clichéd lines of “keeping up with the Joneses.” However, advertising, marketing, and media conduits such as television are also crucial in the promotion of consumption as a means of creating and maintaining identity. Paradoxically, conformity is impelled under the guise of these “unique” identities, and for many, identity and self-concept become bound closely to the acquisition of material possessions, wealth, and status. Richins and Dawson (1992: 304) identify three key materialist values underpinning the consumer society:

1. *Acquisition centrality*—materialists place possessions and acquisition at the centre of their lives
2. *Acquisition as the pursuit of happiness*—possessions and acquisition are viewed as essential to satisfaction and well-being
3. *Possession-defined success*—materialists tend to judge their own and others’ successes by the number and quality of possessions accumulated.

If a combination of biological and social factors does not produce the ‘right’ identity or a ‘good’ life for a person, then the consumer society and economic-marketing complex assert that further consumption *can*. However, much empirical research (e.g. Kasser, 2002; Ryan and Dziurawiec, 2000; Sirgy, 1998; Wachtel, 1989) points to an inverse relationship between materialism and life satisfaction, once basic needs such as food, clothing, shelter, etc., are adequately met. That is, after a certain level of material comfort, a threshold is reached and any additional wealth or income and more or better possessions will not necessarily generate greater amounts of happiness.

In fact, individuals with materialistic orientations tend to be less satisfied with their lot in life: “Although materialists expect acquisition to make them happy, ... the lust for goods can be insatiable; the pleasures of a new acquisition are quickly forgotten and replaced with a desire for more” (Richins and Dawson, 1992: 308).

Nonetheless, many people continue to utilize possessions and acquisition as means of creating and maintaining identity, as well as primary sources of satisfaction. However, despite significant cultural and social pressures, materialism and consumption are not the only factors shaping well-being: "As more and more material needs are met, people's priorities move toward nonmaterial issues like justice and equality" (Zavestoski, 2001: 185). Thus, some individuals are struggling with the notion that wealth and possessions cannot meet all of their needs: "A healthy environment, natural beauty, stable communities, safe neighbourhoods, economic security, social justice, a sense of belonging, and countless other life qualities contribute to human well-being" (Rees, 2002: 253). Materialism can become problematic for some people, compelling them to seek alternatives to consumption as a central activity in their daily lives.

Increased globalization and trade have undoubtedly stimulated the economy: "The global economy has expanded fivefold in the past half-century, threefold since 1980 alone" (Rees, 2002: 255). However, such expansion has not been without significant costs to the natural environment. The scientific community, media, NGOs and other groups have been active in documenting a variety of concerns about accelerated environmental degradation. While there is some debate regarding actual numbers and measures (e.g. Lomborg, 2001; Lewis, 1992), few would dispute the scale of human impact on the environment. Environmental issues are often taken up at higher levels of aggregation, that is, at industry, national, or global levels, with a focus oriented more toward production—of resources, of goods, of wastes, of pollution, etc. However, with a global population of consumers six billion strong and counting, consideration of individual-level consumption impacts may be helpful in contending with these problems.

Princen et al. (2002) suggest that until recently, consumption has been confined to the edges of the debate around environmental degradation and prospects for sustainability. In fact, consumption in dominant economic reasoning has virtually gone unchallenged: "If water supplies are tight, one must produce more water, not consume less. ... Production reigns supreme because consumption is beyond scrutiny" (Princen et al., 2002: 5). Nonetheless, consumer choices and behaviour have significant effects on the environment, particularly with respect to over-consumption and waste: "We live in a disposable society, but we do not have a disposable planet" (Elgin, 1991: 78). Thus, critically questioning consumption and



changing its patterns may have the potential to alleviate some environmental problems. However, mere awareness of the environmental impacts of consuming is not automatically a primary motivating factor in reducing consumption (Zavestoski, 2001: 176). While knowledge may be necessary for changing behaviour, it is not on its own sufficient. Behavioural choices are underpinned by values, and given the seeming predominance of materialist values in the consumer society, the environment is likely not valued highly enough to compete with other needs and wants, especially the material ones.

Beck's (2002) *individualization thesis* is one framework from which this story of the individual, the consumer society, and the environment can be further investigated. "Individualization" in Beck's terms is the compulsion to live *a life of one's own*, and it demands active contributions by the individual. Whereas in the past, and in other societies, social standing may be based on birthright and other factors, to attain advantages in a modern society, one has to *do* something (Beck and Beck-Gernsheim, 2002: 3). In this sense, individuals become the "actors, builders, jugglers, stage managers of their own biographies and identities, and also of their social links and networks" (Beck and Beck-Gernsheim, 2002: 23). The individual believes that he or she is entitled to live his or her own life, and this is associated with esteemed concepts such as autonomy and freedom. "The ethic of individual self-fulfillment and achievement is the most powerful current in modern society" (Beck and Beck-Gernsheim, 2002: 22). Moreover, having a life of one's own also entails having a certain lifestyle and a unique personal identity. In North America, these are largely defined and supported by consumption.

The general societal focus on living a life of one's own is isolating, however, and it contributes to marking human beings as distinct from the rest of the world. "As individuals, we seem to stand out—to be separable from—the biological context that makes our lives possible" (Gottlieb, 1996: 517). This position serves to distance and disconnect people from their surroundings and from each other, and it is further complicated by globalization: "People struggle to live their own lives in a world that increasingly and more evidently escapes their grasp ... In the global age, one's own life is no longer sedentary or tied to a particular place" (Beck and Beck-Gernsheim, 2002: 25). The quest for connection and identity is thus sought through other avenues, such as consumption, and these may potentially foster greater competition, isolation, and discontent as well as environmental consequences.

Drawing from previous work on the risk society, Beck suggests that, “the Western type of individualized society tells us *to seek biographical solutions to systemic contradictions*” (Beck and Beck-Gernsheim, 2002: *xxi*). Living one’s “own” life means taking responsibility for personal misfortunes, failure, and unanticipated events. This carries beyond the realm of the personal and private. A variety of larger social issues and risks, such as ones related to the environment, are also individualized, resulting in a push for people to pursue individual-level solutions. For example, individual lifestyle change was a commanding theme of Earth Day 1990 (Ungar, 1994: 289). Such perspectives lessen institutional, governmental and corporate-industrial accountability, effectively downloading a disproportionate share of responsibility for complex global and national problems to the individual.

Interestingly, however, Beck sees hope in this—for anyone seeking a life of his or her own must also be at least somewhat socially aware, and potentially, ecologically aware as well:

The decline of values which cultural pessimists are so fond of decrying is in fact opening up the possibility of escaping from the creed of ‘bigger, more, better’ in a period that is living beyond its means ecologically and economically. Whereas in the old value system the self always had to be subordinated to patterns of the collective, the new ‘we’ orientations are creating something like a *co-operative or altruistic individualism*. Thinking of oneself and living for others at the same time, once considered a contradiction in terms, is revealed as an internal, substantive connection. Living alone means living socially. (Beck and Beck-Gernsheim, 2002: 28)

Thus, the consumer society may potentially embody a set of contradictory conditions through which fundamental societal change may be realized: “Politics based on the defence of life as a personal project is the rejection of its adversaries: a powerful market system on the one hand, and a communalism that imposes homogeneity on the other” (Beck and Beck-Gernsheim, 2002: 28). On recognizing the troubled connection between consumption and well-being, and the paradox of unique-yet-conforming modern identities based on acquisition, some people are seeking to change the dominant story in their own lives. This thesis explores some of these dimensions. Given the inextricable links of individual lives to the collective and greater social fabric, one way of pursuing change is through involvement with social movements.

## 2.2 SOCIAL MOVEMENTS

Social movements often conjure popular images of 1960s-era sit-ins and student demonstrations, and while it may seem that protest lived and died during that period, recent newspaper headlines, radio sound bites, television clips, and internet discussion boards strongly suggest otherwise. Although technology and the mass media have changed, transforming and generating different forms of social movement practice along with them, such activity is still very much a part of contemporary life. In this research, the intersection of three interrelated movements is taken up: the sustainability movement, the community currency movement, and the voluntary simplicity movement. A brief outline of the field of social movement study in sociology is provided here, followed by a summary of some of the key features of each of the three movements.

Collective behaviour and social change have drawn sociological attention from the earliest years of the discipline through to the present. However, interest in this field has tended to wax and wane partly in response to the level of movement activity in society (McAdam et al., 1988: 695). As well, there is a link between societal prosperity and social movement activity: "Wealthy societies tend to produce the general conditions that favour the emergence of newly organized collectivities" (McAdam et al., 1988: 702). It may be argued that wealthier societies have the potential to create more opportunities for interested individuals to develop and sustain social movements. Moreover, "general societal prosperity may also serve to promote collective action by raising the level of resources available to support such actions" (McAdam et al., 1988: 702). Based on these ideas, conditions in North America are currently quite ripe for social movements.

A recent line of theory and empirical work on New Social Movements (NSMs), recognizes the changing character of social movements in some contemporary societies, particularly in North America and Europe: "New social movements are seen to be 'about' culture, or 'about' identity" (Bagguley, 1997: 157). They are particularly concerned with quality of life issues, including the standing of specific social groups and improving social and physical surroundings. NSMs are multi-issue entities, embracing a range of interrelated problems, including those connected to the environment and sustainability, as well as social justice and human rights. Thus, new social movements play an instrumental role in producing shifts in public perception of social issues (McAdam et al., 1988: 727).

The NSM perspective stresses the impact of industrialization and modernization: "New problems, connected to the shifting boundaries between public, private and social life, and the struggles against the old and new forms of domination in these areas are believed to fuel the movements" (Klandermans, 1989: 9). These movements thus represent a basic opposition to industrial societies: "They represent significant ideological challenges to the status quo, especially the growing incursion of the economic and government sectors into civil society and everyday life" (Mertig and Dunlap, 2001: 114). In the past, geographical concentration and level of organization were important pre-conditions for social movement activity, but with the advent of wireless telecommunications and the internet, these are no longer so relevant. In fact, given the larger individualizing forces at work in the consumer society, new social movements may be loose and less organized. In many cases, the locus of activity is situated at the level of individuals and smaller groups, rather than large collectivities. The NSM concept is therefore helpful in contextualizing the movements in this research, as it incorporates multiple issues and works toward broader socio-cultural changes that benefit individuals, groups, and the environment.

There is a considerable range of theoretical approaches and empirical concentrations that characterize social scientific movement research. Klandermans (1989) specifies four theoretical perspectives that are often applied in the study of social movements:

1. *Breakdown*: Social movements may be viewed as symptomatic of excessive institutionalization. "Traditional breakdown theories hold that social movements emerge as responses to specific grievances in a society" (Klandermans, 1989: 7).
2. *Resource mobilization*: These theories focus largely on organizational dimensions: "Social movements emerge not so much because grievances increase, but because there is an increase in the availability of resources in an aggrieved population" (Klandermans, 1989: 8).
3. *New social movements*: "Social movements are seen, not as means to realizing external goals, but as goals in themselves: democratic niches in a society in which autonomous social action creates new identities. The NSM approach ... is an attempt to explain the emergence of contemporary movements such as the women's movement, the environmental movement, and the peace movement" (Klandermans, 1989: 8).

4. *Grievance Interpretation*: "The crucial variables in movement mobilization are not anger or frustration, but the belief that one's interests are common interests, as well as the perception of injustice—that is, the belief that these interests are legitimate yet are not being met" (Klandermans, 1989: 9). Construction of meaning is an important element.

Accompanying these dominant theoretical approaches are two broad categories of questions that have channelled the study of social movements:

- *Movement emergence*—How and why do social movements emerge in the first place? (e.g. Brulle, 1996 on environmental organizations)
- *Movement recruitment*—Why do some individuals, but not others, join social movements? (e.g. Peek and Konty, 1997 on religion; Jasper and Poulsen, 1995 on animal rights and anti-nuclear movements)

Movement emergence has been studied primarily in terms of macro-sociological characteristics of society and aggregate patterns of behaviour; the recruitment angle considers individual level, social-psychological differences between participants and non-participants, as well as in-depth examinations of organizations.

Individual accounts of activism have been explored using a range of approaches, including relative deprivation: "It is an unfavourable gap between what a person feels he or she is entitled to and what, in fact, they are receiving that encourages activism" (McAdam et al., 1988: 705). Similarly, attitudinal perspectives locate the roots of participation within individual actors: "Activism grows out of strong attitudinal support for the values and goals of the movement." (McAdam et al., 1988: 706). Finally, rational choice theories propose individuals as calculating actors who assess the costs and benefits of movement participation: "If the costs of participation are seen as extremely high, then many potential recruits are expected to choose another course of action. Alternatively, if the anticipated benefits of activism are high, then participation is the likely result" (McAdam et al., 1988: 707).

Empirically, approaches that consider the importance of individual attitudes have found little support: "Individual predispositions are, at best, insufficient to account for participation in collective action. In general, a discrepancy between attitudes and behaviour has been borne out by countless studies over the years" (McAdam et al., 1988: 706). There are certainly challenges in dealing with the worldviews and belief systems tied to movement participation, however, many researchers (e.g., Dietz et al., 2002; Linden, 1998) maintain that values must be

considered a core concept. The intersection of values and behaviour is complex, and while the source and nature of individual values are beyond the scope and focus of this work, it is important to note that there is the ongoing debate.

Sociology has tended to rely mainly on self-report survey methods for gathering of information about behaviour and unobservable internal states, such as beliefs and values. This entails an assumption that verbal responses reflect behavioural tendencies (Deutscher, 1966: 235). However, empirical evidence suggests that this is not always the case. Words are certainly easier to express than to act upon, and there can be marked discrepancies between what people say and what they do. Questions of attitude versus action and the efficacy of verbal evidence have been raised consistently in sociology. Nonetheless, survey methods and self-reports are still among the most efficient ways of gathering data in the social sciences, and these approaches are applied here with this acknowledgement.

Some researchers suggest that people do not participate in movements because they are psychologically compelled to, but because their structural location in the world makes it easier for them to do so: "It matters little if one is ideologically or psychologically disposed to participation if he or she lacks the structural vehicle that could 'pull' them into protest activity" (McAdam et al., 1988: 707). Structural factors tend to stem from typical social sources, such as knowing somebody involved in the movement: "The factor that has been shown to bear the strongest relationship to activism is prior contact with another movement participant" (McAdam et al., 1988: 707). From this perspective, joining or belonging to a number of organizations and having a history of prior activism and activist "know-how" also influence participation.

The social bases for involvement in the sustainability movement can be examined using Biographical Availability, which refers to the absence of personal constraints that may increase the costs and risks of participation, such as full-time employment and family responsibilities (McAdam et al., 1988: 709). From this perspective, the biographical circumstances of a person's life may encourage or restrict participation in important ways: "The unusually high numbers of students and autonomous professionals who are active in movements reflects a clear understanding of the way biography constrains activism" (McAdam et al., 1988: 709). Thus, it is expected that individuals fitting a similar profile—those who have

fewer biographical constraints, such as more flexible employment or no dependent children—may be more likely to participate in the movements under study.

Biographical availability was originally formulated for higher risk, higher cost forms of activism (e.g. Wiltfang and McAdam, 1991 on the sanctuary movement), however, it has been used more recently to explore low-medium cost activities (e.g. Tindall, 2002 on the B.C. wilderness preservation movement). Debating the utility of this framework for explaining movement participation is not the main purpose here. Instead, select individual-level biographical variables (including gender, presence of dependent children, age, and employment) are applied to a relatively low risk, low cost sector of the sustainability movement, in an effort to identify key social factors that may influence the propensity of individuals to choose sustainable practices in daily life.

The prevalence of research mentioned previously on movement emergence, recruitment and individual accounts implies that other areas may be understudied. In particular, there has been increasing interest in social movement outcomes—the intended or unintended changes effected by movement activity. There is some irony in this fact: while social movements are, by definition, concerned with social change, systematic studies of movement outcomes and consequences have been, until relatively recently, rather scarce: “Little research has examined the outcomes, intentioned or otherwise, or developed an understanding of how, when, and to what extent movements ‘matter’” (Earl, 2000: 4). There are two key challenges in studying movement outcomes: identifying and observing “successful” outcomes and causality issues. It is difficult to be absolutely sure that an observed change in society is the direct or even indirect result of social movement activity. Acknowledging these limitations, this research aims to investigate quality of life, in particular, subjective well-being, as a potential, individual-level consequence of movement-mediated values and behaviours around sustainability.

Ultimately, this research attempts to test the social bases of environmental concern and action using biographical availability. It further addresses the outcomes gap in the movement literature by investigating increased well-being as a possible offshoot of the sustainability, local currency and simplicity movements. Considering the social factors that condition interest and participation in sustainability initiatives may assist in identifying incentives and disincentives that influence prospects for sustainability and well-being, both in daily life and for the future.

### 2.3 THE SUSTAINABILITY MOVEMENT

Human-environment interactions are complex and omnipresent and as such, are of significant interest to many parties, including academic researchers, governments and citizens. The sustainability movement, housed to some degree within the environmental movement, is concerned with creating a sustainable future by harmonizing lifestyle with ecological ideology, pro-environmental behaviour, and quality of life. This movement is very diverse, and its proponents embrace a range of issues directly and indirectly related to the environment. A constructivist perspective suggests that sustainability and environmental issues are culturally and socially defined (Linden, 1998: 35). One of the challenges with broad concepts like "sustainability" is that there are multiple definitions and interpretations. The resultant variation and complexity stem in part from level of analysis (e.g. individual, local, national or global), and also from culturally- and politically- mediated notions of what is considered critical to sustain. A list of rules for ecologically sustainable living could run into the hundreds (Durning, 1991: 3). As a result, it is an immense challenge not only to identify all of the issues taken up by those concerned with sustainability, but also to achieve any sort of consensus on these issues.

Nonetheless, some researchers have authored visions of how sustainable future societies might look, in spite of the myriad of challenges presented by the mainstream, including hyper-mobility and homogenous urban sprawl. Roseland (1997) presents an "eco-city" framework, and this set of ideas captures in part the breadth and complexity of matters of interest in the sustainability movement:

Streets for people, not cars. Destinations easily accessible by foot, bike, and public transit. Health as wellness rather than as absence of disease. Restoration of damaged wetlands and other habitats. Affordable housing for all. Food produced and consumed locally. Renewable sources of energy that do not harm the environment. Public awareness and involvement in decision-making. Social justice for women, people of colour and the disabled. Consideration of future generations. (Roseland, 1997: 1)

Similarly, Jacob (1995) envisions sustainable future cities in a context of regional self-sufficiency, characterized by mixed-use, largely car-free neighbourhoods, farmers' markets, community gardens, green space, and urban wildlife. This vision includes important technological innovations, such as solar and wind power, as well as comprehensive recycling and composting enterprises. Sustainable cities in this view also entail a slower pace of life and the fostering of social relationships on which sustainable living depends.



There are a number of approaches in the social scientific study of environmentalism and sustainability. Much of the movement-based research concentrates on specific groups with environmental agendas (e.g. Marangudakis, 2001 on Earth First!) or provides broad trend overviews (e.g. Brulle, 1996 on the development of environmental organizations). Rural-focused studies consider the back-to-the-land movement (e.g. Jacob, 1997). Sustainable communities and eco-city approaches use ecological frameworks to evaluate the elements of a community, including transportation, waste management, and resources (e.g. Inoguchi et al., 1999; Sandberg and Sörlin, 1998; Roseland, 1997).

While the specific goals and interests of individuals and groups within the sustainability movement vary, there are a number of “hot button” issues that are integral in shaping their views and activities. Adapted in part from Gottlieb (1996) these may include the following:

- *Global climate change*—the threat of global warming, ostensibly brought about by the burning of fossil fuels and destruction of the rainforest
- *Waste and pollution*—distribution and accumulation of chemical, biological and nuclear wastes in the atmosphere, water, and land
- *Loss of land and wilderness*—the destruction of forests and wetlands for agriculture, leading to erosion, desertification and loss of habitat for animals
- *Threats to biodiversity*—increasing rates of endangerment and extinction of animal and plant species brought on by habitat loss and the killing of animals for sport, use or food
- *Consumption*—insatiable consumerism depletes natural resources and contributes to global warming and the accumulation of waste
- *Social justice*—the push for more consumer goods locates manufacturing in areas ill prepared to handle waste; also linked to human rights and other abuses (e.g. sweatshops, fair trade issues)
- *Globalization*—a global economy draws radically on the planet’s resources to produce and transport low-cost goods, and fosters exploitative relationships with communities and ecosystems
- *Technology*—sustainability advocates raise concerns about appropriateness and uncritical application of some technological advances, such as genetic engineering

Linden (1998) distils five categories of ecological behaviour that may be taken on in response to the above issues. These behaviours are classified according to costs in terms of time, effort, resources and scale (Linden, 1998: 35):

1. Ecological behaviours that cost very little in extra effort or in money (e.g., not littering)
2. Activity requiring more physical effort and involving some financial cost (e.g., buying organic food or other environmentally certified products)
3. Changes in behaviour which involve extra time commitment (e.g., purchasing more fresh rather than canned or frozen food and cooking from scratch)
4. Actions entailing proactive measures on the part of a neighbourhood or community (e.g., community composting projects)
5. Modification of several aspects of an individual's life (e.g., switching to public transport from the use of a private car, which may in turn lead to changing schedules, time management, etc.)

In addition to various attempts to characterize sustainable behaviour and sustainable societies, there is a considerable body of social scientific work that addresses values and their connection to aspects of pro-environmental performance (e.g., Dietz et al., 2002 on gender; Iwata, 2001 on attitudinal determinants; Kalof et al., 1999 on vegetarianism; Linden, 1998 on value orientations, Peek and Konty, 1997 on religion; Gottlieb, 1996 on deep ecology; Stern and Dietz, 1994 on environmental concern; Finger, 1994 on environmental experiences; Ungar, 1994 on environmental attitudes and behaviour). This research generally demonstrates that value orientations are correlated with beliefs about the environmental consequences of human activity, with intentions to perform pro-environmental acts, and with self-reported pro-environmental behaviour (Zavestoski, 2001: 174). However, the relationship between words and action tends to grow weaker as the effort, costs and/or consequences of an ecological behaviour increase (Linden, 1998: 35).

Generally, environmental values and practices are characterized by contradictions, inconsistencies, and individual differences. Most individual and household level pro-environmental activities are not compelled by law. This means that most people freely choose what they do, based in part on their personal views, as well as other processes such as assessments of costs and benefits. While there is the aforementioned debate as to how values or attitudes translate (or not) into behaviour, it follows in theory that there must be some degree of importance placed

on the environment and related issues in order to engage in practices that are sustainable, but may also be inconvenient, costly or even unpleasant. "For some individuals, environmental concerns can lead to some degree of change in behaviour of everyday life while for others such concerns are no more than empty phrases" (Linden, 1998: 34).

Nonetheless, a purely value basis for environmental behaviour remains problematic for some, particularly given high levels of awareness and specialized knowledge required to make the relevant connections: "Very few individuals have highly developed values specifically related to the quality of the environment. ... Even if such values existed, very few individuals have developed an awareness of the possible environmental outcomes of their behavioural decisions" (Zavestoski, 2001: 178). Thus, the actual motivational impact of explicitly pro-environmental values on similarly pro-environmental activity remains ambiguous. Even if there is a possibility that some of the values underpinning sustainable behaviour may be something other than expressly ecological, their existence and role are still worth consideration. Spretnak (1996: 534-535) identifies ten values of the Green Movement in the United States that provide a sense of guiding visions within the sustainability movement:

1. *Ecological wisdom*—understanding that we are *part* of nature, not on top of it, and thus must live within the ecological and resource limits of the planet
2. *Grassroots democracy*—developing systems that allow and encourage us to control the decisions that affect our lives
3. *Personal and social responsibility*—encouraging commitment to lifestyles that promote health, ecological wisdom, social responsibility and personal growth
4. *Non-violence*—developing alternatives to current patterns of violence
5. *Decentralization*—encouraging regionally-based cultures by restoring power and responsibility to individuals, communities and regions
6. *Community-based economics*—redesigning work structures and developing new economic activities and institutions, such as local currency systems
7. *Post-patriarchal values*—replacing the cultural ethics of dominance and control with more cooperative ways of interacting and respecting the contemplative, inner part of life as much as the outer activities
8. *Respect for diversity*—honouring cultural, ethnic, racial, sexual, religious and spiritual diversity within the context of responsibility toward all beings

9. *Global responsibility*—being of genuine assistance to grassroots groups in other parts of the world and helping others make the transition to self-sufficiency in food and other basic necessities
10. *Future focus*—thinking in terms of the long-range future and making quality of life a primary focus

With respect to social bases of environmental performance, generation and gender emerge as important factors. Generational differences are associated with certain pro-environmental practices: "Many aspects of ecological behaviour coincide with behaviour in less affluent times. Low consumption levels, the reuse of material and organic gardening are examples" (Linden, 1998: 36). Individuals who are older, who perhaps experienced hardships as a result of war or economic depression, may be more likely to embrace certain sustainability ideas and practices. In terms of gender, men and women "report themselves to be equally concerned about the environment" (Linden, 1998: 37). However, Linden suggests that women worry more over environmental problems and consider them to be more serious than men, and moreover, "women are better at environmental behaviour compared to men" (Linden, 1998: 37). Thus, women may be expected to adopt more or stronger ecological views and sustainable practices, as compared to men. Education is also a significant factor, insofar as higher levels of education may be associated with ecological behaviour. Sustainability and environmental ideas tend to thrive in academic environments, and such views and practices may be further cultivated through advanced course work, as well as exposure to the activities and ideas of student activist groups, awareness raising campaigns, and pro-environmental practices such as campus composting or carpooling initiatives.

## **2.4 THE COMMUNITY CURRENCY MOVEMENT**

This thesis is based on data gathered for a larger research project on sustainability, and the principal investigators identified members of the community currency movement as the population of study for that work. Community currency is not a central part of this study; however, these groups may be regarded as an offshoot of the sustainability movement, in this case, with respect to their focus on local economies and regional sustainability issues. Community currency involves attempts to establish locally-based trading and purchasing networks through the

infusion of additional amounts of legal tender into a community's economy. In effect, it is mediated bartering. This is not a single-issue movement; most community currency groups promote a variety of economic, environmental and social justice matters, with an emphasis on local alternatives. For a majority of the organizations, and particularly the three involved in this study, there is a concerted focus on promoting environmentally sound and socially sustainable lifestyle choices.

While many community currency experiments are primarily economic initiatives, participants perceive a range of benefits, including stronger social networks and personal development. Other advantages are conceptualized specifically in ecological terms. In particular, it is believed that a local economy carries with it the potential to be sustainable. "Locally based economies tend to be environmentally healthier and more democratic because its participants live in the same place they are spending their dollars" (Babin, 2004: 3). Both community currency and environmental activists contend that a global economy is oblivious to local needs, since it accumulates resources and wealth at transnational and corporate levels. In the process of extracting resources, manufacturing and shipping, a global economy draws also radically on the earth's finite resources. With alternate views of the economy and consumption, as well as explicit ties to place, participants in this movement are appropriate for this research.

Community currency is revisited in the discussion of the data and sample in Chapter 3, and descriptive accounts of the three community currency organizations involved in this study are provided in Chapter 4. For the purposes of this research, another social movement, voluntary simplicity, is introduced. This approach helps to better capture key connections between consumption, concern for the environment, sustainable practices, mindfulness and well-being.

## **2.5 VOLUNTARY SIMPLICITY**

As a system of beliefs and a set of practices, voluntary simplicity neatly connects the individual, the social and the environment with consumption, lifestyle and well-being. It offers interesting counter-cultural strands and a sheer practicality and applicability as a personal level "solution" to a range of larger problems in society. While there is no all-encompassing definition, voluntary simplicity can be described as "the choice out of free will—rather than being coerced by poverty, government austerity programs or being imprisoned—to limit expenditures on

consumer goods and services, and to cultivate non-materialistic sources of satisfaction and meaning" (Etzioni, 1998: 620).

In certain forms, VS can be quite radical, although most interpretations are more restrained. Nonetheless, it is generally at odds, at least to some degree, with the consumer society. Richard Gregg, a student of Ghandi's teachings, is credited with crafting the first formal description of voluntary simplicity in 1936:

Voluntary simplicity involves both inner and outer condition. It means singleness of purpose, sincerity, and honesty within, as well as avoidance of exterior clutter, of many possessions irrelevant to the chief purpose of life. It means an ordering and guiding of our energy and our desires, a partial restraint in some directions in order to secure greater abundance of life in other directions. It involves a deliberate organization of life for a purpose. Of course, as different people have different purposes in life, what is relevant to the purpose of one person might not be relevant to the purpose of another. The degree of simplification is a matter for each individual to settle for himself (Gregg in Elgin, 1993: 23-24).

Duane Elgin (1993), a contemporary VS authority, has more recently expanded on Gregg's description, providing greater clarity and ties to modern North American society. In particular, a strong ecological dimension is honed, equating voluntary simplicity with ecological, compassionate and sustainable living.

Simplicity is not a new idea. Many religious and philosophical orders have long promoted ascetic lifestyles and eschewed the copious acquisition of material goods. In North America, a tradition of enlightened material restraint dates back to the colonial era (see Shi, 1985 for an historical account of simplicity in America). For many, "the simple life" calls forth back-to-basics, idyllic rural living; a point underscored by a recent reality television show bearing the same name. However, for advocates, VS is not about going "back" to anything, and "simple" as way of living does not equate with "easy." VS is a deliberate and contemplative process, with core components of critical thinking, questioning and challenging: "Voluntary simplicity is a forward-looking cultural development aimed at higher states of focus, attention, mindfulness, awareness, and conscious purpose" (Burch, 2000: 22).

Elgin (1993) interprets VS as a balanced life, emphasizing harmonious and purposeful living, and integrating inner and outer aspects of life into an organic whole. In short, he promotes a life that is outwardly simpler and inwardly richer through three primary tenets: frugal consumption, ecological awareness and personal growth. There is no simplicity formula or doctrine; instead, there are very general patterns of behaviours and beliefs. Based on Elgin's work, Shama (1985: 57-

58) offers six views commonly supported by those choosing a simpler life (see also Shama and Wisenblit, 1984 and Leonard-Barton, 1981):

- *Material simplicity*—buying and consuming less, or only what is needed, is better than over-consuming or catering to wants
- *Human scale*—“small is beautiful,” implying a preference for smaller, more efficient products, technologies and institutions
- *Appropriate technology*—choosing functional, efficient and conservational technologies, rather than the automatic application of high technology
- *Self-determination*—having more control over one’s life and less dependency on large, non-regional, centralized organizations
- *Ecological awareness*—recognizing that resources are limited and realizing the interdependency of people and the environment
- *Personal growth*—exploring the “inner life,” including psychological and spiritual development and mindfulness

Burch (2000: 11-20) further expands on the above ideas, distilling from discussions with VS practitioners, nine clusters of characteristics that are associated with voluntary simplicity:

1. Sufficiency; minimalism; anti-consumption; deliberate reduction of consumption, clutter, noise, social over-commitment, superfluous ornamentation and scale
2. Self-reliance; socially responsible autonomy; personal authenticity and wholeness
3. Connection, interdependence, co-operation with the Earth, nature and other people
4. Mindfulness; spirituality
5. Deliberate reduction of material possessions, reduction of clutter and unnecessary complexity; conscious redirection of consumption decisions in favour of more sustainable forms of transportation, food production, housing and entertainment
6. Practices that develop one’s spiritual, intellectual, emotional, physical, interpersonal, and aesthetic potentials
7. Practices that build strong, intimate, non-violent, and compassionate relationships

8. Development of a conscious, intentional approach to living, rather than acting on unconscious impulses
9. Practices contributing to a holistic approach to personal health

What voluntary simplicity means in a general sense may be gleaned from these broad descriptions of behaviour and beliefs. However, what it actually looks like in practice and how individuals are tuned into it entail more detailed investigations. Much of the voluntary simplicity literature falls in three broad categories: philosophical/religious, 'how to' or self-help, and testimonials, most of which do not apply a rigorous social scientific approach. Alongside various religious writings, there are a few resources that might be described as "classics" in the field. These include *Walden* by Henry David Thoreau (1811/1854), who is viewed by many to be a forefather of modern simplicity; homesteaders Helen and Scott Nearing's *Living the Good Life* (1954), that documents one couple's move from the city to self-sufficiency; and Elgin's *Voluntary Simplicity* (1993/1981), which was one of the first systematic works promoting dialogue on sustainable living.

Many popular simplicity resources are located in self-help sections of bookstores or libraries, and provide step-by-step tips and practical strategies for simplifying many aspects of everyday life (e.g. Lockwood, 2000; Andrews, 1998; St. James, 1994). Others consider simplicity in specific frames, such as simplicity and children (Sherlock, 2003; St. James, 2000). Finally, simplicity has been also cast as a lifestyle movement, spurred on by the goal of financial independence through eliminating debt and redefining relationships to money, possessions and people (e.g. Dominguez and Robin, 1992).

In any case, VS has gained considerable popular interest in the past decade. One could even say it has been co-opted as its own little industry, with slick marketing of simple living classes, books, journals, websites, speakers, educators, study circles, and retreats. Despite an abundance of popular resources, there has been modest academic interest in VS. There are two general themes in academic voluntary simplicity research:

- *Description and motivation*—What is VS and what are the key values and practices? Who engages in VS? Why do people choose VS? (e.g. Zavestoski, 2002; Pierce, 2000; Iwata, 1999, 1997; Etzioni, 1998; Vanderbilt, 1996; Shama and Wisenblit, 1984)



- *Consumption/materialism, values and quality of life*—How does VS relate to consumption and materialism? What is the relationship of materialism versus non-materialism and well-being? (e.g. Craig-Lees and Hill, 2002; Kasser, 2002; Shaw and Newholm, 2002; Zavestoski, 2001).

Interestingly, much of the earlier academic work on VS comes from the field of marketing, where researchers attempt to characterize the mindset of voluntary simplifiers as 'consumers' and identify appropriate strategies for advertising and selling products or services to them.

In considering the descriptive literature, a number of researchers have looked into social variables and interest or engagement in VS. For example, Leonard-Barton relates VS to education (higher) and age (younger), but did not find any association with income or race (1981: 248). From an investigation of VS lifestyles, Shama and Wisenblit provide a profile of the "typical" VS practitioner: "[They] are college graduates, professionals and managers, relatively young and have above average family income" (1984: 235). Zavestoski reports similar results: "Participants in VS classes are not average Americans. They have an extremely high level of education, higher than normal incomes, and tend to be employed in the service sector of the economy as managers or in other leadership positions" (2002: 8). In studying VS in Japan, Iwata targets a female population, providing the following rationale: "Female adults, being mostly housewives, generally have a greater number of opportunities to engage in various pro-environmental behaviours" (1999: 80). A positive relationship between age and VS is also found in this work. These descriptive accounts of VS practitioners not only concur with each other, but they also fall in line with biographical availability.

With ecological awareness occupying a key position in most conceptions of VS, there are also numerous attempts in the literature to describe this relationship. For example, Leonard-Barton connects VS with energy conservation: "Voluntary simplicity has potentially great implications for energy-consuming patterns in the United States" (1981: 243). In reference to consumers, Shama and Wisenblit (1984: 240) suggest that there are important similarities between those who value VS and those who are ecologically responsible. Some researchers emphasize the capacity of VS to have a direct and meaningful impact on the state of the environment: simplicity lifestyles, if constituted on a larger scale, have the potential to significantly enhance society's ability to protect the environment (Etzioni, 1998: 638). Similarly,

Iwata (1997; 1999) asserts that voluntarily adopting simpler lifestyles will be necessary for human survival, and further claims that VS lifestyles are “essential determinants of pro-environmental behaviour” (Iwata, 1999: 385). Finally, Burch connects pro-environmental action directly to VS: “Reducing environmental damage implies creating a richly satisfying way of life while also reducing consumption of resources and the production of wastes. Simpler living halts both resource consumption and waste production at the source, immediately” (2000: 14). Thus, social scientific research generally supports a relationship between VS and environmental concern and performance.

Consumption issues are also central in VS, and they are both explicitly and implicitly connected to the environment and sustainability. Zavestoski suggests that concern about over-consumption may be considered a manifestation of environmental concern (2001: 184). Reducing consumption can entail large scale, even radical lifestyle changes, such as quitting a high-profile job (and thus shedding excess expenses such as commuting, wardrobe, and cosmetics), relying on alternate methods of transportation instead of owning a car, or adopting a strict vegetarian diet. On a more moderate scale, individuals may decide to share seldom used items such as ladders or bread-makers, to own fewer but higher quality possessions, or to repair and mend items to make them last longer.

Efforts to reduce consumption are important, however, many of these may quickly become cumbersome and inefficient. VS more typically entails living *within* the consumer society, not in complete opposition to it. Thus, changing patterns of consumption and making informed consumer choices are also important. Changes can include choosing products based on ecological or other considerations, boycotting products, product categories and/or companies, purchasing second-hand items, or engaging in recycling and reusing. Moreover, this also can involve creating alternate views of possessions. Craig-Lees and Hill (2002: 14) found that simplifiers and non-simplifiers view possessions differently, with VS practitioners tending to be more concerned with the functionality of products instead of brand or appearance, and less inclined to link status to items such as houses or cars than non-practitioners.

As with motivating factors behind any activity, reasons for reducing or changing consumption are difficult to isolate. In the case of VS, there are two general perspectives that may be used to rationalize the decision to change

consumption patterns. *Downshifting* is based mainly on internal, self-centred or altruistic considerations of lifestyle: "Downshifter seek more quality time, but might have little concern for wider moral issues" (Shaw and Newholm, 2002: 3). *Ethical simplifying* takes into account other, largely external matters, such as the environment or social justice: "Ethical simplifiers respond to complex and swiftly developing social and environmental debates that they see as having an impact on their role in consumer society. An individual may adopt a more restrictive diet primarily because of a concern for animal welfare, or decide not to own a car because of concern about the negative environmental impact" (Shaw and Newholm, 2002: 3). The latter form, ethical simplifiers, is applied to participants in this study as a way of connecting behavioural choices and environmental concern.

Shaw and Newholm (2002) identify several key areas of consumption that have been identified and challenged by ethical simplifiers in the United Kingdom. All of these entail ecological considerations and underpin the sustainability variables taken up in this research.

*Diet:* Dietary choices connect a number of important factors including health, food quality, animal welfare, environment, power relationships, and concern for a more equitable distribution of food (Shaw and Newholm, 2002: 6). More sustainable dietary changes include reducing or eliminating meat consumption, buying free-range, organic and non-genetically-modified products, and preparing meals from whole ingredients instead of dining out or consuming frozen or instant food.

*Transportation:* With ties to greenhouse gas emissions and global warming, transportation is a critical issue for many environmentalists. "A significant number of the ethical consumers observed deliberately did not use or own a car. Others found ways to moderate car use by using public transport, walking, cycling, owning what they argued were more efficient new vehicles, and restricting their family to fewer cars. ... Even car owners, however, showed reticence concerning car ownership" (Shaw and Newholm, 2002: 7).

*Fair trade:* Fair trade is typically associated with specific products such as tea, coffee, or chocolate, for which growers and workers are receiving a fair return on their labour or investment. There is an ecological slant, as it is also seen as enabling poor farmers to become more environmentally conscious (Shaw and Newholm, 2002: 9). Fair trade is also linked to the avoidance of products made in sweatshop conditions.

*Used or second-hand shopping:* Purchasing goods used or second-hand falls in with both frugal consumption and ecological awareness, in terms of reducing draws on natural resources as well as saving money. However, there can be a political dimension as well: Second-hand clothing may be worn as a sign of opposition to consumerism (Shaw and Newholm, 2002: 8).

It is difficult to distinguish consumption choices that are attributed solely to simplicity ideals, since these may easily be conflated with self-interest (e.g. health concerns and vegetarian diets) or poverty (purchasing used goods or making do with older, less efficient appliances) among other factors. Moreover, each of the areas mentioned above will vary in importance and relevance for each individual. Thus, patterns of universal VS practices are largely difficult to isolate. People adhering to simplicity values and making choices in some areas do not necessarily do so in other areas. The variation and inconsistencies represent a challenge in capturing any sort of comprehensive index of VS behaviours. While measurement of such phenomena will always be somewhat imperfect, such attempts are both necessary and useful in securing a general picture.

Along with consumption and ecological issues, VS practitioners also emphasize personal growth and the development of inner aspects of life. Simplicity brings greater consciousness and purpose to a range of life choices, helping to better link values and practices. Spiritual dimensions are viewed as essential to VS, particularly those perspectives and practices that contribute to inner growth, as well as foster connections to family and community. Many people are drawn to VS because they experience a general dissatisfaction with their lives, "a spiritual emptiness" (Zavestoski, 2002: 7). Most simplifiers affirm the importance of choosing and staying on a spiritual path, since such practices help to increase one's sense of interrelatedness to the environment and community (Talvi, 2000: 11). However, spirituality in VS need not be tied to any specific faith or formal religious traditions.

Instead, it seems there is a greater focus on the reflective or contemplative elements of spiritual practice: "Cultivating the depth dimension of experience calls for silence, solitude, time for reflection and appreciation, and energy for exploration and new learning" (Burch, 2000: 15). One of these specific practices, mindfulness, is derived from Buddhism. The spiritual and inner growth dimensions supported by VS practitioners have direct ties to quality of life and well-being. Problems with self-esteem, feelings of inadequacy, and the stifling of satisfaction and fulfillment in life

are linked to the possibility that people are “overdeveloped outwardly and underdeveloped inwardly” (Kabat-Zinn, 1994: 163). Thus, VS represents a way to begin considering other sources of satisfaction (Zavestoski, 2002: 7). Etzioni (1998) poses an interesting question that concerns the degree to which VS can represent a source of satisfaction in and of itself: “Does voluntary simplicity constitute a sacrifice that people must be constantly motivated to make, or can it, in itself represent a major source of satisfaction, and hence, be self-motivating?” (628). Accordingly, questions of happiness, satisfaction, and well-being also come to bear in a consideration of the outcomes of voluntary simplicity.

Participation in VS is relatively small in scale, and thus its impacts may not be far-reaching: “At the current level of participation, the lifestyle changes of simplifiers are not likely to have significant social impacts” (Zavestoski, 2002: 9). However, if benefits to participation, particularly with respect to mindfulness and well-being, can be identified and articulated, this may form a basis for greater incentives in taking on sustainable behaviours. Finally, it is important to note that identifying a definitive group of voluntary simplicity practitioners is challenging. Not all voluntary simplifiers will see themselves as members of the simple living movement (Craig-Lees and Hill, 2002: 4). Moreover, explaining why individuals choose to include simplicity elements in their everyday lives is extremely difficult. In this research, voluntary simplicity is applied primarily as a conceptual framework for exploring associations between social-structural, sustainability, mindfulness and well-being variables.

## **2.6 MINDFULNESS**

The concept of “mindfulness” originates in Buddhism and is an essential part of the spiritual and inner growth dimensions of voluntary simplicity. Mindfulness can be described as a calm yet focused engagement with the present, similar to a meditative experience, but it can be shorter, less systematic, and not always as intense (Jacob and Brinkerhoff, 1999: 349). Mindfulness ultimately entails awareness—the ability to pay attention to what is happening in terms of thoughts, ideas, and emotions, rather than being driven or hijacked by them.

The pace and pressures of the modern consumer society ostensibly promote a distracted, harried way of living. Moreover, the collective push for efficiency, convenience and material success fosters a tendency to drift into thoughts about past or future events, or getting caught up in opinions about what is happening.

These orientations can have significant costs spiritually and ecologically: "The habit of ignoring our present moments in favour of others yet to come leads directly to a pervasive lack of awareness of the web of life in which we are embedded" (Kabat-Zinn, 1994: 5). For formal adherents, mindfulness is a disciplined spiritual practice. Thich Nhat Hanh, a Buddhist monk, peace activist, and teacher, suggests: "Peace and happiness are available...if we can only quiet our distracted thinking long enough to come back to the present moment and notice the blue sky, the child's smile, the beautiful sunrise" (Hanh, 1991: *xiv*). In a less formal sense, being "mindful" means striving to bring similar, focused, non-judgemental awareness to everyday life, and it is this informal interpretation that is applied in this work.

Mindfulness (as opposed to mind/essness) has at its core a basic examination of who we are—questioning our views of the world and our place in it, and nurturing appreciation for the fullness of each moment in life (Kabat-Zinn, 1994: 3). This has important implications for ecological sustainability, and also resonates well with the reflective, questioning and challenging orientations of voluntary simplicity. Kabat-Zinn suggests that mindfulness is simplicity itself (1994: 11). In fact, Thoreau's experience at Walden has been characterized as a personal experiment in mindfulness (24). From a mindfulness perspective, simplicity involves slowing down and being attentive to the present moment, with the view that this can increase one's general sense of awareness, serving to articulate and probe values, behaviour and choices: "The notion of VS keeps me mindful of what is important, of an ecology of mind and body and world in which everything is interconnected and every choice has far reaching consequences" (Kabat-Zinn, 1994: 70).

While the more accessible, informal dimensions of mindfulness are applied here, it must be underscored that mindfulness is an important part of the Buddhist tradition. The interpretations taken up in this work are derived, and should not be conflated with formal Buddhist practice. Mindfulness in varying forms is also being used as a tool in the areas of psychology and health (e.g. Harvard Women's Health Watch, 2004; Barinaga, 2003; Goleman, 2003). There are a number of positive states associated with mindfulness, including feelings of patience, trust, compassion, stillness, generosity and wholeness and these may have implications for well-being. There is mounting evidence that "cultivating mindfulness can increase our enjoyment of life, expand our capacity to cope with illness, and possibly improve our physical and emotional health" (Harvard Women's Health Watch, 2004: 1).

## 2.7 QUALITY OF LIFE AND SUBJECTIVE WELL-BEING

Philosophers, prophets, and writers have pondered “the good life” for centuries, and more recently, academics, economists, policy-makers, governments and individuals have entered into the fray. One conclusion that often emerges is that a “good” life is a “happy” life. People value happiness and satisfaction, and these are viewed to be important in any evaluation of life. However, happiness is a tricky concept. Defining and measuring such elusive, changeable and subjective matters with appropriate degrees of reliability and validity is difficult: “It is argued that subjective appraisals tend to be unstable, incomparable and unintelligible” (Veenhoven, 2002: 36). Nonetheless, it is important to consider *all* aspects of the human experience that make life meaningful and worth living—whether they are easily measurable or not. Quality of life (QoL) refers to a wide range of factors that contribute to experiences of enjoyment, meaning and satisfaction in everyday life. These may include social or national level factors such as population health, the environment, economy, and culture, as well as individual level variables like occupation, marital status, and personal health. The popular sensibility of the term “quality of life” stems largely from the fact that everybody aspires to a higher degree of it. QoL resonates because each individual has an interpretation, based on his or her unique circumstances, values, goals and expectations, as well as those of family, community, and society.

Initial social scientific efforts to assess and measure the quality of human existence focus largely on the macro, external conditions leading to satisfying lives, and in particular health and environmental indicators. However, there are certain social dimensions that also are considered: “The variables which are in general most closely and reliably related to the pattern of average happiness across countries include income per capita, civil rights and liberties, and religious belief” (Welsch, 2002: 475). For the individual, Wilson (1967) provides one of the first reviews of research on happiness, concluding that: “The happy person emerges as a young, healthy, well-educated, well-paid, extroverted, optimistic, worry-free, religious married person with high self-esteem, high job morale, modest aspirations, of either sex and of a wide range of intelligence” (1967: 294). Such correlates of happiness have been identified and researchers currently are not as interested in describing what constitutes a generally “happy” person. Instead, focus has shifted toward better understanding the factors that influence well-being.

In the past, descriptive endeavours were able to overlook subjective elements of QoL. However, with the centrality of the individual, the significance placed on personal views, and the pursuit of a "good" quality of life in North American society, subjective perceptions are critical for accurate and complete evaluations of life experience. Subjective well-being (SWB) is one measure of quality of life. It is a social construction representing "a broad category of phenomena that includes people's emotional responses, domain satisfactions, and global judgements of life satisfaction" (Diener et al., 1999: 277). SWB literature considers how and why people experience their lives in positive ways, including both cognitive judgements and affective reactions (Diener, 1984: 542). One cannot presume SWB to be *the* lone ingredient of a good life. SWB is considered necessary for a good life and good society, but not sufficient for it.

The field of subjective well-being study entails the analysis of how people evaluate their lives, both globally and in specific domains, such as family or work. SWB research is diverse in its approaches to theory and methodology, across a range of disciplines. Sociologists and quality of life researchers focus largely on social indicators such as age, gender, ethnicity, income, education and marital status. Interestingly, these aspects tend to account for only a small part of the variance in SWB (e.g. Diener et al., 2003; Campbell et al., 1976; Andrews and Withey, 1976). Psychology also has shaped the study of SWB. Personality is one of the strongest and most consistent predictors of SWB (e.g. Diener et al., 1999). In fact, there may be certain trait or hereditary factors that result in a temperamental predisposition for positive SWB: "Individual differences in both personality and SWB emerge early in life, are stable over time, and have a moderate to strong genetic component" (Diener et al., 2003). Finally, economists have developed and tested theories relevant to SWB, many of which stem from consumer economics and production theories: "Economists have typically assumed that human beings aspire to secure material goods and services" (Ormel et al., 1999).

Personality and trait elements, as well as economic theories, are beyond the scope of this work and are not considered in the analysis. Instead, the focus is on sociological factors. There have been many studies that investigate social correlates of subjective well-being. Diener (1984) and Diener et al. (1999) provide summaries of some key sociological variables used to explore well-being:



- *Income*—While there is evidence of a small, positive relationship between income and SWB, increases in income are not inevitably associated with increases in happiness. Generally speaking, “the data do not support a strong causal path from income to SWB” (Diener et al., 1999: 288).
- *Age*—Early studies found younger people were happier than older people, however, “recent studies converge to show that life satisfaction often increases, or at least does not drop with age” (Diener et al., 1999: 291).
- *Gender*—There is little difference in global happiness or satisfaction between females and males (Diener, 1984: 554).
- *Employment*—There are positive correlations between work and SWB. “Unemployment may have a devastating impact on SWB for many persons that goes beyond the obvious financial difficulties” (Diener, 1984: 555).
- *Education*—There may be a small, positive effect of education on SWB, although this may be due to interaction with other variables such as income and occupation (Diener, 1984: 555).
- *Religion*—SWB correlates strongly with religious certainty and religion may provide psychological and social benefits, including a sense of meaning in daily life, a collective identity and a reliable social network (Diener et al., 1999: 289).
- *Marriage and family*—A positive relation between marriage and SWB is well supported in the literature: “Marriage and well-being correlate significantly even when variables such as age and income are controlled” (Diener et al., 1999: 289). However, most studies find either negligible or negative effects of having children on SWB (Diener, 1984: 556).

Researchers have started to explore culturally-mediated factors influencing SWB, including personal experiences, values and goals. For example, Ormel et al. (1999) present a social production function approach to SWB, in which individuals optimize the production of well-being by choosing and substituting goals. Similarly, Cantor and Sanderson (1999) highlight the importance of having appropriate goals: “Well-being is enhanced when individuals are able to pursue their distinct personal goals in ways that are intrinsically valued and autonomously chosen, approached at a feasible level, and facilitated in their daily life context” (Cantor and Sanderson, 1999: 232).

Values also are important in well-being research. Oishi et al. (1999) propose a value-as-moderator model, where individuals' values are influenced by culture and changeable over time. This model predicts that people gain a sense of satisfaction out of activities congruent with their values (Oishi et al., 1999: 163). That is, behaving in a way that is consistent with individually held values (such as those relating to ecological sustainability) may result in a greater sense of well-being. In multiple discrepancy theory, "individuals compare themselves to multiple standards, including other people, past conditions, aspirations and ideal levels of satisfaction, and needs or goals. Satisfaction judgements are then based on discrepancies between current conditions and these standards" (Diener et al., 1999: 282). This theory has been applied in an investigation of values and performance in the back-to-the-land movement, where Jacob and Brinkerhoff (1997; 1999) found that the "gaps" between reported behaviour and idealized notions accounted for variance in SWB. Certain compensating factors, such as mindfulness, were identified and these help individuals reconcile their values and performance. Thus, intersections of the individual and the social, in the form of socially- and/or culturally-mediated values and goals, are important in the study of well-being.

Given the complexity of SWB, and the interaction of an assortment of biological, psychological, cultural and social factors, there are significant challenges for its systematic study. The field of SWB has been built largely on survey research, with a variety of self-report approaches to assessing happiness and life satisfaction, including single-item indicators (e.g. "How happy are you?") and the construction of complex scales (see Cummins, 1995 and Diener, 1984 for reviews of multi-item scales used in SWB research). Typical measurement issues include differential or inconsistent interpretations of questions and response categories by respondents, potential contextual and temporal order effects such as momentary mood or preceding events/questions, distortion and bias: "Conscious distortion and response artifacts are always a concern. Perhaps more troubling is the possibility that persons may at some level be unhappy, but for some reason label themselves as happy" (Diener, 1984: 551). Similarly, Schwarz and Strack caution that self-reports do not reflect a stable inner state of well-being: "Reports of well-being are subject to a number of transient influences. Like other social judgements, they are best considered constructions in response to particular questions posted at a particular time" (1999: 79).

Taking into account measurement concerns in conjunction with the cross-sectional nature of survey work and the potential influence of personality factors, causal priority remains a significant challenge. Thus, much of the SWB research, including this work, proposes largely correlational ties between variables with theoretical causal inferences, rather than overt causal relationships. In any case, the field of SWB provides an interesting base from which to explore how individuals view and interpret their lives and choices within the broader social framework. This research considers SWB as an outcome or offshoot of participation in the sustainability movement via voluntary simplicity.

## 2.8 HEURISTIC CONCEPTUAL MODEL AND HYPOTHESES

For this thesis, six major concepts are drawn from the review of the literature: biographical availability, ecological views, sustainable practices, spirituality, mindfulness and subjective well-being. Table 2-1 below specifies these concepts and their theoretical definitions:

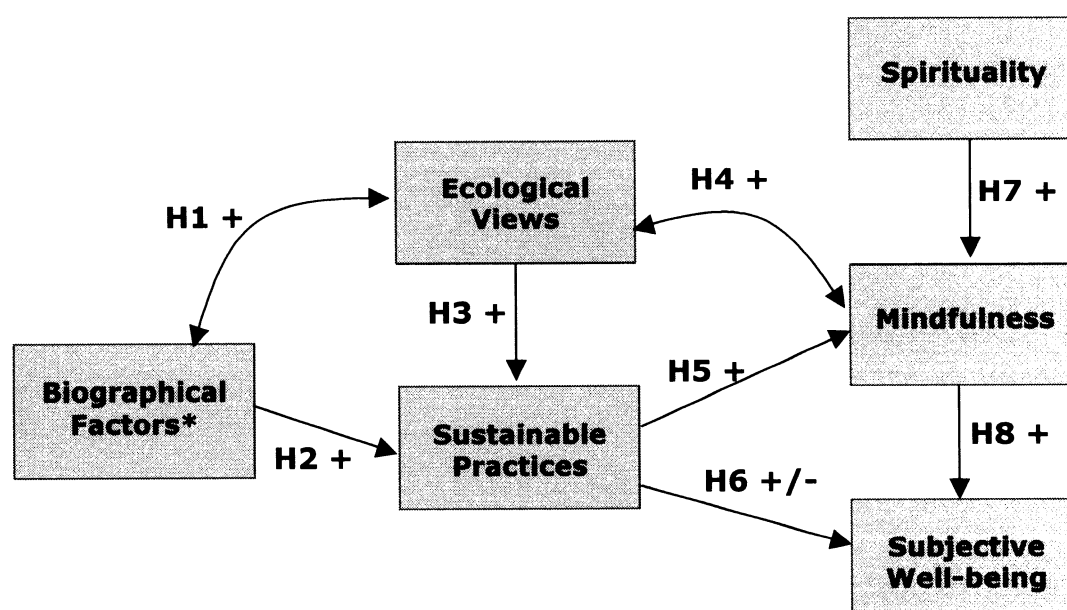
**Table 2-1: Major Concepts and their Definitions**

<b>Concept</b>	<b>Definition</b>
Biographical factors/ Biographical Availability	Social-structural factors stemming from individual biographies that may allow or constrain interest and participation in social movements and movement activities
Ecological views	Values or beliefs about the environment and life that are deemed to be less detrimental to the health of the planet, ecosystems, community and individual, including positive orientations toward sustainability
Sustainable practices	Behaviours, practices, and activities that are deemed less detrimental to the health of the planet, ecosystems, community and individual, relative to more common ways of conduct
Spirituality	Interest in and concern with spiritual matters and higher things in life, not necessarily tied to formal religion
Mindfulness	The ability to experience a calm, yet focused engagement with the present
Subjective well-being	The degree to which an individual perceives his/her life in general (i.e. not domain specific) as generally positive or negative

### 2.8.1 Heuristic Conceptual Model

A heuristic conceptual model (Figure 2-2 below) has been constructed to pictorially map potential relationships between these major concepts. Once again, it is important to note that although this visual model appears to be a causal apparatus, it is not. Instead, it is applied as a heuristic device to help explore and understand the proposed relationships.

**Figure 2-1: Heuristic Conceptual Model Diagram**



*\*includes the Biographical Availability subset*

### 2.8.2 Hypotheses

From the theoretical framework and heuristic conceptual model, it is proposed that certain biographical factors may differentially condition ecological views as well as availability for and interest in the sustainability movement. This in turn influences an individual's likelihood to engage in certain sustainable practices. These elements are connected within the voluntary simplicity framework, where VS is both a system of beliefs and a set of practices. Spiritual development, inner growth, and mindfulness in particular, are also central to VS, and this has the propensity to positively influence well-being. Specific hypotheses, distilled from the literature review above, link the variables as follows:

- H1.** There is a positive correlation between certain biographical factors (not necessarily the availability subset) and holding more or stronger ecological views, such as placing importance on local economy and fair trade, activist views, and avoiding genetically-modified food.
- **H1a.** Female respondents are more likely than male respondents to hold more or stronger ecological views.
  - **H1b.** Individuals with higher levels of education (e.g., some university or college experience) are more likely than individuals without to hold more or stronger ecological views.
- H2.** Individuals with certain biographical features (and particularly those from the availability subset) are more likely to participate in the sustainability movement via more frequent engagement in sustainable practices. That is, those who are more “available” are more likely to engage in sustainable practices, such as acquiring household food from ecological sources, participating in activist causes, taking on more demanding recycling practices, using greener forms of transportation, and adopting vegetarian diets.
- **H2a.** Female respondents are more likely than male respondents to engage more often in sustainable practices.
  - **H2b.** Respondents without significant family responsibilities (i.e., no or few dependent children at home) are more likely than those with significant family responsibilities to engage more often in sustainable practices.
  - **H2c.** Older respondents are more likely than younger respondents to engage more often in sustainable practices.
  - **H2d.** Individuals with more flexible employment situations (e.g., self-employed, part-time, unemployed, students or retired) are more likely than those with less flexible, conventional employment situations (e.g., full-time, working for a large company) to engage more often in sustainable practices.
  - **H2e.** Individuals with higher levels of education (e.g., some university or college experience) are more likely than individuals without post-secondary experience to engage more often in sustainable practices.
- H3.** Respondents holding more or stronger ecological views are more likely to engage in sustainable practices.
- H4.** There is a positive correlation between ecological views and mindfulness (i.e., a greater frequency of mindful feelings—accepting things as they are, being in the present moment, a sense of stillness and a sense of time standing still).

- H5:** Respondents engaging more often in sustainable practices are more likely to experience mindfulness.
- H6:** Respondents engaging in sustainable practices are more likely to have a positive sense of subjective well-being.
- **H6a.** The positive effect of sustainable practices on subjective well-being is expected to diminish with the inclusion of mindfulness, based on the potential association proposed in H5.
- H7:** Respondents placing more importance on spirituality and spiritual practices are more likely to experience mindfulness.
- H8:** Respondents experiencing mindfulness are more likely to have a positive sense of subjective well-being.

## **2.9 SUMMARY**

This chapter has assembled a patchwork theoretical perspective from which the social bases of sustainability and well-being can be investigated. Given the breadth and depth of the concepts under study, a contextual overview was provided along with a review of the literature covering a range of interrelated social movements, including sustainability, community currency, and voluntary simplicity. In this work, biographical availability is used as a way of determining whether or not certain social factors may influence sustainable behaviour. Voluntary simplicity is then applied to link together beliefs and practices of the community currency sample with elements of pro-environmental beliefs and performance, mindfulness, and well-being. From the literature, a conceptual model and hypotheses were created as heuristic tools to explore potential relationships. The following chapter will provide a detailed overview of the research design, including the data, sample, analysis techniques, analytic concerns and measurement.

## **CHAPTER 3 - RESEARCH DESIGN**

The purpose of this chapter is to describe the data, sample, analysis procedures, and measures that are used to explore the model and hypotheses presented in Chapter 2. It begins with a description of the data and sample, followed by an overview of the statistical techniques used in this work. Next, there is a brief discussion of quantitative measurement concerns, including reliability, validity, multicollinearity, and data limitations. Finally, a detailed account of measurement is provided for the variables taken up in the bivariate and multivariate analyses.

### **3.1 DATA SOURCE**

This Master's thesis is based on secondary analysis of data gathered for a Social Sciences and Humanities Research Council of Canada (SSHRC) funded study, "*Understanding Ecologically Sustainable Behaviour*," headed by principal co-investigators Drs. Jeffrey Jacob and Merlin Brinkerhoff. The first phase of this research design employs structured interviewing and participant observation as the primary means of collecting data. In this work, the interview responses are the focus; however, where appropriate, some observational material is introduced to add illustrative detail. A second phase of the same project (not part of this thesis) will build on the first using a mail-out survey and larger sample. I was involved with the initial phase of this project as a research assistant, beginning in April 2002 with pre-testing the survey instrument, interviewing respondents, and following through with data entry and analysis in 2003-2004.

Data for this work are drawn from three places with community currency groups: Calgary, Alberta (March 2002-2003), Nelson, British Columbia (July-August 2002), and Ithaca, New York (April 2002). Structured, face-to-face interviews were conducted by members of the research team (two principal investigators and two graduate students) with a sample of local currency participants in each of the locations. The interview schedule was first pre-tested on a few local volunteers in Calgary, and then revised for clarity, conciseness, and content. Revisions also were made after the first round of interviews in Ithaca, and eight ambiguous questions were removed from the schedule for Calgary and Nelson. Respondents in Ithaca were asked eight extra questions that are simply not taken up in this work and comparability of the data is not at all compromised.

The Urban Nature/Sustainable Cities interview schedule (Appendix A) is divided into a number of sections, and contains instructions, questions and response categories. The first part taps participation and experiences with community currency (not addressed in this thesis). The next section looks at food and local economy support, including questions related to dietary choices and habits. The following segments explore a range of issues, including clothing acquisition, recycling, and transportation choices, as well as interest and involvement in activist causes and political preferences. Based on previous work on sustainability by the principal investigators (e.g. Jacob and Brinkerhoff, 1997, 1999), and supporting the voluntary simplicity framework, a number of spirituality and mindfulness indicators are also included. A demographic section profiles respondents using typical sociological control (and biographical availability) variables, including gender, marital status, children, age, employment, education and income. The schedule concludes with two subjective well-being measures—a series of semantic differential items and a single indicator “happiness” measure.

As the research entails the participation of human subjects, the principal investigators obtained ethical clearance for this work. Moreover, I filed a separate application with the University of Calgary’s Conjoint Faculties Research Ethics Board and received approval to use the data for secondary analysis. For the interviews, questions and response categories were read aloud by the interviewer; the respondent was given a copy of the instrument to follow along and provide responses, which the interviewer then recorded. The participant completed the last page of the schedule (containing income, mindfulness, and SWB items) him- or herself, and the survey form was then sealed in an envelope. During the interview, respondents were encouraged to share any thoughts, opinions, anecdotes and experiences raised by the questions. This flexible interview style allows for codeable, quantitative data to be gathered alongside more qualitative material that could assist in better tapping views and beliefs.

Interviews typically took 40 to 60 minutes, depending on the degree of additional detail provided by the respondent. The structured portion of the interview was recorded on the instrument by the interviewer, with the exception of the last page, which was self-administered by respondents. Additional notes or comments were logged on the envelope or written up afterwards. After the interviews were complete, each case was assigned a unique identification number and the interview



schedules and notes were separated from the names. A codebook was created and quantitative responses were coded and entered directly from the schedules using the SPSS statistical software package. A few months after data entry, at least one-third of the forms were re-visited and checked for coding errors. There were no systematic coding problems found with the data, and statistical analysis could commence.

### **3.2 SAMPLE**

In order to describe and understand the circumstances, values and practices underlying more sustainable living, this study required a group of individuals committed to at least some pro-environmental and simplicity ideals. Since there are countless different ways of taking up sustainability in everyday life, there is a comparable range of movements and organizations that could have contributed research participants. In this case, the principal investigators identified members of the community (or local) currency movement as their focus. Community currency is the use of a community-specific scrip for legal tender within local trading and purchasing networks. While motivations for becoming involved in these groups vary, practitioners often frame their efforts in ecological terms, particularly with respect to their views and choices regarding consumption. Thus, it is highly likely that a substantial portion of this group is favourably disposed to both sustainability and voluntary simplicity, even though they may not self-identify as such.

Three community currency organizations are involved in the project: Ithaca HOURS, Kootenay Barter in Nelson and Calgary Dollars. Ithaca HOURS is a pioneer and leader in the community currency movement, Kootenay Barter (Nelson) represents a larger Canadian group, and Calgary Dollars is a smaller, local organization. Gerald Wheatley (a graduate student and member of the research team) is employed with Calgary Dollars and was able to provide some organizational backing for the project within his group, as well as forge stronger collegial ties with the groups in Ithaca and Nelson. The remainder of the research team joined Calgary Dollars as participant-observers, and organizers and members were made aware of this fact. Membership typically involves listing services or products to exchange for the local currency, as well as attending some of the monthly meetings or potluck dinners. The events are important for solidarity building and networking within the local currency organization. Involvement helped to establish rapport with the groups

and respondents, as well as acquire some perspective and understanding regarding the ideology and practices central to participation in local currency initiatives.

Each community currency group publishes a directory of listings that could conveniently serve as a sampling frame. The directories contain names, telephone numbers or email addresses, and listings of goods and services being offered by the listing members. The goal of this phase in the larger study was to reveal and examine a series of values and practices related to sustainability, and the principal investigators were not necessarily seeking a representative sample of the group itself, or of surrounding populations. The sampling plan employed a non-probability, purposive technique, whereby local currency group organizers imparted some direction in selecting potential study participants. "*Purposive sampling* uses the judgement of an expert in selecting cases or it selects cases with a specific purpose in mind" (Neuman, 2000: 198).

In this case, organizers from each of the three organizations provided a shortlist of members drawn from their directories and based on knowledge and experience specific to their own groups. These shortlists tended to include listers with unusually large volumes of local currency transactions and also those who offer different kinds of goods or services. The tendency to have these exaggerated cases is intentional, as the research requires *active* listers; there are many 'name only' members who have listings and may declare ideological support for the notion of community currency, but do not participate regularly or consistently in local currency transactions or events. Because of the purposive nature of the sample, however, there are limitations to generalizing to the group of local currency listers, and further, to advocates of sustainability and voluntary simplicity. However, generalization is not a primary goal here, and the cases selected in this manner are particularly informative and helpful in gaining a better understanding of factors that may influence more sustainable living.

Potential interviewees on the shortlists were contacted via telephone to set up an appointment, and interviews were conducted at the respondent's discretion. In Ithaca and Nelson, as many respondents as possible were contacted in the time available; in Calgary, the first 40 respondents were included. Though the process of selection does not meet the criteria of a scientific, random sample, the research team is unaware of any bias in the contacting process itself. Nonetheless, the nature of the sampling process means that making any sweeping statements about the

population is not really appropriate, although speculations may be made. Although this work exhibits an explanatory element, its goals are primarily exploratory, aiming to describe sustainability initiatives within three groups of community currency participants and identify potential relationships for further study. In terms of sample size, approximately 40 respondents were targeted in each community currency organization. The final sample (n=134) is broken down as follows: Calgary (n=40), Nelson (n=52) and Ithaca (n=42). While this sample size is seemingly on the small side, it was compelled by intensive time and resource considerations involved in doing hour-long, individual interviews in three different locations, where time limitations were in place due to travel requirements. A demographic description of the sample is provided in Chapter 4.

### **3.3 DATA ANALYSIS**

The data forming the base of this thesis are structured interview responses in numerical form and appropriate quantitative techniques are employed in the analyses. Preliminary data analysis involves the calculation of univariate and bivariate statistics, and includes, where necessary, data recoding and dummy-coding techniques. Factor analysis is used to confirm the dimensionality of sets of multiple items used to tap particular variables in the construction of scales. It is utilized also to help mitigate reliability and validity concerns. Finally, Ordinary Least Squares (OLS) regression is applied to test some of the hypothesized relationships between concepts put forth in Chapter 2.

#### **3.3.1. Univariate Statistics**

To formulate a descriptive snapshot of the sample and its characteristics, basic univariate statistics are obtained at appropriate levels of measurement. Frequency or percentage distributions, ranges, central tendencies (means, medians, modes), and standard deviations (measures of dispersion) are calculated for most of the structured responses in the interview schedule. Where relevant, some of the descriptive information is broken down by location using contingency tables. These numbers are applied also to support certain assumptions underpinning techniques such as regression. The descriptive findings, including a sample profile, are provided in Chapter 4.

### 3.3.2. Bivariate Statistics

Zero-order correlations are used to test some of the hypotheses from Chapter 2 and also to check for potential multicollinearity problems (see section 3.4 below). A zero-order correlation, also known as Pearson's product-moment correlation, or simply as 'r', is a symmetric measure of association that measures the linear relationship between two interval-level variables (Elifson, et al., 1998: 185). It ranges in magnitude from 0 to 1.00, with zero reflecting the absence of a relationship between the variables, and 1.00 signifying a perfect linear relationship. The sign (+ or -) indicates the direction of the relationship.

This statistic assesses *only* whether or not two variables are related—that is, if they vary together. It does not establish any causal direction, although speculation supported by theory may be advanced. Nonetheless, zero order correlations ( $r$ ), when squared ( $r^2$ ), have a proportional reduction in error (PRE) interpretation. This PRE logic suggests that errors in predicting values of a dependent variable with knowledge of values of an independent variable(s) may be reduced, as compared to having no knowledge of the independent variable or by chance alone (Elifson, 1998: 479). Correlation matrices are used to determine the presence, strength and direction of linear associations between the variables, and these findings are reported in Chapter 5.

### 3.3.3. Factor Analyzed Scale Construction

Scaling creates a measure of a variable that is expressed as a numerical score. This form is more functional than nominal or ordinal level data in certain statistical techniques, such as regression. Theoretically, any of the items from the interview schedule could be summated into a scale or index, however, it is important for scales to be one-dimensional—that is, all of the items 'hang together' (reliability) and measure a *single* construct (validity). Factor analysis refers to "a variety of statistical techniques whose common objective is to represent a set of variables in terms of a smaller number of hypothetical variables" (Kim and Mueller, 1978: 9). In this case, Principal Components Analysis (PCA) is applied as a means of data reduction: "The main motivation behind the use of factor analysis is ... achieving data reduction and obtaining factor scales which can be used as variables" (Kim and Mueller, 1978: 50). Factor analysis is used here to condense the information

contained in many variables to a smaller set of components, or factors, and also to test for unidimensionality in these multiple item measures.

Factor analysis is mathematically complex and SPSS software is used to compute the statistics, which are then evaluated against specified criteria. There are three requirements identified and applied for all of the factor analyses in this thesis:

1. Each scale must represent a single component, or factor. To determine this, the Kaiser criterion is used, where the eigenvalue (a mathematical property) for a single component is *greater than or equal to 1* (Kim and Mueller, 1978: 49). SPSS calculates eigenvalues that are then evaluated against this criterion.
2. Where a single common factor is found, the factor loadings for each item are considered. "Factor loadings are equivalent to correlations between factors and variables" (Kim and Mueller, 1978: 21). For an item to fit, *factor loadings should be greater than or equal to 0.40* (a conservative estimate). SPSS also produces factor loadings that are assessed using this parameter.
3. Cronbach's alpha coefficient, a measure of internal consistency of items, is also evaluated. "Internal consistency is a measurable property of items that implies that they measure the same construct" (Spector, 1992: 30). *Cronbach's alpha should approach or exceed 0.70* to demonstrate an appropriate level of internal consistency (Spector, 1992: 32). However, the alpha coefficient is a direct function of both the number of items and their intercorrelations: "Even items with very low intercorrelations can produce a relatively high alpha, if there are enough of them" (Spector, 1992: 31). Similarly, its value may be artificially lower in cases where there are only few items. Thus, those scales where Cronbach's alpha is only slightly low, around 0.60, may still be included in the analyses. SPSS generates Cronbach's alpha coefficients for the proposed scale, as well as adjusted values for the scale if a given item is dropped.

For the scales in this work, sets of items are grouped together based on face validity, and factor analysis is applied to determine factor structure. Items that 'hang together' are assessed once again for face validity and summated to form a scale measure of the underlying factor. PCA was conducted on sets of variables for each of the multiple-item measures included in the study. Evaluations of eigenvalues and factor loadings resulted in some items being dropped from the scales, and these are

identified and discussed in the measurement section below. Cronbach's alpha is also a frequently used criterion for item selection (Spector, 1992: 35), and it is also applied in the selection of items for deletion, particularly to increase the reliability of the scale in question.

To reduce possible attrition of cases due to non-responses on only a few of the items under consideration, cases with missing values are included *only* if they meet the following rule: If a case has *at least* three-quarters (75 percent) of items answered, it is included in the analysis with its mean score on the remaining items substituted for the missing score(s). A scale construction summary for the multiple-item measures, including the items, eigenvalues, factor loadings, Cronbach's alpha and scale properties, is presented in Table 3-1. Further detail regarding the variables and their measurement is contained in Section 3.4 below.

**Table 3-1: Summary of Factor Analyzed Scale Construction**

Scale Name	# Items	FACTOR ANALYSIS <sup>a</sup>		Cronbach's Alpha	Summated Scale Properties <sup>b</sup>			n <sup>c</sup>
		Range of loadings	Eigen values		Range	Mean	SD	
1 Subjective Well-being: General Outlook on Life	8	.71 - .81	4.48	0.886	8 - 56	46.28	6.91	127
2 Mindfulness	4	.64 - .82	2.25	0.726	4 - 20	13.19	2.98	132
3 Importance of Spirituality and Spiritual Practices	5	.61 - .84	2.65	0.775	5 - 20	11.87	3.96	133
4 Sustainable Practices								
a. Ecological Food	4	.63 - .87	2.41	0.754	4 - 16	12.11	2.84	134
b. Activist Participation	5	.49 - .74	2.03	0.615	5 - 20	13.69	3.35	132
c. More Demanding Recycling	4	.47 - .89	2.00	0.633	4 - 16	12.52	3.07	133
d. Greener Transportation	4	.61 - .87	1.98	0.655	4 - 16	8.58	2.84	134
5 Ecological Views								
a. Importance of Local Economy	5	.48 - .86	2.47	0.730	5 - 20	16.70	3.24	134
b. Activist Views	3	.73 - .84	1.79	0.644	3 - 12	9.86	1.84	132

<sup>a</sup> Using principal components analysis; all scales have a single factor

<sup>b</sup> The higher the scale scores, the more positive the outlook on life, the greater degree of mindfulness, etc.; "Range" refers to the theoretical range of the scale scores; actual ranges are reported in Section 3.5

<sup>c</sup> ns vary due to non-responses – for all scales, respondents who fail to answer at least ¾ of the items are excluded from the analysis; for occasional non-responses, the mean score on the remaining items is substituted for the missing value(s)

#### **Scale Items\***

- Subjective well-being scale** (derived from Campbell, Converse and Rogers, 1979): 8 items -- semantic differential, point best describing life between: boring-interesting [R], useless-worthwhile [R], lonely-friendly [R], empty-full, disappointing-rewarding, doesn't give me much chance-brings out the best in me [R], sad-happy [R], miserable-enjoyable
- Mindfulness scale:** 4 items -- frequency of accepting things as they are; living in the present moment; a sense of stillness, and; a feeling of time standing still
- Importance of spirituality and spiritual practices scale:** 5 items -- importance of formal meditation; yoga; prayer; Sabbath/rest day and; degree of spiritual mindedness

*Table 3-1: Summary of Factor Analyzed Scale Construction (continued)...*

- 4a **Ecological food scale:** 4 items -- effort to buy food grown/produced locally; effort to buy organic food; estimate of household food purchased at a co-op [R] and at large chain supermarkets
- 4b **Activist participation scale:** 5 items -- belong to or work with an activist group(s); amount of financial support given to groups; amount of time spent working with groups; participation in demonstrations, and; make an effort to stay current on activist issues
- 4c **More demanding recycling scale:** 4 items -- frequency with which respondent: composts kitchen and food scraps; composts grass and yard waste; takes their own bags or containers when shopping, and; reuses envelopes
- 4d **Greener transportation scale:** 4 items -- frequency with which respondent gets around by: walking; cycling; taking public transit; and; driving [R]
- 5a **Importance of local economy and fair trade scale:** 5 items -- importance of avoiding fast food establishments; avoiding food from transnational companies; buying locally-grown (or produced) food; drinking fair trade coffee, and; not purchasing clothing made in sweatshops
- 5b **Activist views scale:** 3 items -- degree to which respondent: sympathizes with goals of activist groups; sympathizes with groups that oppose global free trade, and; is interested in participating in a demonstration or protest (again, or for the first time)

*\*Reverse coded items denoted by [R]; for a detailed description of the measures, please see 3.4 Measurement below*

### **3.3.4. Ordinary Least Squares (OLS) Multiple Regression**

Ordinary Least Squares regression is used to explore some of the hypotheses from Chapter 2. This statistical technique estimates the unique contribution of each independent variable on the dependent variable, while controlling for the effects of other variables. Thus, it can simultaneously control for many alternative explanations and variables. Regression is based on a number of assumptions about the data and sample, and violations of these assumptions can result in misleading or problematic estimates. It is important to note that the regression techniques and statistics are *not* being used here to generalize to a population; instead, they are applied in the exploration of potential relationships between variables and will require follow-up investigation before any sweeping generalizations can be made.

One of the key assumptions underpinning regression is the use of interval-level, numerical data. However, many key sociological variables, such as gender, are at nominal or ordinal levels of measurement. Dummy variable coding allows such responses to be used in regression analyses. For dichotomous variables (2 response categories), the ones that will be used here, one value is included in the analysis and compared to a reference category. To perform this technique, the variables are recoded, with one category included in the analysis and coded (1). The second category is coded (0) and is excluded from the analysis. Proper reading of these statistics is essential, and when interpreting dummy-coded variables, the included group (1) is always compared to the excluded category, or reference group (0).

Another important condition for regression techniques is a larger sample, although what “large” means depends in part on the number of variables involved. The sample size for this study may be described as relatively small ( $n=134$ ), and this entails certain considerations. “Degrees of freedom” is a mathematical concept that refers to “the rank of a quadratic form,” (Dallal, 2004: 1); however it also may be understood less ambiguously as a way of keeping score. Basically, degrees of freedom are adjusted to reflect the number of explanatory variables included in the model. Each piece of information in a study can be used to estimate variability: “In general, each item being estimated costs one degree of freedom” (Dallal, 2004: 1). Consequently, smaller samples necessitate fewer independent variables—that is, the number of variables should be considerably less than the sample size by a factor of 10 or greater. In this study, three processes are used to monitor and control degrees of freedom. First, factor analysis is utilized for data reduction, to condense a large number of variables to only a few. As well, the response categories for some variables are collapsed and dummy coded to reduce the number of categories. Finally, the regressions are performed in steps, introducing different sets of independent variables instead of entering a large number at once.

Multiple regression is mathematically complex and SPSS software is used to calculate the statistics. There are two key coefficients: The R-squared statistic ( $R^2$ ) represents the proportion of variance in the dependent variable that the independent variables are able to explain. The magnitude of  $R^2$  indicates how well a set of variables is able to account for variation in the dependent variable. The greater the  $R^2$  value (approaching 1.00), the better the independent variables “fit” the proposed model. Regression is also used to assess the direction and size of the effect of each independent variable on the dependent variable. This relationship is indicated by the multiple regression coefficients, or slopes:  $b$  (unstandardized, calculated in the same units as the independent variable) and  $Beta$  (standardized, allowing for comparison of the relative effect of each independent variable in the analysis). These statistics represent the units of change in the dependent variable, given a one-unit increase in an independent variable while holding all other independent variables constant.

There are two separate regressions performed in this work, one for each of two dependent variables (Mindfulness and Subjective well-being). The findings of the regression analyses, including a brief assessment of regression assumptions, are presented in Chapter 5.



### 3.4 ANALYTIC CONCERNS

This section reviews common issues in social scientific research—reliability, validity, and multicollinearity. A brief comment on statistical significance, as well as concerns regarding the data and their limitations are also articulated.

#### 3.4.1. Reliability and Validity

Reliability and validity involve how empirical measures are connected to theoretical constructs. *Reliability* refers to the consistency or dependability of a measure: “Reliability concerns the extent to which an experiment, test, or any measuring procedure yields the same results on repeated trials” (Carmines and Zeller, 1979: 11). Reliability concerns are addressed in part through instrument design, including the use of close-ended questions for more consistent responses and the use of multiple indicators for variables. The reliability of multiple item measures can be assessed using Cronbach’s Alpha, which assesses internal consistency among the items. This coefficient ranges from 0 to 1, with a higher number indicating a more reliable scale. It is widely accepted that Alpha should approach 0.70 for a scale to demonstrate internal consistency (Spector, 1992: 32). As mentioned, however, Alpha is a function of the number of items, and in cases where there are only few items, its value may be lower. Thus, scales for which Alpha is only slightly low are still included in the analyses. Generally, the multiple-item measures in this study display acceptable levels of internal consistency, and Cronbach’s Alpha is reported for each multiple-item measure in Table 3-1.

*Validity* refers to a match between conceptual and operational definitions of a variable: “An indicator of some abstract concept is valid to the extent that it measures what it purports to measure” (Carmines and Zeller, 1979: 12). There are various types of validity, and two forms are considered here. *Face validity* is a relatively basic form, whereby a judgement is made that the indicators measure the construct (Neuman, 2000: 168). The variables and items in this research have been evaluated for their face validity, based in part on the principal investigators’ experience studying ecological sustainability, mindfulness and subjective well-being in other contexts, and also from the popular and academic sources on sustainability and voluntary simplicity. The second form, *construct validity*, concerns the multiple-item measures, and “the extent to which a particular measure relates to other measures consistent with theoretically derived hypotheses concerning the concepts

that are being measured (Carmines and Zeller, 1979: 23). Thus, construct validity requires a theoretical context. Factor analysis can help ascertain construct validity by assessing how well indicators of a single measure converge. The results of the factor analysis discussed previously support the validity of the multiple-item measures.

### **3.4.2. Multicollinearity**

*Multicollinearity* refers to the existence of high correlations among independent, exogenous variables, which may cause problems with estimation and interpretation. In particular, it can suppress or inflate regression coefficients: "It is difficult to estimate reliably the slopes of variables that are highly correlated with the other independent variables" (McClendon, 2002: 162). Given that a number of the variables included in these analyses are meant to be tapping similar concepts, checks for multicollinearity issues were performed. A common method for identifying potential multicollinearity problems involves an examination of the zero-order correlations among the exogenous variables. As a general rule, correlations that approach or exceed 0.80 potentially indicate the presence of high multicollinearity (Berry and Feldman, 1985: 43). A zero-order correlation matrix is presented in Appendix B, and based on the above guideline, multicollinearity does not appear to be a problem, since none of the correlations approach 0.80. As an additional check, variance inflation factor (VIF) is also considered. "VIF is always greater than or equal to 1 ... when multicollinearity is totally absent there is no variance inflation or effect on the standard error" (McClendon, 2002: 162). VIF values with magnitudes less than 3 indicate that multicollinearity is not an issue, and the variables used in this analysis also meet this criterion. The VIF statistics are not presented here, but are available from the author upon request.

### **3.4.3. Data Limitations**

The data for this work are drawn from structured interviews and there were restrictions in terms of the time required of respondents. This necessitated decisions to be made by the principal investigators with respect to what was included in the schedule. Thus, as with most surveys (and carrying over to secondary analysis), data for some theoretically relevant variables were not collected and therefore cannot be included in the investigation. Moreover, because the data are being used for secondary analysis, there were several variables that were not measured directly.

With respect to biographical factors, information was obtained for a number of standard sociological variables. However, there were a few key pieces of data missing, such as employment status (e.g., full-time, part-time, etc.) and hours worked per week. As well, the available biographical variables do not adequately capture potential interactions or additive effects of the availability factors. However, during the initial data analysis phase, attempts to address this problem, by scaling or indexing the availability variables, met with little success. Asking respondents directly about their time and resources and how these impact their interest in and availability for practices related to sustainability, and particularly, to simplicity could have alleviated this problem of inferring “availability” from biographical features.

Measures for Sustainable Practices and Ecological Views are also incomplete. While all available data were drawn from the interview schedule, there are other important variables that are absent. For example, measures tapping other sustainability concerns, such as environmental packaging, would have improved the coverage. Moreover, questions that directly relate values and performance to each other would have strengthened the capacity for speculation regarding their potential match (e.g., questions about views on climate change and personal energy use). Finally, specific questions addressing simplicity and pro-environmental views and practices would have strengthened the connection between the community currency sample and their actual, not inferred, propensity for sustainable living.

#### **3.4.4. Statistical Significance**

Statistical significance, or alpha ( $\alpha$ ) level, refers to a probability value that is considered so rare in the sampling distribution that one is willing to assert the operation of non-chance factors (Elifson et al., 1998: 320). The probability that the same result may occur by chance alone becomes important when making inferences for data from scientific random samples to larger populations. In this thesis, however, there is no random sample and there will be no sweeping generalizations. The level of significance attached to the various coefficients will instead be applied as a criterion to assess the importance of a given variable in the analysis. Relationships that are statistically significant are considered to be more important. This is a way of deciding whether the relationships between variables may be theoretically sound. From a PRE perspective, stronger relationships are more likely to be significant. Significance levels in this work are noted as follows:  $p \leq 0.05$ ;  $p \leq 0.01$ .

### **3.5 MEASUREMENT**

This section describes the conceptualization and operationalization of the variables examined in this study. Six major concepts were specified in Chapter 2: Biographical Availability, Ecological Views, Sustainable Practices, Spirituality, Mindfulness and Subjective Well-being. Using variables available in the Urban Nature/Sustainable Cities Interview Schedule (Appendix A), specific measures are defined for each of the concepts.

The interview schedule includes a number of questions and variables under the following headings: Local Economy Support and Production, Clothing, Recycling Practices, Transportation, Activism, Religion and Spirituality, Respondent Profile, Political Party Preference and Philosophy, Income, and measures of Mindfulness and Subjective Well-being. For most of the questions, respondents were asked to choose from a series of structured responses, including yes/no, frequency (never, sometimes, often, always), importance (not at all important, somewhat important, important, very important), and amount (very little or none, some, quite a bit, most). In most cases, the higher end of the spectrum of responses (coded 4 or 5) represents a greater sustainable character for that particular item. The character [R] that appears at the end of some items indicates that the item was reverse coded. The majority of response categories are ordinal, to allow respondents to quickly gauge an approximation of frequency, importance, etc., without being overly distracted by the task of quantifying. In order to use these ordinal responses with statistical techniques that require interval level data, they have been modified. Some are combined into numerical scales using factor analysis, and others are dummy coded. Univariate descriptive statistics are reported in Chapter 4 for all of the relevant variables, and frequencies and response categories also are cited there.

This section deals specifically with variables included in the bivariate and multivariate analyses. Many of these variables are measured using multiple-item constructs, a few of which have been used in or adapted from previous studies by the principal investigators and others. Table 3-2 summarizes the variables used to tap the major concepts in this work. Specific measurement processes follow, beginning with the "dependent" variables: Mindfulness and Subjective Well-being. Next, the measures used to tap Spirituality, Sustainable Practices, and Ecological Views are described. Finally, the Biographical variables are introduced, a subset of which comprises the biographical availability items.

**Table 3-2: Concepts and Variables**

<b>Concept</b>	<b>Variables</b>
Subjective Well-being:	1. Subjective well-being: General outlook on life scale
Mindfulness:	1. Mindfulness scale
Spirituality:	1. Importance of spirituality and spiritual practices scale
Sustainable Practices:	1. Ecological food scale 2. Activist participation scale 3. More demanding recycling scale 4. Greener transportation scale 5. Vegetarian diet (yes=1) single indicator
Ecological Views:	1. Importance of local economy scale 2. Activist views scale 3. Importance of avoiding genetically-modified (GM) food single indicator
Biographical Factors: ( <i>Biographical Availability subset includes: gender, dependent children, age and flexible employment</i> )	1. Gender (male=1) 2. Marital status (partnered=1) 3. Number of dependent children at home 4. Age (in years) 5. Education (no university/college=1) 6. Household income (by category) 7. Flexible employment (less flexibility=1)

### 3.5.1. Subjective Well-being

Subjective well-being refers to the degree to which an individual perceives his/her life as generally positive or negative. It is tapped here with a multiple-item construct, "Subjective Well-being—General Outlook on Life Scale" which is derived from a summated series of semantic differential items: "This technique involves a battery of opposite or 'polar' adjectives placed at the extremes of a 7-point rating scale" (Campbell et al., 1976: 38). Respondents were asked to place an "X" in the position they felt best described their present life on eleven pairs of words. Coding is reversed as appropriate, to align "positive" and "negative" terms.

Principal components analysis (PCA) was conducted on the responses and these loaded on two factors. An evaluation of the factor loadings and Cronbach's alpha resulted in three items being dropped from the scale 'hopeful—discouraging' [R], 'hard—easy', and 'tied down—free'. The remaining eight items loaded on a single factor and a summated scale was constructed (Table 3-3 below; see Appendix A for question format). The eigenvalue is 4.48 (greater than one). The factor loadings range from 0.71 to 0.81, exceeding the conservative loading guideline of

0.40. Finally, the Cronbach's alpha coefficient is 0.886, which is greater than the criterion value of 0.70. The actual scale scores range from 26 to 56, with a mean of 46.28 (see Table 3-1, page 46, for a summary of properties for all scales in the analysis, including theoretical rather than actual scale score ranges).

**Table 3-3: Subjective Well-being—General Outlook on Life Scale Items**

<b>Interview question/scale item</b>	<b>Response categories</b>
<i>Place an 'X' in the position that you feel best describes your present life between:</i>	7 positions between the semantic differential poles, coded 1 through 7
1. 'interesting'—'boring' [R]	<i>(see Appendix A for format of questions)</i>
2. 'worthwhile'—'useless' [R]	
3. 'friendly'—'lonely' [R]	
4. 'empty'—'full'	
5. 'disappointing'—'rewarding'	
6. 'brings out the best in me'—'doesn't give me much chance' [R]	
7. 'happy'—'sad'	
8. 'miserable'—'enjoyable'	

### 3.5.2. Mindfulness

Mindfulness refers to a calm yet focused engagement with the present. It is measured in this work using a multiple-item construct, "Mindfulness Scale". This variable consists of a series of feelings or experiences derived from previous work by Jacob and Brinkerhoff (1999). The survey included questions on several dimensions of mindfulness and at the end of the interview, respondents were asked to report the frequency with which they experienced certain feelings.

**Table 3-4: Mindfulness Scale Items**

<b>Interview question/scale item</b>	<b>Response categories</b>
<i>Please indicate how often you experience the feeling or idea:</i>	'never' (coded 1)
1. a feeling of accepting things as they are	'rarely' (2)
2. a feeling of living in the present moment	'occasionally' (3)
3. a sense of stillness	'quite often' (4)
4. a feeling of time standing still	'very often' (5)

To tap mindfulness in this work, a factor analyzed, summated scale was constructed from four of the items (Table 3-4). The items included in the scale were selected from among 14 on the interview schedule, based on face validity and previous reports of mindfulness practice and experience (e.g. Jacob and Brinkerhoff,

1999 utilized a seven-item scale that tapped related notions). Principal components analysis was conducted on the items and they loaded on a single factor. The eigenvalue is 2.25, the factor loadings range from 0.64 to 0.82, and Cronbach's alpha is 0.726. The actual scale scores range from 6 to 20, with a mean of 13.19 (see also Table 3-1).

### 3.5.3. Spirituality

Stemming from the spiritual and inner growth dimensions of voluntary simplicity, as well as previous work on mindfulness and sustainability by Brinkerhoff and Jacob (1999, 1987), the importance placed on a series of spiritual practices is also considered. Activities such as formal meditation, yoga, prayer, and Sabbath or rest-day observance, while ostensibly not "ecological," are central to the mindset and practice of voluntary simplicity. Practices that develop one's spiritual potential are believed to help foster a sense of interconnectedness, as well as greater co-operation with the Earth, nature, and other people: "Practitioners of VS value the capacity to experience connection with the ecosphere and with other people" (Burch, 2000: 13).

**Table 3-5: Importance of Spirituality & Spiritual Practices Scale Items**

Interview question/scale item	Response categories
<i>How important are the following practices to you?</i>	'not at all important' (coded 1)
1. formal meditation	'somewhat important' (2)
2. yoga	'important' (3)
3. prayer	'very important' (4)
4. Sabbath or rest-day observance	
5. "In general, how spiritually-minded would you say you are? (not necessarily related to formal or institutionalized religion)"	'very little or not at all' (coded 1)
	'somewhat spiritually minded' (2)
	'quite spiritually minded' (3)
	'very spiritually minded' (4)

Principal component factor analysis was conducted on five spirituality items from the interview schedule (Table 3-5 above) and a simple summated scale was constructed based on the results. A sixth spirituality item available in the schedule, "informal meditation" was excluded due to its similarity to the major mindfulness concept considered here. The eigenvalue is 2.65, the factor loadings range from 0.61 to 0.85, and Cronbach's alpha is 0.775. The actual scale scores range from 5 to 20, with a mean of 11.87 (see also Table 3-1).

### 3.5.4. Sustainable Practices

Sustainable practices encompass a wide range of behaviours and activities, derived from pro-environmental and simplicity ideals, which are deemed to be less detrimental to the health of the planet, communities and individuals, as compared to more typical conduct in the consumer society. With an enormous breadth of potential sustainable practices and the limitations of variables provided by the interview schedule, sustainable practices are tapped in this work using four scale variables (Ecological Food, Activist Participation, More Demanding Recycling, and Greener Transportation) and one dichotomous, dummy coded variable (Vegetarian Diet—yes=1). Measurement of each of these variables is detailed below.

Ecological Food refers to the degree of effort an individual reports making to acquire household food from more ecological (i.e. environmentally friendlier) sources—that is, food and food products that are locally-grown, organic and purchased from retailers that embrace sustainability ideals, such as cooperative food markets (a source which is more likely to stock locally grown/produced and organic food—this measure was reverse-coded) versus national or regional chain supermarkets (a source more likely to rely on large, trans-national suppliers for their stock). Potential items for factor analysis were grouped together based on face validity, and this variable is comprised of a 4-item summated scale. Principal components analysis was conducted on the four measures (Table 3-6) and these loaded on a single factor. The eigenvalue is 2.41, the factor loadings range from 0.63 to 0.87, and Cronbach’s alpha is 0.754. The actual scale scores range from 4 to 16, with a mean of 12.11 (see also Table 3-1).

**Table 3-6: Ecological Food Scale Items**

<b>Interview question/scale item</b>	<b>Response categories</b>
<i>When you shop for food,</i>	`none' (coded 1)
1. "How much effort do you make to buy locally grown and/or produced food?"	`not very much' (2)
	`some' (3)
2. "How much effort do you make to buy organic food and/or produce?"	`a great deal' (4)
<i>How much of your household's food is purchased at:</i>	`most of our food' (1)
3. "a co-op (cooperative food market)?" [R]	`quite a bit' (2)
4. "a large national or regional chain supermarket?"	`some' (3)
	`very little or none' (4)



Activist participation refers to the degree to which an individual reports supporting groups that are working to solve environmental, social or economic problems. Participation in various causes related to the environment and other issues demonstrates another angle related to sustainable living—efforts to produce changes and working against the social status quo. Principal components analysis was conducted on all nine Activism items and these loaded on three separate factors. Three of five items loaded on one factor (see Activist Views below), one item loaded by itself (an activist 'radicalness' indicator, which is excluded from bivariate and multivariate analyses), and the five remaining items also loaded on one factor—the Activist Participation variable described here (Table 3-7).

**Table 3-7: Activist Participation Scale Items**

<b>Interview question/scale item</b>	<b>Response categories</b>
1. "Do you work with or belong to any groups working to solve environmental, social or economic problems?"	'no' (recoded 1) 'yes' (recoded 4)
2. "Have you ever participated in a demonstration against corporate or government policy?"	
3. "How much do you support financially groups working to solve environmental, social or economic problems?"	'none' (coded 1) 'some' (2) 'quite a bit' (3)
4. "How much time do you spend working with groups working to solve environmental, social or economic problems?"	'a great deal' (4)
5. "To what extent do you stay current or up-to-date with the activities and intentions of protestors?"	'have little or no interest' (1) 'some effort' (2) 'a definite effort' (3) 'a great deal of effort' (4)

The five Participation items loaded on a single factor, and a summated scale was constructed. The eigenvalue is 2.03, the factor loadings range from 0.49 to 0.74, and Cronbach's alpha is 0.615. The actual scale scores range from 5 to 20, with a mean of 13.20.

Recycling practices involve more pro-environmental methods of disposing of used or unwanted goods and waste. Instead of sending materials to landfills, they can be recycled through municipal programs, reused in the household or community, or composted. Principal components analysis was conducted on all 11 recycling items from the interview schedule, and these loaded on three separate factors. Six of eleven items loaded on one factor, labelled "Common Recycling Practices", and four

of 11 items loaded on another factor, “More Demanding Recycling” discussed below (Table 3-8). One remaining item (“Recycle plastic bags and containers”) loaded by itself, likely due to inconsistencies with service availability in the communities, and it is not included the analysis.

“Common Recycling” considers very basic, low cost and low effort practices including recycling of paper, cans, and bottles—services that are readily available in the communities under study. Given the fact that nearly all respondents in the study report engaging in these practices ‘always or almost always,’ this variable was subsequently dropped from the analyses. “More Demanding Recycling” is a more sensitive measure that gauges recycling practices requiring greater effort and conscientiousness. Principal component factor analysis was conducted on the four “More Demanding Recycling” measures (Table 3-8) and a summated scale was constructed based on the results. The Eigenvalue is 2.00, the factor loadings range from 0.47 to 0.89, and Cronbach’s alpha is 0.633. The scale scores range from 4 to 16, with a mean of 12.52.

**Table 3-8: More Demanding Recycling Scale Items**

<b>Interview question/scale item</b>	<b>Response categories</b>
<i>How often do you do the following recycling, reuse or composting behaviours?</i>	
1. Compost kitchen and food scraps	‘rarely or never’ (1)
2. Compost grass and yard wastes	‘sometimes’ (2)
3. Take your own bags/containers when shopping	‘quite often’ (3)
4. Reuse envelopes	‘always or almost always’ (4)

Greener transportation taps the frequency with which respondents report using more pro-environmental (i.e. less pollution, lower use of non-renewable energy sources) methods of getting around their localities. On the interview schedule, there were eight modes of transportation. Two were dropped (Rollerblades and Motorcycle) prior to analysis, due to a lack of responses. “Driving car/truck” was reverse-coded, as relying less on this method is considered more pro-environmental. Principal component factor analysis was conducted on the remaining 8 measures, and these loaded on 2 separate factors. An evaluation of factor loadings and Cronbach’s alpha resulted in two items being dropped from the scale: car pooling and car sharing. Although these variables are important greener transportation alternatives, they also tended to have very low variation, with less than 10 percent of respondents

reporting using them 'quite a bit' or 'a lot or most of the time'. The remaining four items loaded on one factor (Table 3-9), and a summated scale was constructed. The eigenvalue is 1.98, the factor loadings range from 0.61 to 0.87 and Cronbach's alpha is 0.655. The actual scale scores range from 4 to 15, with a mean of 8.58.

**Table 3-9: Greener Transportation Scale Items**

<b>Interview question/scale item</b>	<b>Response categories</b>
<i>How much do you use the following means of transportation to get around your community?</i>	
1. Walking	'very little or not at all' (1)
2. Biking	'some' (2)
3. Public transit	'quite a bit' (3)
4. Driving car/truck [R]	'a lot or most of the time' (4)

Vegetarian diet: Vegetarian (meatless) diets and lifestyles are viewed by sustainability proponents to be more ecologically sound than meat-based diets, given the high resource demands, including land, water, feed, and waste management, that go into meat production. Respondents were asked, "Are you a vegetarian?" Response categories were 'yes' (coded 1) and 'no' (coded 0), and respondents provided additional detail regarding their diets (e.g. "lacto-ovo," "vegan," or "Macrobiotic"). Vegetarian diet retains this coding as a dichotomous dummy code, with non-vegetarian as the reference category (0).

### **3.5.5. Ecological Views**

Ecological views include values, beliefs and attitudes, derived from voluntary simplicity and sustainability ideals, toward practices and/or products, which are deemed to be less detrimental to the health of the planet, community and individual. As with sustainable practices, there is a considerable range of potentially "ecological" worldviews. Given the variables available in the interview schedule, ecological views are tapped in this work using two scales (Importance of local economy and fair trade and Activist views) and one variable for which responses categories are ordinal, were (Importance of avoiding genetically-modified food), and treated as interval-level data. In some of the analyses that follow, the Spirituality measure may be grouped with these Ecological Views for streamlining and organizational purposes. The measurement of each of these variables is detailed below.

Importance of local economy and fair trade taps the importance an individual reports placing on the role of his/her consumption practices in the support of a local economy and fair trade. Policies and practices of large multinational corporations, and their impact on the environment and communities, as well as the mechanisms by which goods are produced are of concern generally to those interested in sustainable living. Principal components analysis was conducted on five items from the interview schedule (Table 3-10). These items loaded on a single factor and a simple summated scale was constructed. The eigenvalue is 2.47, the factor loadings range from 0.48 to 0.86, and Cronbach's alpha is 0.730. The actual scale scores range from 6 to 20, with a mean of 16.70 (see also Table 3-1).

**Table 3-10: Importance of Local Economy and Fair Trade Scale Items**

Interview question/scale item	Response categories
<i>"How important is it to you to:</i>	
1. avoid eating at national or big regional chain establishments? (e.g. McDonald's, Pizza Hut, Denny's, etc.)"	'not at all important' (coded 1) 'somewhat important' (2)
2. avoid eating food products from large national or international corporations? (e.g. Coca Cola, Frito Lay, Nestlé, etc.)"	'important' (3) 'very important' (4)
3. buy locally grown food or produce?"	
4. drink fair traded coffee (i.e. organically grown coffee whose growers and workers receive a fair return on their labour or investment)	
5. avoid purchasing clothing made in low-wage, non-union factories? (i.e. sweatshops)	

Activist views refer to the degree to which an individual reports interest in and sympathy for the goals and activities of groups working to solve environmental, social or economic problems. Sympathy toward various causes related to the environment captures another angle related to sustainable living—desire for change to the status quo. As mentioned previously, principal component factor analysis was conducted on all 9 Activism items and three of them loaded on one factor, the Activist Views variable presented here. Principal components analysis was conducted on the Views measures (Table 3-11) and a simple summated scale was constructed based on the results. The eigenvalue is 1.79, the factor loadings range from 0.73 to 0.84, and Cronbach's alpha is 0.644. The actual scale scores range from 4 to 12, with a mean of 9.86.

**Table 3-11: Activist Views Scale Items**

<b>Interview question/scale item</b>	<b>Response categories</b>
1. "Do you sympathize with the goals of activist groups?"	'don't sympathize at all' (1) 'have some sympathy' (2)
2. "To what extent do you sympathize with groups, like those in Seattle in 1999—the Battle of Seattle—who demonstrate against global free trade?"	'quite a bit of sympathy' (3) 'a great deal of sympathy' (4)
3. "To what extent would you be willing to demonstrate, again or for the first time, against government or corporate policy, if you had the opportunity to do so?"	'not at all interested' (1) 'have some interest' (2) 'have definite interest' (3) 'would love to do it' (4)

Importance of avoiding genetically-modified (GM) food: "Genetically-modified" refers to a plant or organism that has received genetic material from another species, resulting in permanent changes to one or more of its characteristics. Some forms of GM food are viewed by sustainability proponents to be inherently unecological and potentially dangerous, especially those processes that alter fundamental characteristics such as increased resistance to pests or herbicides. Respondents were asked, "How important is it to you to avoid eating genetically modified food or organisms?" Response categories were 'not at all important' (coded 1), 'somewhat important' (2), 'important' (3) and 'very important' (4). This variable retains this coding and it is treated as interval-level data on the assumption that differences between the categories are approximately equal.

### **3.5.6. Biographical Factors**

Standard sociological control variables, including gender, family status, age, level of education, household income and occupation are included in the analyses and labelled "Biographical Factors." A subset of these variables is applied to test the Biographical Availability hypothesis, that certain social-structural factors—in this case, gender, number of dependent children, age, and flexible employment—may allow individuals to be differentially available to participate in social movement activity, such as the behaviours entailed in the sustainability, voluntary simplicity and community currency movements.

Gender: Interviewers circled the appropriate response (male or female) on the interview schedule. Gender is dummy coded 1 for females and 0 for males. In the Biographical Availability hypothesis, women, and older women in particular, are

considered to be more “available” for participation (e.g. Iwata, 1999; Jacob and Brinkerhoff, 1999) in certain kinds of new social movement activity.

Family status: Family status is tapped with two variables, marital status and number of dependent children at home. *Marital status* (married) is tapped through response to the question, “What is your marital status?” The response was open-ended, with categories constructed afterwards as: ‘married’ (coded 1), ‘living with a partner’ (2), ‘single/divorced’ (3), and ‘widowed’ (4). The responses were dichotomized and dummy coded ‘married/living with a partner’ coded 1 and all others coded 0. The rationale for this dichotomy is primarily to preserve degrees of freedom, and also stems from an assumption that those who are partnered (married or common law) are more similar for the purposes of this work than those who are not partnered. *Dependent children* is measured with the question, “How many children are living at home?” for which the respondent provided a numerical value. From an availability perspective, having dependent children is viewed to constrain one’s “availability” for participation in any social movement activity for reasons relating to resources (such as time and money) or risk, among other things.

Age: Respondents were asked the question, “What is your age in years?” and the interviewer recorded the number. In the Biographical Availability hypothesis, older respondents, who may be retired and/or empty-nesters, are viewed to be potentially more “available” to participate in social movement activity.

Education: Respondents were asked about their highest level of education. The response was open-ended, and categories were constructed afterwards as follows: ‘elementary school’ (coded 1), ‘completed junior high school’ (2), ‘some high school’ (3), ‘completed high school’ (4), ‘completed high school and other training—not university’ (5), ‘some university or college’ (6), ‘completed university or college’ (7), ‘some graduate school’ (8), ‘graduate degree’ (9). Education is an important biographical variable when considering sustainability issues, as higher levels of education may potentially entail exposure to different ideas, practices and awareness of sustainability issues, either through coursework, or through campus climate and activism. Taking this into account, and to preserve degrees of freedom, the responses were collapsed and dummy coded with educational levels less than (5) (i.e., 1 through 4) coded 1—“no university or college experience,” and levels (5) and above (i.e., 5 through 9) coded 0—“university or college experience.” The sample is highly educated, with more than 80 percent reporting at least some college or

university experience and very few respondents falling in the categories under (5). The dichotomization should not adversely affect the variation, and simultaneously addresses the degrees of freedom issue.

Income: Respondents were asked to circle their level of household income. The values of the categories were in \$10,000 increments from 'less than \$10,000' (1) through 'greater than \$100,000' (11). To obtain a reasonable, interval-level estimate of income, the midpoints of the response categories may be reported in certain analyses (e.g. '\$5,000' for 'less than \$10,000', '\$15,000' for 'between \$10,000 and \$19,999', and so on). Otherwise, the category labels are used in the analyses and interpreted in \$10,000 increments.

Employment: Respondents were asked about their employment, the title of their job and what they do at work. The response was open-ended, and dichotomous categories were constructed afterwards, based on an evaluation of the perceived flexibility of the reported employment in terms of time, hours, and scheduling as well as the nature of the work itself. Those reporting professional or full-time positions with conventional employers such as larger companies, government, or schools are viewed to be 'less flexible' (coded 1) than those reporting being self-employed or employed part-time, seasonal, or occasional, as well as retired, unemployed or students (coded 0). From a biographical availability perspective, less flexible full time employment may constrain one's "availability" for participation in movement activity.

### **3.6 SUMMARY**

This chapter has provided a detailed discussion of the data, collection procedures and sample. Analytic techniques, including the statistics and statistical techniques such as factor analysis and multiple regression were also reviewed. Key issues in social scientific research, including reliability, validity, multicollinearity and data limitations were considered. Finally, the measurement section addressed the conceptualization and operationalization of variables included in the bivariate and multivariate analyses. The findings of the statistical analyses are presented in the next two chapters. Chapter 4 provides a descriptive snapshot of the sample, using all of the available and relevant variables from the interview schedule. Chapter 5 then delves into bivariate and multivariate statistical techniques that aim to identify and illuminate some of the potential relationships between selected variables.

## **CHAPTER 4 - DESCRIPTIVE FINDINGS**

In this chapter, descriptive results from the Urban Nature/Sustainable Cities interviews are presented, beginning with background sketches for the three communities involved in the study: Ithaca, Nelson and Calgary. This is followed by a sample profile, compiled from gender, age, family, education, employment and income variables. Next, using basic univariate statistics, descriptive summaries are provided for structured interview responses to a range of questions underpinned by sustainability and simplicity themes. Where relevant, noteworthy differences between the locales are highlighted. The issues taken up here are generally interconnected; however, for organizational purposes, they are broken down by category as follows: Food and Diet, Fair Trade, Recycling, Transportation, Activism and Politics, Spirituality and Mindfulness, and Well-being and Happiness.

### **4.1 COMMUNITY PROFILES**

Three diverse communities serve as the backdrop for this study: Ithaca, New York, a small American city, Nelson, British Columbia, a small Canadian city, and Calgary, Alberta, a large Canadian city. Each locale has a community currency organization that provides a base population from which the study sample is drawn. The three locations were selected largely on this basis by the principal investigators. Ithaca HOURS is generally acknowledged as the origin of North American local currency movement and is also the largest group; Kootenay Barter in Nelson represents a bigger Canadian organization; and Calgary Dollars is a small, but active local group. A short profile of each community follows, including details regarding location, population, economy, and distinctive features, as well as a brief background on their local currency groups.

#### **4.1.1. Ithaca, New York<sup>1</sup>**

Nestled amidst beautiful waterfalls, gorges and woodlands, Ithaca is a small city in central New York State's Finger Lakes region, located roughly between Buffalo and New York City. There are approximately 30,000 residents in the city with a student population of more than 25,000, most of whom do not count as permanent

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<sup>1</sup> Unless otherwise cited, descriptive information for Ithaca comes from personal impressions and supplemented by websites (e.g., The City of Ithaca, Ithaca/Tompkins County Convention and Visitor's Bureau and Public Communications Inc. websites).



residents) and another 20,000 in the suburban township. It also serves as the county seat and commercial center for nearly 100,000 people in Tompkins County. Ithaca is well known for its post-secondary institutions, namely Cornell University and Ithaca College. These institutions strongly shape the economy and culture in Ithaca. Jacob et al. (2004) identify two features that influence Ithaca's propensity to sustain a local currency system and seek certain kinds of lifestyles. First, Ithaca is viewed generally as a desirable place to live and so there is chronic under-employment in the area. While the Cornell research complex attracts Ph.D.s and post-doctoral fellows, this has little impact on employment prospects for the typical Ithaca resident. Thus, there is a tradition of entrepreneurial activity and higher levels of self-employment. Tourism websites identify software and computer services, business services, and biotechnology and retail as primary economic growth sectors. Secondly, there is a "contrarian intellectual culture with a predisposition toward counter-stream social movements" (Jacob et al, 2004: 31).

This alternative culture is confirmed by a number of features and organizations, one of which is EcoVillage, a co-housing project that began in the early 1990s. Its agenda focuses on sustainability, including ecological housing design and organic agriculture. Ithaca is also home to the famous, vegetarian Moosewood Restaurant and the Commons, a pedestrian-only mall that is largely devoid of chain establishments, with the exception of a bank. For a more comprehensive listing of various grassroots initiatives in Ithaca, see Glover (2000). Generally, Ithaca is an interesting and award-winning place, proclaimed in 1997 as "America's Most Enlightened Town" by the *Utne Reader* (Utne website, 2004). It was also voted "America's Top Small City in the East" in the *Rating Guide to Life in America's Small Cities* (Public Communications, 2004) and recently was ranked number one for U.S. cities emerging as great places to live (Jacob et al., 2004: 37).

Ithaca's community currency organization, Ithaca HOURS, is known internationally as an important innovation, and it has served as a model for over 60 community currency experiments in North America—including the ones in Nelson and Calgary. Started in 1991, Ithaca HOURS is an alternative paper money system. Paul Glover was the initial driving force behind HOURS. A self-described "social entrepreneur," he claims: "The streets are my main office. I've been a vegetarian for 32 years. I don't ride in cars. I don't own anything. I rent an apartment paid for entirely by Ithaca HOURS. I consider myself wealthy if I can appreciate the beauty of

the day" (Shepperd in Jacob et al., 2004: 33). Of course, before he could pay rent in HOURS, they had to be created. His first motivation was need: "I was short of money and it occurred to me to print some" (Boyle in Jacob et al., 2004: 34).

However, the development of HOURS was also driven by ideological factors. It was in part a reaction to the first Gulf War and Glover says, "Our country was just being dragged along by huge armaments manufacturers and the need for oil to fuel the automobile. I felt that something had to be done to build a local economy which would enable people to supplant these forces" (Douthwaite in Jacob et al., 2004: 34). The HOURS system thus has a clear activist mandate. It is regarded as a way for people to take control of some of the social and environmental effects of commerce. The HOURS motto, "In Ithaca We Trust," is prominently displayed on the currency, representing an embrace of local economy and a rebuke of the federal dollar. HOURS have been circulating within Ithaca and the surrounding area for over 13 years, and at the height of its popularity in the mid-1990s, the system was boasting more than 2,000 listers, including over 400 businesses. Listers have since levelled off between 800 and 1000, and Ithaca HOURS is now managed by a board of directors as a non-profit corporation. In April 2002, the research team travelled to Ithaca and 42 Ithaca residents participated in structured interviews for this study.

#### **4.1.2. Nelson, British Columbia<sup>2</sup>**

Nelson is a small city located in the southern interior of British Columbia, on the west arm of Kootenay Lake in the Selkirk Mountains. It is roughly equal driving distance between Calgary and Vancouver. The population in the city is slightly less than 10,000, although it serves a trading area of over 50,000 people. Nelson is characterized by a number of restored heritage homes and buildings, and Baker Street in the downtown hub features many restaurants, cafés and small businesses: "People make a point of supporting the local economy in Nelson, which ensures the blooming of unique businesses here" (Nelson Chamber of Commerce website, 2004). Traditionally, the area's economy was resource based (forestry and mining), and this sector still represents a vital component. However, Nelson is also the provincial administrative center for the Kootenay district, housing many regional and district government offices. Tourism is an up and coming sector of the local economy that is fostered by its beautiful wilderness and scenery, as well as its arts endeavours.

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<sup>2</sup> Unless otherwise cited, descriptive information for Nelson comes from personal impressions and supplemented by websites (e.g., The City of Nelson, Nelson Chamber of Commerce, and Nelson Community websites)

Like Ithaca, Nelson also boasts a counter-stream alternative flavour. It has a very strong, integrated arts community. Each summer the town hosts Artwalk, which showcases the work of local artists in galleries and shops. There is also the annual International Streetfest, featuring performance artists from all over the world. Many Nelson residents are active in the community. For example, in response to recent government cutbacks affecting the local hospital, community organizers formed a group, Nelson and Area Society for Health, dedicated to restoring health services in the Nelson region (Nelson and Area Society for Health website, 2004). Finally, there is another, interesting feature of the local culture—marijuana. In an exposé on the B.C. pot trade, Edwards asserts, "Nelson is the marijuana culture capital of North America. Per capita, more people grow dope, smoke dope and are influenced by dope life here than in any other place known to man. Marijuana is woven into the way of life, a social stimulator, an economic generator. ... Nelson, this charming little mountain town, is Dope Central" (2000: 25).

Despite this dubious distinction, Nelson has also developed a reputation as a great place to live. It is an award-winning community, cited by *Mothering Magazine* as one of the best places in Canada to raise a child (The City of Nelson website, 2004), named "#1 Small Arts Community in Canada," and declared "the Heritage Capital of B.C." (Nelson Community website, 2004). Over the years, Nelson has developed a rather unique social composition, consisting of the usual Anglo-Scottish-Irish contingent along with significant Chinese and Italian populations, Russian Doukhobours, and draft-dodging Americans from the 1960s (Edwards, 2000: 29). However, another group has more recently joined this assortment of individuals: "In short, Nelson became a lifestyle town. ... It started to draw yet another kind of folk to follow the Nelson-lifers and the hippies: the big city refugees. Essentially, these were people, often couples, who simply got sick of the rat race and decided to try the 'Kootenay-Time' pace of Nelson" (Edwards, 2000: 30). Nelson has also been named one of the five best places in the world for urban refugees (Nelson International Streetfest website, 2004).

Suzu Hamilton, a local activist and community organizer, was a founding member of Nelson's community currency organization, Kootenay Barter (also known as Kootenay HOURS and Kootenay Barter Bucks) in 1994. It is modelled on a do-it-yourself kit supplied by the Ithaca HOURS organization. According to its mission statement, Kootenay Barter "allows us to shape our economic destiny consistent with

our philosophy of growth and to have increased control over the social and environmental effects of commerce” (Humphrey, 2001: 44). It is a non-profit organization headquartered in downtown Nelson at the West Kootenay EcoCentre. The EcoCentre hosts a handful of community activist groups, campaigns for sustainability and social reform and also hosts the offices of the Green Party. Kootenay Barter thus has roots in environmental and social activism through this umbrella organization. At the height of its popularity in the late 1990s, there were approximately 800 listers. In July-August 2002, 52 members of Kootenay Barter participated in structured interviews for the study.

#### **4.1.3. Calgary, Alberta<sup>3</sup>**

Calgary is a large southern Alberta city located in the foothills between the Canadian Rockies to the west and the Great Plains to the east. With a population approaching one million, it is a much bigger centre than either Ithaca or Nelson. Settled originally as a trading post, the city grew out of the expansion of the Canadian Pacific Railway. In the early 1900s, oil and gas were found in nearby Turner Valley, and other major oil and gas discoveries across Alberta soon followed. The economy is dominated by oil and gas, and as a result, Calgary is the Canadian administrative headquarters for the industry and the second-largest head-office city in Canada. Besides energy, the industrial base also includes agriculture, tourism, manufacturing, research and development and technology. Such a variety of opportunities has created a thriving economy and a population boom. Coupled with first-rate recreational opportunities, as well as big-city amenities such as sports, theatre, art, music, museums, and shopping, Calgary is viewed as a very desirable place to live, drawing new residents from across Canada and beyond.

With its proximity to the Rockies and Banff National Park, outdoor recreation is a key feature of life in Calgary. The city boasts the largest urban park in Canada, Fish Creek Provincial Park, which offers accessible recreation for residents while protecting a sizeable chunk of river valley. There is also an extensive pathway system for walking, jogging, cycling and in-line skating. In 1988, Calgary hosted the Winter Olympic Games, and this legacy created a number of world-class athletic facilities in the area, including Canada Olympic Park, the Canmore Nordic Centre, and the Saddledome. The city is also home to several professional sports teams,

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<sup>3</sup> Unless otherwise cited, descriptive information for Calgary comes from personal impressions and supplemented by websites (e.g., The City of Calgary and Calgary Convention and Visitor's Bureau websites).

including the Calgary Flames (hockey), Calgary Stampeders (football) and the Calgary Roughnecks (lacrosse). Finally, Calgary is known for its annual Stampede, a 10-day celebration of western cowboy culture with rodeo events, chuckwagon races, concerts, and pancake breakfasts.

While Calgary's size, diversity, economy and heritage may ostensibly discourage enduring 'alternative' cultures, like those in Ithaca and Nelson, the city does have a number of community and grassroots activist groups. The Boiled Frog Cooperative aims to promote and provide access to environmentally sustainable technologies that already exist in society, including biodiesel and solar and wind power (Boiled Frog website, 2003). The Calgary Activist Network is a website that coordinates the actions of a number of community groups. For example, it is home to the Revolutionary Knitting Circle, an organization that claims it is "building community and speeding forward the revolution through knitting" (Revolutionary Knitting Circle website, 2004).

Calgary's community currency organization, Calgary Dollars, is another such alternative. It was started in 1996, under the name "Bow Chinook Barter Community," with the starter kit from Ithaca HOURS. Like Kootenay Barter, Calgary Dollars also grew out of an umbrella organization, the Arusha Centre, which describes itself as an organization that provides resources and programming on local and global social justice issues. "Social justice is the belief in an equitable, compassionate world where difference is understood and valued, and where human dignity, the Earth, our ancestors and future generations are respected" (Arusha website, 2004). Calgary Dollars promotes healthy, sustainable lifestyles with an ecological slant, describing itself as follows:

Calgary Dollars is a grassroots currency system that brings together local talents and resources to strengthen our local economy and build community. ... By encouraging local production and consumption, we are committed to creating a healthy economy that is rooted in a healthy society and a healthy ecosystem (Calgary Dollars website, 2004).

Unlike Ithaca HOURS and Kootenay Barter, Calgary Dollars enjoys some financial assistance: "Calgary Dollars is generously supported by the United Way of Calgary and Area" (Arusha website, 2004). This allows organizers to have a staff (other organizations are run by volunteers) and more resources for their endeavours. Because of this, Calgary Dollars is an active and vigorous organization, despite a very small circulation of 300 to 350 listers. From April 2002 to March 2003, 40 members of Calgary Dollars participated in structured interviews for the study.

## 4.2 SAMPLE PROFILE

Over 2002-2003, 134 respondents from Ithaca, Nelson and Calgary participated in hour-long structured interviews and answered questions on a wide range of topics. Based on demographic profile data collected during the interviews, the “average” respondent in the sample may be described as in his or her early-to mid-40s, well educated with a relatively modest income, and married with one child. Table 4-1 presents a profile breakdown of respondents by location:

**Table 4-1: Descriptive Profile of Respondents by Location**

Biographical variable	Ithaca	Nelson	Calgary	Full sample	n <sup>a</sup>
Gender (% female)	38.1	48.1	57.5	47.8	134
Age in years (mean)	41.4	45.7	42.8	42.9	123
Marital status (% married/cohabiting)	61.9	52.9	50.0	54.9	133
% respondents with children	52.4	80.0	48.7	61.8	---
% respondents with children at home	42.9	38.5	37.5	39.6	---
# children (mean for sample)	1.0	1.8	1.0	1.3	131
# children at home (mean for sample)	0.7	0.6	0.7	0.7	79
Education <sup>b</sup> - % completed university/college	46.3	40.0	46.2	43.8	130
Education <sup>b</sup> - % with graduate degree	26.8	0.0	15.4	13.1	130
Annual respondent income <sup>c</sup> (midpoint of median)	\$25,000	\$15,000	\$15,000	\$15,000	121
Annual household income <sup>c</sup> (midpoint of median)	\$35,000	\$25,000	\$25,000	\$25,000	120

<sup>a</sup> n=134 for full sample, ns vary because of non-responses; n=42 for Ithaca, n=52 for Nelson, n=40 for Calgary

<sup>b</sup> Highest level of education attained (i.e., “% completed university/college” is not a subset of “% with graduate degree”)

<sup>c</sup> Incomes are in U.S. and Canadian Dollars as applicable and assumed to be comparable

Respondents in the sample range in age from 19 to 83, with a mean of 42.9 years. In Nelson, the average age of respondents is slightly higher (45.7 years), compared to Ithaca (41.4 years) and Calgary (42.8 years). The gender composition of the full sample is roughly equal, with 64 females (47.8 percent) and 70 males (52.2 percent), although there are slight regional differences. Over half of the respondents are either married (36.1 percent) or living with a partner (18.8 percent). One is widowed, and the remainder (44.4 percent) are single or divorced. Nearly 40 percent of the sample is childfree, while another 45 percent have one or two children. Only 16.8 percent of the sample reports having three or more children, and the maximum number of children counted is 5. In Nelson, respondents have a slightly higher mean of 1.78 children, compared to Ithaca (0.98 children) and

Calgary (1.03 children). Of the 79 parents interviewed, 26 (one-third) do not have children currently living at home, however, the average number of children currently living at home is roughly the same for the three communities: 0.62 children in Nelson, 0.65 children in Calgary, and 0.74 children in Ithaca. Given the purposive sampling strategy, the sample cannot be called representative, however, the variety in these demographic features suggests that the sample includes a range of participants.

Occupations cover an eclectic range that is inclined toward more flexible kinds of work situations, such as self-employment, part-time and occasional or seasonal work. This finding may have implications for the availability and simplicity perspectives, although further analysis is needed. Given the relatively small sample size in each locale and the fact that many community currency listers may be identified from their occupations, specific job titles are not provided here. While the occupational data collected did not specifically ask respondents if they were self-employed, the job descriptions provided indicate that two-thirds (66.7 percent) are non-salaried business owners, consultants, and non-professional service providers. Nine respondents (~7 percent) are unemployed or retired, and the rest (~26 percent) hold more conventional, full-time positions with various companies, government, and other entities. Spouses and partners of the respondents hold similar occupations, with approximately 45 percent belonging to the more flexible category, and another 45 percent with more typical occupations.

Respondents in the sample are highly educated, with 80 percent having at least some post-secondary experience. As higher education may have important effects on the propensity to be interested in sustainability and simplicity initiatives, this finding is significant. Fifty-seven respondents (nearly 44 percent) report completing university or college, and a further 17.6 percent have at least some graduate experience. More than one quarter of the Ithaca sample (26.8 percent) and 15.4 percent of the Calgary group finished graduate school. One Nelson respondent reports having some graduate experience. Educational attainment is comparable for spouses and partners: 75 percent have at least some post-secondary education, nearly half (48.6 percent) report completing university or college, and 18 percent have at least some graduate experience. Again, nearly one-quarter of partners in the Ithaca sample (21.4 percent) completed graduate school; in the Nelson group, 2 spouses have graduate degrees, and for Calgary partners, the figure is 16.7 percent.

The question of income follows this review of education and occupation. With theoretical support for a discrepancy between wealth and life satisfaction, the issue of prosperity is of considerable interest. On the survey, income is reported using a series of categories in \$10,000 increments. In Table 4-1 above, the midpoint of the median category was presented as a point estimate of income for each location. Table 4-2 expands on this summary, describing the dispersion of reported annual income by both respondent and household. For the purposes of this work, and due in part to the categorical nature of the data and the fact that the information was collected over a one-year period, it is assumed that purchasing power between locales is roughly comparable. No adjustments are made for currency.

Considering the respondent columns in Table 4-2, there is evidence of relatively modest income levels: more than three-quarters of respondents (77.7 percent) report earning less than \$30,000 in the past year. However, the findings support some prosperity in the sample as well, since eleven respondents report earning more than \$50,000 in the past year. Affluence becomes more prominent when household income is considered. More than a quarter of respondents (25.8 percent) live in households with incomes over \$50,000. Only 3 percent of the respondents, however, report annual household incomes over \$100,000. The distribution of household income suggests a trifurcated pattern. Approximately one-third (30.8 percent) of the group has annual household income levels under \$30,000, with another third or so (35 percent) falling between \$20,000 and \$40,000, and the remaining 34.2 percent making over \$40,000 per year.

**Table 4-2: Respondent and Household Income**

<b>Income category<sup>a</sup></b>	<b>Respondent %</b>	<b>Cum. %</b>	<b>Household %</b>	<b>Cum. %</b>
less than \$10,000	28.1	28.1	10.8	10.8
\$10,000 - \$19,999	29.8	57.9	20.0	30.8
\$20,000 - \$29,999	19.8	77.7	20.1	50.9
\$30,000 - \$39,999	5.8	83.5	15.0	65.9
\$40,000 - \$49,999	7.4	90.9	8.3	74.2
more than \$50,000	9.1	100.0	25.8	100.0

<sup>a</sup> Ithaca incomes are reported in U.S. Dollars; Nelson and Calgary incomes are reported in Canadian Dollars; these are assumed to be comparable for the purposes of this work



From Chapter 2, the biographical availability framework suggests that certain biographical factors differentially allow individuals to be “available” to participate in social movement activity—such as that involved in the sustainability and simplicity movements. Gender, age, family status, and employment were identified as key availability variables for this work. It was hypothesized that individuals who are female, slightly older, without significant family responsibilities (i.e., no dependent children at home), but with more flexible employment situations, are more likely to be involved in sustainability and simplicity initiatives. From these descriptive data, it appears that the “average” study participant fits the biographical availability framework and the voluntary simplicity profile reasonably well—that is, respondents in the study are, on average, slightly older (early- to mid-forties), with more flexible family and employment situations. Bivariate and multivariate analyses in Chapter 5 will further probe these descriptive findings.

### **4.3 LOCAL ECONOMY, FOOD, AND DIET**

Diet and issues relating to food and food production emerge as significant themes in the sustainability movement. Serious ecological and health concerns are raised, including loss of land and wilderness, agricultural waste, pollution, additives and preservatives in foods, and global health issues such as obesity and diabetes. These issues are similarly taken up in voluntary simplicity as part of changing consumption patterns and generalized ecological concern. Thus, questions relating to this topic were explored with the study participants. With connections to individual and ecosystem health, as well as general cultural significance, dietary habits and food choices turned out to be provocative subjects for many respondents. All respondents in the sample provided responses to these questions, and several offered additional commentary and caveats.

Generally speaking, the sustainability movement favours locally-produced, minimally-processed, environmentally-packaged, organic, non-genetically-modified (GM) and/or free-range food. Moreover, vegetarian diets are viewed to be more ecologically sound than meat-based diets, given the high resource demands, including land, water, feed, and waste-management, that go into meat production. In North America, the overall prevalence of vegetarianism is very low. For example, one study found 5.2 percent of a sample of 420 Americans consider themselves vegetarian (Kalof et al., 1999: 504). Another national U.S. poll registered only 2.5

percent of the statistical population as vegetarian (Vegetarian Resource Group website, 2000). In this study, however, 52 of 134 respondents (38.8 percent) identify themselves as vegetarian. Thus, it appears that vegetarianism is significantly more common in this sample than in the general population.

Nearly two-thirds of the vegetarians (one-quarter of the entire study sample) are ovo-lacto vegetarians, eschewing all meat and fish, though eggs and dairy products such as milk and cheese are included in the diet. Only 7 percent of respondents follow more extreme forms of vegetarianism. There are six vegans, whose diet and lifestyle prohibits all animal and animal-derived products, including eggs, dairy, honey, chocolate, and leather. As well, there are 3 practitioners of macrobiotics, a philosophy and diet based on brown rice, whole grains, seeds and organically grown fruit and vegetables, underpinned by the belief that bodily systems are balanced by adjusting the amount and kind of food eaten. The remainder of the vegetarians (10 respondents, or 19 percent) follow varying degrees of semi-vegetarianism, where fish, poultry and other animal products are consumed occasionally. It is interesting to note that many of the self-declared omnivores qualified their answers with caveats such as, "I rarely have red meat, but I'll eat it if it's cooked for me" (female, Nelson) or "We have many vegetarian meals during the week, except for fish." (female, Ithaca).

In line with sustainability concerns regarding modern agriculture and food production practices, respondents were asked specifically about organic and genetically-modified (GM) foods. "Organic" refers to produce, animals (meat) and products (e.g., eggs) grown or produced without the use of synthetic chemicals, and endorsed as such by a certifying board. Organic producers favour naturally occurring pesticides and fertilizers, and feed livestock and animals organic, vegetable-based feeds. Organic food is deemed to be less polluting, more healthful and more flavourful. "Genetically modified" refers to a plant or organism that has received genetic material from another species, resulting in permanent changes to one or more of its characteristics. While all food is genetic, and genetic changes occur both naturally and purposefully (e.g., dog breeding), many in the sustainability movement balk at the idea of biotechnology and purposeful genetic engineering. They are concerned in particular with recombinant DNA processes and transgenic (cross-species) manipulations that alter fundamental characteristics such as the ability to seed or increased resistance to pests or herbicides, proprietary claims on GM plants

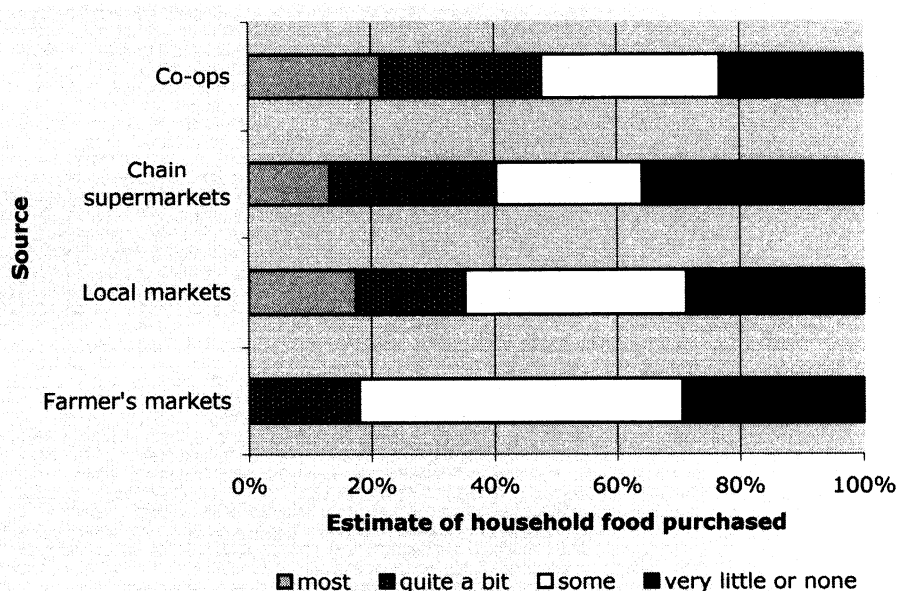
or products, as well as the potential to “contaminate” other crops (see Monsanto vs. Schmeiser website for a recent crop contamination case in Canada, involving Monsanto and Roundup Ready [herbicide tolerant] Canola). The interview results support the sustainability movement’s position on these issues: a majority of the sample (86.6 percent) report making at least ‘some effort’ (response category) to purchase organic food. Further, more than half (51.5 percent) make ‘a great deal of effort.’ Similarly, 84.1 percent of respondents say it is ‘important’ (19.7 percent) or ‘very important’ (64.4 percent) to avoid GM food, although many were skeptical that this was even possible, given corporate control of agricultural processes.

Respondents exhibit further concerns regarding corporate involvement with food, and over two-thirds (68.4 percent) report it is ‘very important’ to avoid national or large regional chain food establishments, such as McDonald’s or Denny’s. Similarly, more than half (52.6 percent) say it is ‘very important’ to avoid eating food products from large national or international corporations such as Coca-Cola, Frito Lay and Nestlé. Given overarching social norms that value convenience and efficiency, how actual performance (i.e., *never* actually frequenting McDonald’s or purchasing Coca-Cola) converges with the self-reported condemnations is of interest. Unfortunately, the data from this sample cannot directly address this matter.

Respondents were also asked a number of questions to gauge where they typically obtain their household food. Given the North American climate and its generally short growing season, it was not anticipated that respondents would be responsible for any large-scale production of their household food. However, more than 80 percent of the sample reports having space for a garden at their primary residence. Nearly two-thirds (65.7 percent) of those who have the space have a garden, and a further 12.7 percent report having garden space away from their residence. Moreover, nearly half (49.3 percent) grow small amounts of food, such as herbs, indoors or in containers. However, most respondents estimate that they personally produce only a fraction (1 to 2 percent) of the amount of the food they consume. Support of local farmers and food producers is another common theme, and over 90 percent of the sample say they make at least ‘some effort’ to buy locally-grown food when it is in season. Interestingly, when asked about the importance of this, slightly fewer (86.6 percent) report that purchasing locally-grown food is ‘important’ to them. Nonetheless, there appears to be some awareness of and interest in supporting the local economy and farming operations.

Individuals in the sample purchase their household food from a range of sources. From Figure 4-1, nearly half of respondents (47.8 percent) report buying 'most' or 'quite a bit' of their household food at co-operative (co-op) food markets—a source generally viewed to be more sustainability-minded than the other choices. In Ithaca, this is understood to be the Green Star Co-op; in Nelson, it is the Kootenay Co-op. The categorization is less clear in Calgary, as there is a large, local supermarket chain, Calgary Co-op, that embodies the co-operative spirit. At the same time, however, there are several smaller food stores that are more on par with the co-ops in Ithaca and Nelson, such as Community Natural Foods, Amaranth and Sunnyside Market.

**Figure 4-1: Sources of Household Food Purchases**



In addition to food bought at co-ops, 'most' or 'quite a bit' of the household food is purchased roughly equally at big chain supermarkets (40.3 percent of respondents) and at local or regional grocery stores (35.2 percent of respondents). It is interesting to note that more than one-third of the sample (35.8 percent) purchases 'very little or none' of their household food at the big chain supermarkets. Finally, a significant minority (18 percent) report that they buy 'quite a bit' of their food from farmer's markets, when in season. As well, community supported agriculture and farmer direct purchases were cited as occasional sources of household food.

A majority of respondents (70 percent) report that they rarely eat out at restaurants and cafés, frequenting such establishments 'about once a week' or 'less than once a week'. However, 10 percent report dining out 'at least once per day'. Support of local enterprises also spills over into dining—when they do dine out, nearly 95 percent of respondents make at least 'some effort' to eat at locally-owned restaurants. Nonetheless, dining out seems to be an occasional luxury for most respondents. Cooking appears to be a significant activity and nearly 60 percent of the sample reports they 'rarely or never' purchase prepared or frozen food—that is, instant or quick meals and products that only need to be warmed up in a microwave or oven. Similarly, three-quarters of respondents say they 'quite often' prepare their meals from scratch, using basic, raw and whole ingredients. Finally, despite a range of dietary habits and practices, a majority of respondents (82 percent) report close agreement within their households on food purchasing and consumption issues.

These descriptive findings indicate that many of the respondents embrace some sustainable and simplicity ideals and practices with respect to their support of the local economy. While dietary habits and food choices may not be explicitly tied to ecological concern, it may be inferred that respondents are at least somewhat conscious of their choices, given the relative preponderance of meatless and reduced-meat diets, interest in locally-grown/produced, organic, and non-GM selections, and reported habits in terms of dining out and cooking.

#### **4.4 FAIR TRADE AND SOCIAL JUSTICE**

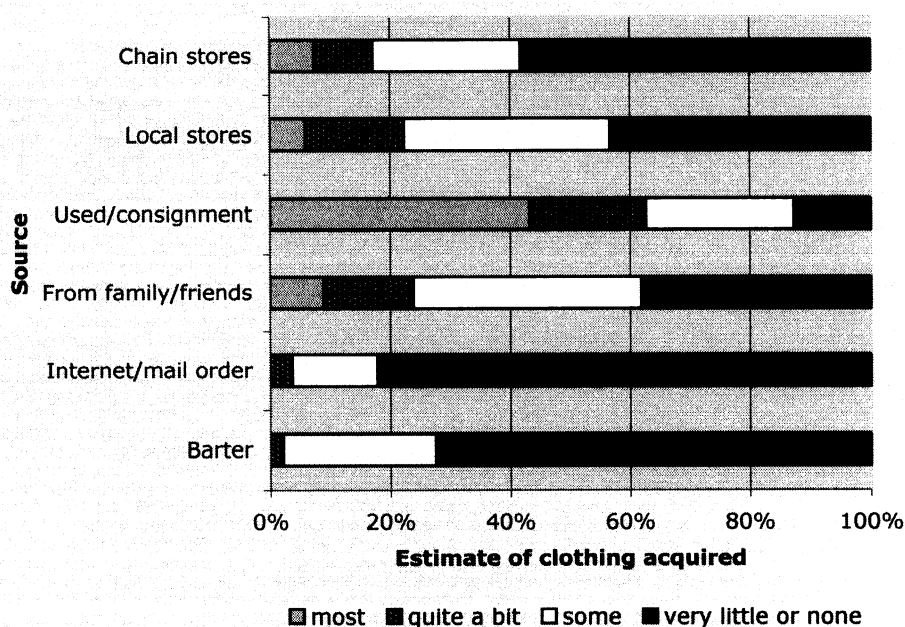
In the literature review, it is suggested that proponents of sustainability often embrace issues such as fair trade and social justice alongside ecological concern. Two areas are investigated in this regard: fair-trade coffee and the acquisition of clothing. "Fair trade" in this case refers to coffee for which growers and workers receive a fair return on their labour or investment. Social justice is a generally broad concept tied to equality, democracy, peace, and security for all people. This work considers clothing acquisition, and indirectly, the treatment of workers involved in the manufacture of clothing.

Of the three-quarters of the sample who identify themselves as coffee drinkers, over half (57.4 percent) say it is 'very important' to them to drink fair traded coffee, and an additional 22.8 percent say it is 'important'. The fact that several of the independently-owned or small chain coffee houses and many of the

grocery stores in each of the locales (e.g. *ABC Café* in Ithaca, *Oso Negro* in Nelson, and the *Good Earth Café* in Calgary) offer fair trade options speaks to this.

Regarding clothing acquisition, respondents were asked about the importance of avoiding purchasing clothing made in sweatshops—that is, low-wage, non-union factories, where workers are generally treated poorly, working long hours in deplorable conditions for meagre pay. Not surprisingly, nearly three-quarters of the sample believe this to be ‘important’ or ‘very important’. However, many respondents were not able to speak to the degree of difficulty in finding clothing *not* made in sweatshops, having never really looked or given it much thought. Nonetheless, nearly 40 percent of respondents report it is ‘somewhat easy’ or ‘very easy’ to find such clothes. Interestingly, some respondents offered the justification that since their clothing is purchased second-hand, they are absolved from responsibility for its production. That is, buying used clothes effectively cancels out, in their minds, how, where, and under what conditions the items are manufactured.

**Figure 4-2: Sources of Household Clothing Acquisition**



Individuals in the sample report acquiring household clothing from a range of sources. From Figure 4-2, nearly two-thirds of respondents (62.7 percent) say they acquire ‘most’ or ‘quite a bit’ of their household clothing at used or consignment stores. Further, another quarter (24.6 percent) acquires at least ‘some’ of their

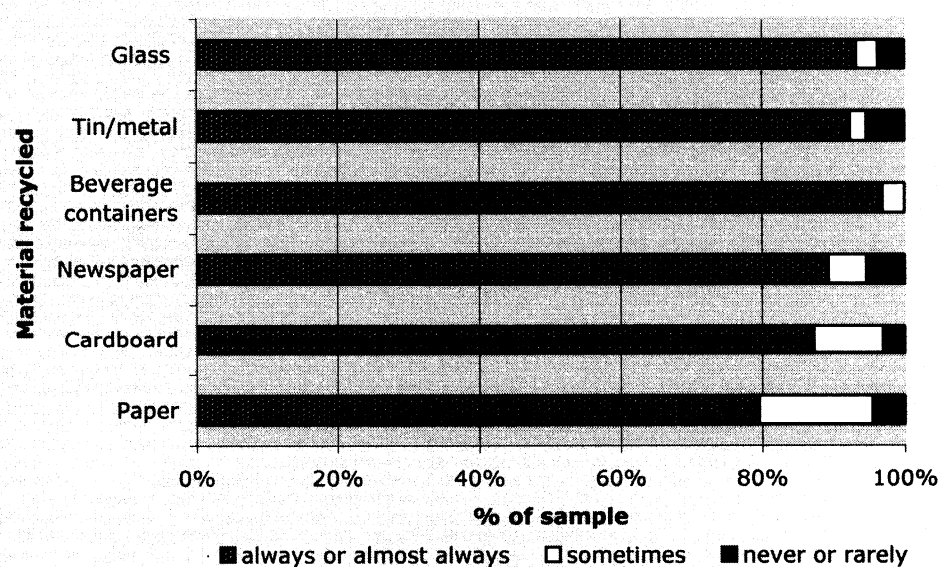
clothing second-hand. The sample also reports that 'some' of their household clothing is acquired from chain stores (24.6 percent of respondents), local retailers (34.3 percent of respondents), and family or friends (38.1 percent of respondents). Finally, a minority said they acquired 'some' clothing from the internet or mail order (14.2 percent of respondents) and through barter (25.4 percent of respondents).

Thus, from these data, most respondents exhibit an awareness of issues related to fair trade and social justice, at least with respect to coffee and clothing. Again, how these expressed concerns translate into observable performance in terms of actual consumer choices remains uncertain.

#### 4.5 RECYCLING

Recycling represents a reasonable triumph for modern environmentalism—formal entrenchment in government, particularly at the municipal level. The waste management divisions for the communities involved in this study all offer recycling services. In Ithaca, regular curbside pickup is provided every other week, and residents are required to recycle newspaper, glass, metal cans, and corrugated cardboard. In Nelson and Calgary, recycling is handled through a voluntary drop-off system, and residents store and sort materials such as newspaper, paper, cardboard, glass, metal cans, and milk jugs and return them to depots.

**Figure 4-3: Common Recycling Practices**

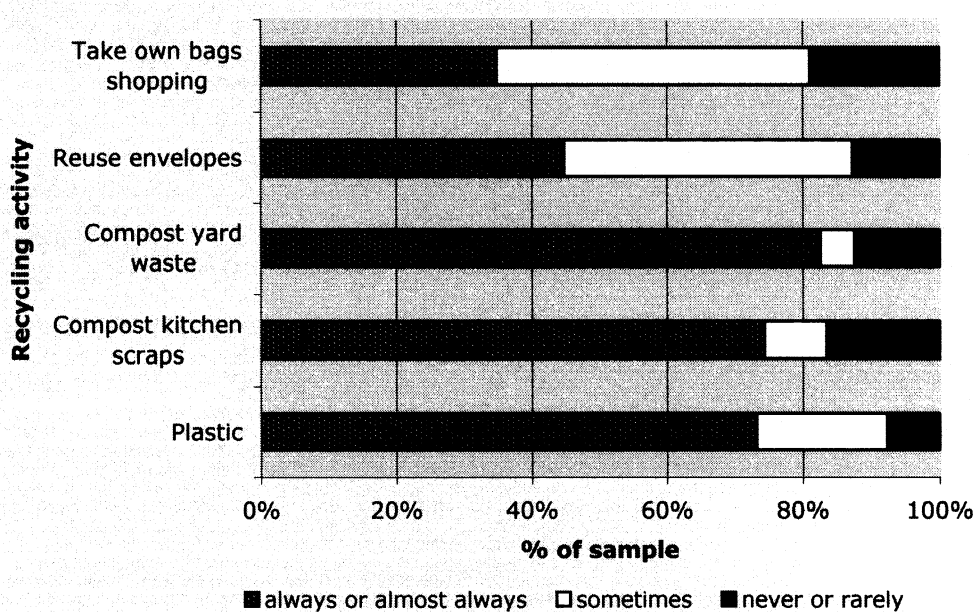


Recycling is a standard service offered in many communities, and it is generally an easy, low-cost activity that for many has simply become a part of the weekly chore of dealing with household waste. Thus, it is not surprising that "common" forms of recycling are very widely practiced in this sample. Figure 4-3 shows that between 80 and 93 percent of respondents 'always or almost always' recycle materials that are usually accepted in municipal recycling programs, including glass, tin and metal cans, beverage containers, newspaper, cardboard and paper. Only a small number, between zero and five percent of the sample, say they 'rarely or never' recycle these materials.

Participation in recycling is conditioned to a considerable degree by municipalities, as they control which materials are accepted, what services are offered, and the degree to which recycling programs are promoted and/or enforced in the community. However, there are other forms of recycling behaviour that may be done in the home, although they may require concerted effort or extra time. A few of these "more demanding" practices are included in the interview schedule to gain a better sense of commitment to pro-environmental behaviour. Not surprisingly, from Figure 4-4 below, it appears that individuals in the sample are less inclined to take on recycling activities that are more demanding in terms of time and effort. Just over one-third of respondents (34.8 percent) report 'always or almost always' taking their own bags or containers when shopping, while nearly 20 percent say they 'rarely or never' do that. Nearly half of the sample (44.8 percent) reports 'always or almost always' reusing envelopes, although from respondent comments, few actually reuse them for mailing, but rather as scrap paper for lists and such. Composting is more on par with the common recycling practices: Nearly three-quarters of the sample (74.4 percent) report that they 'always or almost always' compost kitchen and food scraps, and 82.6 percent compost grass and yard wastes.

It is important to note that the communities involved in the study generally do not offer comprehensive recycling services for plastics. Thus, there was some confusion for respondents as to what actually constitutes 'recycling' plastic. For example, one individual (male, Nelson), reported saving and storing much of his household's plastics, then packaging and shuttling it every few months to a larger centre that accepts the material. Several other respondents claimed they repeatedly reuse their plastic containers from yogurt and sour cream before ultimately throwing them away.

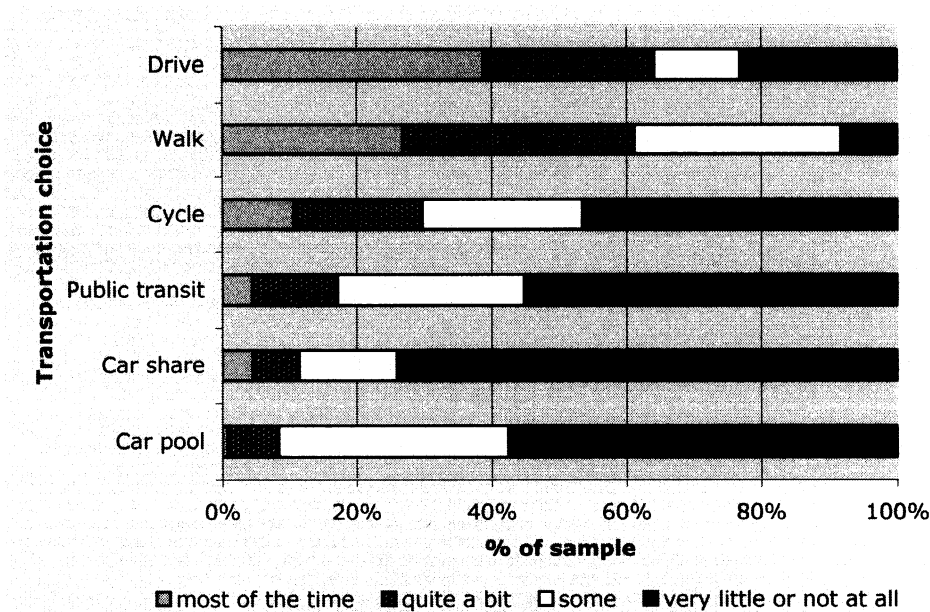


**Figure 4-4: More Demanding Recycling Indicators**

These findings suggest that many of the respondents in the sample embrace various forms of recycling, reusing and composting as a part of their daily lives, and most do not view it as a major inconvenience. In fact, many lament the fact that they aren't able to do more personally (e.g., recycle plastics or compost food scraps if they live in a high-rise building). However, diminished participation in the "more demanding" category suggests either a lack of awareness of these other activities, or that recycling participation may be conditional, at least to some degree, with respect to convenience and lower costs in terms of effort and time.

#### 4.6 TRANSPORTATION

With strong links to pollution and resource use, and implications for climate change concerns, transportation and related issues are very important in the sustainability movement. Respondents were asked how they typically got around in their communities. There are some important considerations that come to bear here, including whether or not respondents live in rural areas (both Ithaca and Nelson have significant rural contingents), as well as the availability and feasibility of public transit and car sharing programs within a given district. Figure 4-5 below details the frequency with which respondents use select modes of transportation to get around their communities.

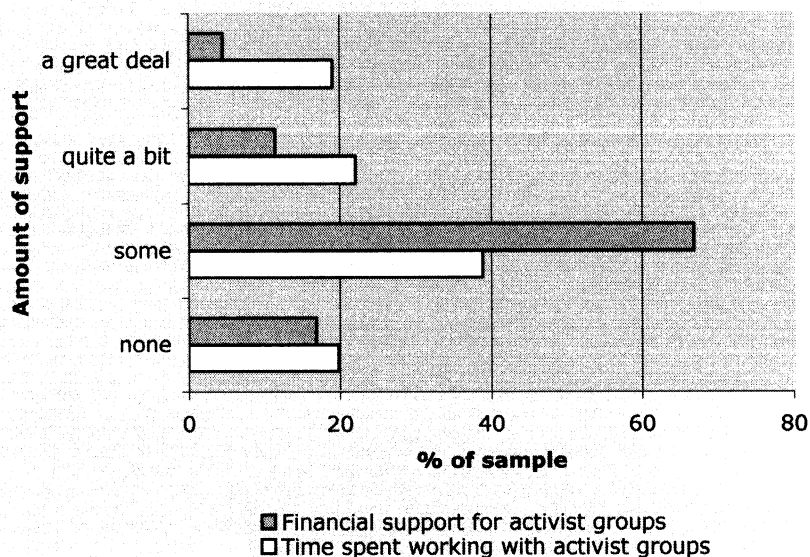
**Figure 4-5: Getting Around**

Not surprisingly, a majority of respondents (38.8 percent) rely primarily on driving, with another quarter (25.4 percent) driving 'quite a bit' of the time. However, a significant minority, nearly one-quarter (23.1 percent), drive 'very little or not at all'. Over 90 percent of the sample walks at least some of the time, and more than one-quarter (26.9 percent) cite walking as their main mode of transportation. Cycling is less frequently cited as a primary way of getting around, but nonetheless, more than half of the sample (53.4 percent) cycles at least 'some' of the time. Public transit is not a popular choice: less than 5 percent of the sample rely on transit 'quite a bit' or 'most of the time,' and more than half (55.2 percent) say they use it 'very little or not at all'. The low public transit numbers may stem from availability and service factors, particularly in the rural areas. For example, a few Ithaca and Nelson residents reported that rural transit schedules (e.g., once-a-day pickups and drop-offs) simply did not mesh with their requirements. Although car pooling and car sharing are less popular options, a significant number of respondents (42.5 percent and 26 percent, respectively) report using these methods to get around at least 'some' of the time. From these findings, it appears that factors such as convenience and efficiency tend to influence transportation decisions, and driving, while not the most ecological choice, is viewed by many as regrettably necessary. Nonetheless, there is also evidence that respondents are trying to use more pro-environmental modes of transport, such as walking, cycling or car sharing.

#### 4.7 ACTIVISM AND POLITICS

Given interest in and ties to other social movements and general social change in the sustainability movement, interest and participation in activist endeavours was another area broached with respondents. It was quickly realized that the sample as a whole is quite active in a variety of groups working to solve environmental, social and economic problems. In fact, nearly all respondents (96.2 percent) report having 'definite sympathy' for or 'sympathize very much' with the goals of activist groups in general. Further, when considering a specific issue such as global free trade, more than three-quarters (77.6 percent) say they sympathize 'quite a bit' or 'a great deal' with groups who demonstrate against global free trade—such as those involved with the 1999 World Trade Organization protests (see Klein, 2002 for more detail regarding the globalization protests and debate). Less than a quarter of respondents report having 'some' (20.8) or 'no/none' (1.6 percent) sympathy for these groups.

**Figure 4-6: Supporting Activist Groups**

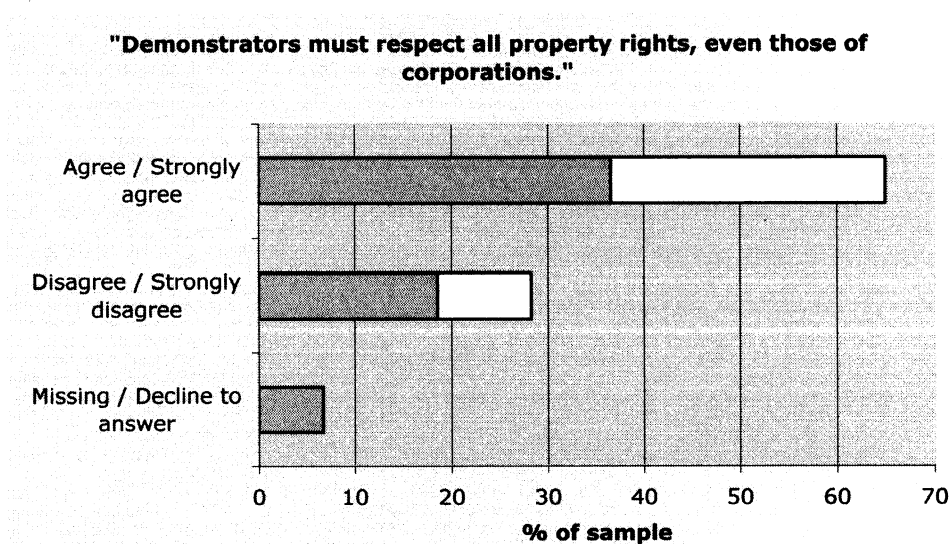


Voicing support for activist causes is one facet, however, individuals in this sample also report acting in accordance with their views. They endeavour to stay informed on the issues and causes, and provide tangible forms of support to activist causes, including both time and money. Nearly all respondents (90 percent) make at least 'some' effort to stay current with the activities and intentions of protest

groups—through the internet, receiving newsletters and attending lectures or workshops. More than half of the respondents (51.1 percent) make a 'definite effort' or 'a great deal of effort' to keep up-to-date. Further, at the time of the interviews, three-quarters of the sample (74.2 percent) actually worked with or belonged to one or more activist groups.

Figure 4-6 above provides a snapshot of the types and amount of support respondents offer to activist organizations. Despite relatively modest incomes, 83 percent of respondents report providing at least 'some' financial support to activist groups. Similarly, 80 percent of the sample spends at least 'some' time working with the groups. Generally speaking, they are active in their participation as well, with more than three-quarters (77.3 percent) reporting having participated in a demonstration against corporate or government policy at some point in their lives. Several respondents shared stories of clashing with law enforcement and being jailed as a result of their protest activity. Nearly all respondents (93.2 percent) have at least 'some interest' in demonstrating again—or for the first time—if given the opportunity, and about one-third each report they have 'definite interest' (32.1 percent) or 'would love to do it' (33.6 percent). Only 9 respondents (less than 7 percent) say they are 'not at all interested' in protest action. Some of these included former activists and group organizers who have "quit" after many years of activist work, reporting feelings of burn out and frustration (e.g. female, Nelson).

**Figure 4-7: Activism 'Radicalness' Indicator**



To gain a sense of the activist 'radical-mindedness' of respondents, they were asked about their agreement (or disagreement) with the following statement: "Demonstrators must respect all property rights, even those of corporations." Figure 4-7 above shows the breakdown of their responses. Nearly two-thirds of the sample report they 'agree' (36.6 percent, blue bar on the left) or 'strongly agree' (28.4 percent, yellow bar to the right) with the statement, believing that property rights should be respected. However, a significant minority, nearly one-third reported they 'disagree' (18.6 percent) or 'strongly disagree' (9.7 percent), and a few qualified their answers with scathing commentary on the corporate lack of respect for people's rights. Moreover, several respondents declined to provide an answer to the question, after answering all of the others in the series.

The respondents in the sample are quite involved with activist and special interest groups, and they tend also to espouse strong political views. With consideration of national (U.S.A/Canada) and regional (Nelson/Calgary) variations in politics, Table 4-3 summarizes federal-level political party preference by location:

**Table 4-3: Political Party Preference by Location**

<b>Political Party</b>		<b>Ithaca %</b>	<b>Nelson %</b>	<b>Calgary %</b>	<b>Total %</b>
<b>Canada</b>	Green Party of Canada	-	51.9	17.5	25.5
	New Democratic Party	-	7.8	5.0	4.5
	Marijuana Party	-	3.8	2.5	2.2
	Liberal Party of Canada	-	0.0	7.5	2.2
	Progressive Conservative Party <sup>a</sup>	-	0.0	7.5	2.2
	Canadian Alliance Party <sup>a</sup>	-	1.9	2.5	1.5
<b>U.S.A.</b>	Green Party of the United States	47.6	-	-	15.0
	Democratic Party	16.7	-	-	5.2
	Republican Party	2.4	-	-	0.7
<b>No preference</b>		33.3	34.6	57.5	41.0

<sup>a</sup> In December 2003, after interviews were completed, the Progressive Conservative and Canadian Alliance merged to form the Conservative Party of Canada.

While more than half of the respondents (60 percent) report that they identify with a major political party, another 40 percent or so do not cite any political affiliation. Regional differences are apparent here: Approximately one-third of the Ithaca and Nelson samples report that they do not identify with a political party; in

Calgary, this figure is over half (57.5 percent). Given the general activist character of the sample, this is an interesting finding, that a significant portion of this group reports no political affiliation. This may suggest that in all three communities, conventional means for pursuing societal change, via formal political activity, are either not attractive to some respondents or perhaps even viewed as ineffective. In Calgary, this result may reflect the fact that Alberta is a known Conservative party stronghold, federally and provincially. In fact, there are only two non-Conservative federal Members of Parliament of the 28 from Alberta, as of the latest election in June 2004 (The Government of Canada, 2004).

Despite a number of politically uncommitted respondents, many do espouse political affiliations. In all of the locations, more respondents identify with the Green party than any other option. Nearly one-half of Ithaca respondents place their loyalties with the U.S. Green Party (47.6 percent); there is a small minority who identify themselves as Democrats (16.7 percent) and one lone Republican. Interestingly, some Ithaca respondents reported Green Party affiliations, but hold Democratic party memberships in order to vote in the primaries. In Nelson, more than half of the sample (51.9 percent) identifies with the Green party, followed by a handful of New Democratic Party (NDP) supporters (7.8 percent), and a few each for the Canadian Alliance and Marijuana parties. There are no Liberals or Progressive Conservatives in the Nelson group. Finally, in Calgary, for those who have an opinion, political party preference seems to be spread out amongst the available options. A small majority of respondents (17.5 percent) claim to identify with the Green party, and between 1 and 3 respondents report supporting one of the other Canadian options—NDP, Liberal, Conservative, Alliance, and Marijuana Party. Thus, it appears that many respondents are inclined toward 'green' politics, perhaps as a way of expressing ecological or pro-environmental views. Some respondents find affiliation with other alternative or supposedly more "left" leaning options, while others still are less decided.

#### **4.8 SPIRITUALITY AND MINDFULNESS**

With the centrality of personal growth and spirituality in the voluntary simplicity framework, and based on previous work by Jacob and Brinkerhoff (e.g., 1999, 1987) respondents were asked about the importance of various formal spiritual practices, as well as about certain kinds of mindfulness-related experiences

in daily life. Table 4-4 below details respondent views on select spiritual practices. A considerable number (between one-third and one-half) report such practices as not at all important. However, many respondents (nearly two-thirds in most cases) attach at least 'some' importance to them. In particular, the sample reports formal meditation (41.4 percent), yoga (36.1 percent), prayer (45.4 percent), mindfulness or informal meditation (84.9 percent) and Sabbath observance (32.3 percent) to be 'important' or 'very important'.

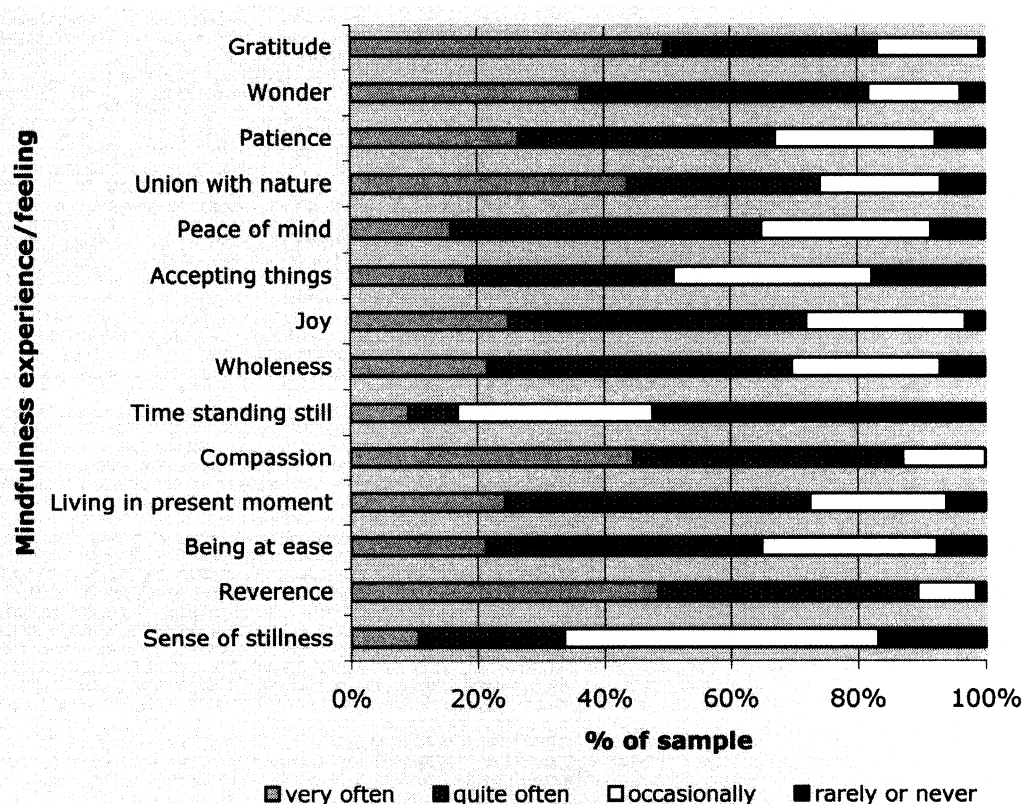
**Table 4-4: Importance of Spiritual/Religious Practices**

	<b>Formal meditation</b>	<b>Yoga</b>	<b>Prayer</b>	<b>Sabbath observance</b>	<b>Mindfulness</b>
<i>% respondents reporting practice as:</i>					
very important	21.1	15.8	24.2	13.5	68.4
important	20.3	20.3	21.2	18.8	16.5
somewhat important	21.8	30.1	16.7	22.6	10.5
not at all important	36.8	33.8	37.9	45.1	4.5

In addition to questions about specific spiritual practices, respondents were also asked whether they felt part of a religious group or church. Less than one-quarter (24.8 percent) declare a formal religious affiliation, and more than half (53.7 percent) claim they never attend church or temple services. Despite a general lack of interest in formal religion, nearly three-quarters of the sample (73.7 percent) view themselves to be 'quite' or 'very' spiritually minded. Only a small minority (5.3 percent) say they are 'not at all' spiritually minded.

While many respondents report certain spiritual practices to be important, less formal elements of spirituality seem to be even more significant. When asked directly about mindfulness, explained to respondents as "a more informal meditation practice or conscious awareness of your thoughts and activities," more than two-thirds (68.4 percent) report this is to be 'very important' to them. In fact, nearly all respondents (95.4 percent) say that mindfulness is at least 'somewhat important'. The sample was also questioned regarding a range of feelings associated with mindfulness. Figure 4-8 below details the reported frequency of these feelings and experiences for respondents.

**Figure 4-8: Frequency of Mindfulness Experiences or Feelings**



Generally, respondents experience mindfulness-related feelings with some frequency, and most (between 66 and 89 percent) report having them 'quite often' or 'very often'. There are, however, a couple of notable exceptions. "A feeling of time standing still" is the only item that shows a reverse trend: more than half (52.3 percent) of respondents say they 'rarely or never' experience this feeling. Similarly, nearly two-thirds of respondents report less frequent experiences of feeling "A sense of stillness" (66.4 percent) and "Accepting things as they are" (51.1 percent). While the numbers tell a story about the experiences and feelings of individuals in the sample, some of the commentary from respondents is also compelling. Despite the possibility of perceiving the mindfulness items with skepticism, dismissing them as "hokey" or gratuitous, these questions generally were accepted and even welcomed. In fact, many participants commented that they found this series of questions interesting and valuable, and several said they really enjoyed completing that portion. From these findings, the sample generally appears to exhibit a considerable degree of spiritual awareness and interest in spiritual practices, including mindfulness, and these notions will be taken up in further in Chapter 5.





As is typical with self-reports of well-being, the results from this portion of the survey are skewed—that is, respondents tend to provide generally positive assessments of their lives. The sample by far prefers the positive ends of the pairings—between 78.0 and 92.3 percent assign a score of '5' or higher to the positive terms in the semantic differential pairings (happy, interesting, enjoyable, worthwhile, friendly, full, hopeful, rewarding, and "brings out the best in me"). Conversely, between 2.4 and 9.5 percent of respondents assign a score of '3' or lower to the negative terms in the semantic differential pairings (sad, boring, miserable, useless, lonely, empty, discouraging, disappointing and "Doesn't give me much chance"). Finally, between 4.7 and 14.2 percent of respondents selected the "neutral" space (a score of '4') to the pairing. There are two notable exceptions to this generally positive trend: When asked to identify the position best describing their present life between "hard" and "easy," only 38.3 percent of respondents provided a score of '5' or higher. Moreover, nearly one-third (31.3 percent) of the sample indicates they view their lives as generally harder (a score of '3' or less). Similarly, when asked about feeling "tied down" versus "free," less than half (47.2 percent) provide a score of '5' or higher, and one-quarter (25.6 percent) indicate they generally feel "tied down" (a score of '3' or less).

A single indicator general measure of happiness was also included as the last question of the interview. Respondents were asked to take all things together and rate how happy they were at the present time by selecting one of four categories: not at all happy, not too happy, pretty happy or very happy. Table 4-5 presents the responses for this question.

**Table 4-5: Single Indicator "Happiness" Measure**

	<b>Ithaca</b>	<b>Nelson</b>	<b>Calgary</b>	<b>Full sample</b>
<i>% respondents reporting life as:</i>				
not at all happy	0.0	0.0	0.0	0.0
not too happy	4.9	2.1	11.1	5.6
pretty happy	51.2	45.8	61.1	52.0
very happy	43.9	52.1	27.8	42.4

This happiness measure is strongly skewed also toward the positive. The sample is almost evenly divided between reports of being 'pretty happy' (52 percent) and 'very happy' (42.4 percent). In fact, none of the respondents selected the 'not at all happy' option, and only a small minority (5.6 percent) of the sample claims to be 'not too happy'. There are small regional differences in reported happiness. Specifically, fewer respondents in Calgary (27.8 percent) report being "very happy," as compared to Ithaca (43.9 percent) and Nelson (52.1 percent). Similarly, more of the Calgary group (11.1 percent) reports being "not too happy." This figure is considerably lower in Ithaca (4.9 percent) and Nelson (2.1 percent). The fact that respondents from the largest community, Calgary, show an overall trend of lower reported happiness, as compared to two smaller communities, is interesting. However, isolating an explanation for this result would require a much more detailed investigation of well-being than what is covered here. In spite of this difference, the respondents in this study appear to be generally happy and satisfied with their present lives.

#### **4.10 SUMMARY**

From this descriptive analysis, the respondents in the sample seem to embrace a wide range of views and practices that may be recognized as more in harmony with sustainability and simplicity ideals. In particular, they report making concerted efforts to bring more ecologically sound habits and products into their daily lives. Acquiring more ecological food (e.g., organic, locally-grown), being aware of dietary choices and habits, as well as recycling and composting, are some examples of such behaviours. However, the data also suggest there are challenges involved in reconciling ecological views with society at large. For example, many respondents drive to get around most of the time, as this method is more convenient and efficient. Overall, the sample exhibits an awareness of other issues, such as fair trade, and provides support for and participation in activist and political causes. Moreover, they are also quite spiritually-minded, which may assist in fostering mindfulness as well as stronger ecological worldviews. Finally, despite taking on practices that may be potentially viewed as diminishing quality of life, respondents generally appear to enjoy a positive sense of subjective well-being and satisfaction with their lives. The next chapter further probes these findings in an effort to account for some of the variation in mindfulness and well-being.

## CHAPTER 5 – BIVARIATE AND MULTIVARIATE FINDINGS

Bivariate and multivariate findings of this study are presented in three parts. First, there is a review of the descriptive characteristics for the variables used in these analyses. Next, a series of zero-order correlations are used to explore potential relationships between the variables. Finally, results of multiple regression analyses are presented and discussed for Mindfulness and Subjective Well-being.

### 5.1 UNIVARIATE ANALYSIS

There are 18 variables taken up in these analyses. Table 5-1 summarizes univariate features for the 13 interval level (numerical) variables:

**Table 5-1: Descriptive Statistics for Continuous and Scale<sup>a</sup> Variables used in the Multivariate Analysis (Calgary/Ithaca/Nelson, n=134)**

Variable name	n <sup>b</sup>	mean	range	standard deviation
<u>Dependent variables</u>				
SCALE--SUBJECTIVE WELL-BEING: GENERAL OUTLOOK ON LIFE	127	46.28	26--56	6.91
SCALE--MINDFULNESS	132	13.19	6--20	2.98
<u>Spirituality</u>				
SCALE--Importance of Spirituality and Spiritual Practices	133	11.87	5--20	3.96
<u>Sustainable practices</u>				
SCALE--Ecological Food	134	12.11	4--16	2.84
SCALE--Activist Participation	132	13.20	3--20	3.92
SCALE--More Demanding Recycling	133	12.52	4--16	3.07
SCALE--Greener Transportation	134	8.58	4--15	2.84
<u>Ecological views</u>				
SCALE--Importance of Local Economy	134	16.70	6--20	3.24
SCALE--Activist Views	132	9.86	4--12	1.84
Importance of Avoiding GM Food <sup>c</sup>	132	3.42	1--4	0.90
<u>Biographical variables</u>				
Number of children at home	134	0.66	0--4	1.00
Age (in years)	123	42.85	19--83	11.11
Household income (category midpoints)	120	36,500	5,000--105,000	26,046

SOURCE: Calculated by the author using data from the Urban Nature/Sustainable Cities Survey, 2002-2003

NOTES: <sup>a</sup> Scale items and response categories are found in Table 3-1 (page 46); <sup>b</sup> ns vary slightly because of non-responses on selected items; <sup>c</sup> "Importance of Avoiding GM food" ordinal variable is treated as interval level

As a general rule, multiple regression requires interval-level data. As such, appropriate data modification techniques, such as factor-analyzed scaling and dummy coding, have been applied to render nominal- and ordinal-level data from the structured interviews suitable for use in these analyses. In some cases, ordinal (rank order) responses are treated directly as interval data, though it must be assumed that the distance between the categories are approximately equal.

In addition to the scale and continuous measures, there are five categorical variables ("Dependent children" is reported here for informative purposes; the interval-level option is used in the analysis). An overview of dummy variable coding and detail regarding the measurement of these variables are provided in Chapter 3. Descriptive statistics for the categorical variables are presented in Table 5-2.

**Table 5-2: Descriptive Statistics for Categorical Variables used in the Multivariate Analysis (Calgary/Ithaca/Nelson, n=134)**

<b>Variable name</b>	<b>n<sup>a</sup></b>	<b>percent</b>
<b><u>Sustainable practices</u></b>		
Vegetarian Diet	134	100.0
<i>Yes (1)</i>	<i>52</i>	<i>38.8</i>
<i>No (0)</i>	<i>82</i>	<i>61.2</i>
<b><u>Controls/Biographical availability</u></b>		
Gender	134	100.0
<i>Male (1)</i>	<i>70</i>	<i>52.2</i>
<i>Female (0)</i>	<i>64</i>	<i>47.8</i>
Dependent Children at Home	134	100.0
<i>Yes (1)</i>	<i>53</i>	<i>39.6</i>
<i>No (0)</i>	<i>81</i>	<i>60.4</i>
Flexible Employment	132	100.0
<i>"Less flexible" (1)</i>	<i>44</i>	<i>33.3</i>
<i>"Flexible" (0)</i>	<i>88</i>	<i>66.7</i>
Marital Status	133	100.0
<i>Partnered--married/common-law (1)</i>	<i>73</i>	<i>54.9</i>
<i>Not partnered--single (0)</i>	<i>60</i>	<i>45.1</i>
Education	130	100.0
<i>No university/college experience (1)</i>	<i>25</i>	<i>19.2</i>
<i>University/college experience (0)</i>	<i>105</i>	<i>80.8</i>

*SOURCE: Calculated by the author using data from the Urban Nature/Sustainable Cities Survey, 2002-2003*

*NOTES: <sup>a</sup> ns vary slightly because of non-responses on selected items; there are no dummy-coded categorical Ecological Views variables included in the analysis; Italicized numbers represent frequencies and percentages of the response categories for each variable*

### **5.1.1. Dependent Variables**

There are two dependent variables considered in this work, and their composition and characteristics are briefly reviewed here.

Subjective well-being (general outlook on life), or SWB, is the primary dependent variable in the second regression analysis. It is a factor-analyzed, summated scale constructed from a series of semantic differential items (see Section 3.5.1 for item detail). Applied here as a measure of quality of life, the SWB scale taps respondents' global assessments of their current lives. As with most self-reports of quality of life, people in this study tend to look on the brighter side of things and there is some skew in the distribution. The sample generally has a positive outlook on life, which is demonstrated by a relatively high mean (46.3 points) on a scale for which scores range from 26.0 to 56.0. Higher scores on this scale indicate a more positive view of life, or a greater sense of subjective well-being. This variable approximates a normal distribution that is slightly negatively skewed, and as such, it meets a criterion for using multiple regression—the assumption of normality, and is appropriate for use as a dependent variable.

Mindfulness is the second dependent variable and also an independent variable in the SWB regression. It is a factor-analyzed, summated scale constructed from four items tapping feelings associated with mindfulness (see Section 3.5.2 for item detail). Generally, the individuals in this study report experiencing such feelings fairly frequently. The mean for this scale is 13.2 points, and scores range from 6.0 to 20.0, with higher scores indicating a greater frequency of mindfulness experiences. The distribution of this variable also approximates normal, and consequently meets the normality assumption.

### **5.1.2. Independent Variables**

Based on the heuristic model outlined in Chapter 2, there are three sets of independent variables included in these analyses—Sustainable Practices, Ecological Views, and Biographical factors (including the Availability subset), as well as a single Spirituality measure. Their key characteristics are reviewed here.

Spirituality is measured using the "*Importance of spirituality and spiritual practices*" scale. This scale has a mean of 11.9 and scale scores range from 5.0 to 20.0. For organizational purposes, this variable is grouped with the Ecological Views measures in certain analyses.

Sustainable Practices are tapped with four scale variables and one dichotomous dummy coded variable. In all cases, higher scale scores indicate a greater degree or frequency of Sustainable Practices. The "*Ecological food*" scale has a mean of 12.1, and scores range from 4.0 to 16.0. This suggests that many respondents make a considerable degree of effort to procure household food from more ecological (i.e., environmentally friendly, organic, locally-grown) sources. The "*Activist participation*" scale has a mean of 13.7, and scores range from 5.0 to 20.0. Respondents tend to provide a range of support to activist groups, in terms of time, money and effort. The "*More demanding recycling*" scale has a mean of 12.5, and scores range from 4.0 to 16.0. Generally, respondents make an effort to engage in recycling practices that require more effort and attention, such as composting, reusing envelopes and taking their own bags or containers when shopping. The "*Greener transportation*" scale has a mean of 8.6, and scores range from 4.0 to 15.0. Respondents tend to use a variety of ways of getting around, with some relying on "greener" methods, such as walking, cycling, or taking public transit, more often than others. Finally, for the dichotomized, dummy-coded "*Vegetarian diet (yes=1)*" variable, nearly two-fifths of the sample (38.8 percent) report being vegetarian (considered a sustainable practice); 61.2 percent say they are not vegetarian.

Ecological Views are measured using two scale variables and one categorical, interval-level variable. As with Sustainable Practices, higher scale scores indicate a greater degree of Ecological Views. The "*Importance of local economy and fair trade*" scale has a mean of 16.7, and scores range from 6.0 to 20.0. Respondents tend to believe quite strongly in supporting their local economies through the purchase of food and goods produced locally, and avoiding products from large chains or trans-national companies. The "*Activist views*" scale has a mean of 9.9 and scores range from 4.0 to 12.0. Most respondents report sympathizing with the goals of activist groups and express interest in protest and other activist endeavours. Finally, for the "*Importance of avoiding genetically-modified (GM) food,*" nearly 65 percent of the sample believes avoiding GM food is 'very important' (coded 4), while almost 20 percent view it to be 'important' (3). Just over 15 percent report that it is 'not at all' (6.1 percent) or only 'somewhat' (9.8 percent) important to avoid GM food. This ordinal-level variable is treated as interval data in this analysis, with a mean of 3.42, responses ranging from 1 to 4.

Biographical factors include a number of standard demographic variables that may have implications in the investigation of sustainability. There are seven biographical factors, representing individual characteristics that can influence the other variables in the analysis: Gender (male=1), Marital status (partnered=1), Number of dependent children at home, Age (in years), Flexible employment (less flexible=1), Education (no university or college=1), and Household income (by category). Included in these is the Biographical Availability subset, which is comprised of those biographical factors that may potentially impact an individual's "availability" to participate in the sustainability movement via engagement in more sustainable practices. The Availability subset includes gender, number of dependent children, age, and flexible employment.

Based on the heuristic model and hypotheses outlined in Chapter 2, correlations are used as a preliminary means of identifying and probing potential associations among the variables. These bivariate findings are reported in the next section. This analysis is followed up with a series of multiple regression exercises that further explore and test some of the relationships between the variables.

## **5.2 BIVARIATE ANALYSIS**

A series of zero-order correlations are used in this instance to explore associations between Biographical Factors and variables tapping Ecological Views/Spirituality and Sustainable Practices for respondents in this study. A zero-order correlation, or 'r,' is a measure of the linear, or straight-line relationship between two variables. Typically, only continuous variables are included in a correlation matrix. However, dichotomous variables such as 'Gender' may also be used, as long as care is taken to interpret the statistics in reference to the coding (Elifson et al., 1998: 193). It is important to note that correlation coefficients in and of themselves do not permit inferences of causation. What will be considered here is whether or not a linear relationship exists between select pairs of these variables, that is, if they co-vary. An indication of the strength and direction (positive or negative) of those associations is also determined. Taking into account this caveat regarding causation, some speculation is made regarding potential relationships between variables, based on the heuristic model outlined in Chapter 2. In the next section, multiple regression analysis is used to follow up on the bivariate findings and further explore relationships.



To keep this bivariate analysis systematic, and to address the various sets of hypotheses from Chapter 2, correlations are computed in four parts. Statistically significant findings are then reported and discussed in the appropriate section. Biographical factors (including the Availability subset) are taken up first with Ecological Views/Spirituality, and then with Sustainable Practices. Next, correlations between Views and Practices are reviewed. Finally, Spirituality, Views and Practices are considered with respect to the dependent variables, Mindfulness and Subjective Well-being. Appendix B includes the full correlation matrix for all of the variables involved in this part of the analysis.

### **5.2.1. Biographical Factors and Ecological Views/Spirituality**

The Spirituality measure is grouped with Ecological Views for this part of the analysis. From Table 5-3 below, three zero-order correlations between Biographical factors and Ecological Views/Spirituality are statistically significant. Five of seven biographical variables, number of children at home, marital status (partnered=1), age (in years), flexible employment (less flexible=1), and household income (by category), have no significant linear relationship with any of the Views/Spirituality measures. Moreover, "Importance of local economy" does not correlate with any of the biographical variables. Biographical Availability suggests that individuals have differential availabilities, stemming from these biographical factors, to partake in social movement activities. As this implies *doing* something, the Availability hypothesis lacks a reasonable application with Ecological Views and is not explicitly taken up here.

Turning to the three significant correlations and their interpretations, there is a linear relationship ( $r=-0.225$ ) between gender and "Importance of spirituality and spiritual practices". That is, on average, women in the sample tend to view spirituality and spiritual practices such as meditation, yoga, and prayer, to be more important to them, as compared to the men in the sample. This finding suggests that generally, female respondents may be more spiritually-minded and perhaps more interested in related practices and perspectives than the male respondents. While this result was not considered in the literature review, it is possible that women have the potential for increased exposure to spiritual ideas and practices through channels accessed less often by men, for example, through friends, or via resources such as magazines targeted at women. By squaring the r-value,  $r^2=0.051$ , PRE (proportional

reduction in error) logic suggests that with knowledge of the gender of the respondent (male or female), errors in predicting an “Importance of spiritual practices” score may be reduced by 5.1 percent, as compared to using the scale mean as an estimate or by chance alone. However, the results of this analysis do not support gender as an overall significant variable in influencing Ecological Views held by respondents.

**Table 5-3: Biographical Correlates<sup>a</sup> of Ecological Views (Calgary/Ithaca/Nelson, n=134<sup>b</sup>)**

Ecological Views		Importance of spiritual practices	Importance of local economy	Activist views	Importance of avoiding GM food
Biographical Availability	Gender (male=1)	<b>-0.225 **</b>	-0.068	0.071	-0.031
	# children at home	0.155	-0.134	-0.120	0.145
	Age (in years)	-0.035	-0.074	0.131	-0.036
	Flexible employment (less flexible=1)	0.036	0.190	0.166	0.077
	Marital status (partnered=1)	-0.155	0.003	0.010	-0.072
	Education (no university or college=1)	0.078	-0.143	<b>-0.317 **</b>	<b>-0.225 **</b>
	Household income (by category)	-0.069	-0.023	-0.053	-0.024

SOURCE: Calculated by the author using data from the Urban Nature/Sustainable Cities Survey, 2002-2003

NOTES: <sup>a</sup> Pearson correlation coefficients (*r*); **\*\****p* ≤ 0.05; bold figures represent statistically significant findings; <sup>b</sup>ns range from 118 to 134 because of non-responses

Education is the only biographical factor that significantly correlates with more than one Ecological Views variable. There is a linear relationship ( $r=-0.317$ ) between education and “Activist views.” On average, those respondents who have had at least some university or college experience tend to score slightly higher on the “Activist views” scale, as compared to those who do not have any university or college experience. Thus, education is associated with stronger activist views. It is possible that individuals with higher education (i.e. university or college experience) may have greater exposure to student movements and activist ideas that often flourish in post-secondary environments. This potentially increased contact with activists and their ideas may allow predisposed individuals to further cultivate such views. PRE logic suggests that with knowledge of whether an individual has post-secondary experience, errors in predicting an “Activist views” score may be reduced by 10 percent, compared to using the scale mean as an estimate or by chance alone.

There is also a linear relationship ( $r=-0.225$ ) between education and "Importance of avoiding GM food". On average, those respondents who have had at least some university or college experience tend to report avoiding GM food as slightly more important to them than those who do not have any university or college experience. As with "Activist views," higher levels of education can potentially foster increased awareness—in this case, of advanced topics in biology, chemistry or environmental science—perhaps helping to augment concerns about GM food. PRE logic suggests that with knowledge of whether an individual has post-secondary experience, errors in predicting whether they view avoiding GM food as important may be reduced by 5.1 percent, as compared to using the mean of item responses as an estimate or by chance alone.

Overall, there is little evidence supporting the existence of strong, direct relationships between many of the biographical factors included in this study and the variables tapping Ecological Views (**H1**). Education correlates with "Activist views" and "Importance of avoiding GM food," suggesting that post-secondary experience may be associated with holding more or stronger ecological views (**H1b**). However, from these data, there is no indication that female respondents are more likely to hold more or stronger ecological views than the men (**H1a**). Gender correlates significantly with "Importance of spirituality and spiritual practices". This unanticipated finding suggests that women in the sample view spiritual practices as more important to them, though it does not provide information regarding actual performance.

In sum, most of the Biographical factors (including marital status, number of children at home, age, flexible employment and household income), as measured here, are not associated significantly with the Spirituality indicator or with selected Ecological Views derived from the Urban Nature/Sustainable Cities interview schedule—in this case, the importance one places on local economy and fair trade, activist views and avoiding genetically-modified food. Nonetheless, with knowledge of a person's gender and his or her highest level of education, there is some benefit in terms of reducing errors in predicting some Ecological Views and Spirituality.

### **5.2.2 Biographical Factors and Sustainable Practices**

From Table 5-4, three zero-order correlations between Biographical factors and Sustainable Practices are statistically significant. Five of the seven biographical

variables (gender, age, flexible employment, marital status and household income) have no significant linear relationship with any of the Practices variables. Moreover, three of the Sustainable Practices variables, "Ecological food," "Greener transportation" and "Vegetarian diet (yes=1)" are not associated with any of the biographical factors. The three significant correlations are interpreted here.

**Table 5-4: Biographical Correlates<sup>a</sup> of Sustainable Practices (Calgary/Ithaca/Nelson, n=134<sup>b</sup>)**

Sustainable practices		Sustainable practices				
		Ecological food	Activist participation	More demanding recycling	Greener transportation	Vegetarian diet (yes=1)
Biographical Availability	Gender (male=1)	0.054	0.010	-0.072	0.017	-0.066
	# children at home	-0.082	<b>-0.211 **</b>	0.085	-0.090	0.099
	Age (in years)	-0.033	0.048	-0.063	-0.087	-0.155
	Flexible employment (less flex=1)	0.162	0.088	0.128	0.093	0.088
	Marital status (partnered=1)	0.036	-0.044	0.147	-0.115	0.076
	Education (no university or college=1)	-0.146	<b>-0.259 **</b>	<b>-0.216 **</b>	-0.041	0.048
	Household income (by category)	-0.039	-0.045	-0.028	-0.088	0.136

SOURCE: Calculated by the author using data from the Urban Nature/Sustainable Cities Survey, 2002-2003

NOTES: <sup>a</sup> Pearson correlation coefficients (r); \*\*p≤ 0.05; bold figures represent statistically significant findings; <sup>b</sup> ns range from 120 to 134 because of non-responses

There is an inverse linear relationship ( $r=-0.211$ ) between number of children at home and "Activist participation." That is, on average, respondents with more dependent children tend to be less involved in activist causes, as compared to those with fewer or no children at home. This makes substantive sense, as parents may be less available and/or less inclined to participate in demonstrations, or may have fewer resources (time, money) to devote to activist groups, if they have dependent children. By squaring the r-value,  $r^2=0.045$ , PRE logic suggests that with knowledge of how many children an individual has at home, errors in predicting his/her "Activist participation" score may be reduced by 4.5 percent, as compared to using the scale mean as an estimate or by chance alone. The overall results of this analysis do not necessarily support that the presence of dependent children diminishes engagement in other types of sustainable practices examined here.

Again, education is the only biographical factor that significantly correlates with two Practices variables. There is a linear relationship ( $r=-0.259$ ) between education and "Activist participation." On average, those respondents who have had

at least some university or college experience tend to have slightly higher scores on the "Activist participation" scale, as compared to those who do not have any university or college experience. As with "Activist views," it can be postulated that individuals with higher levels of education may have increased exposure to activist groups and their activities via the frequent presence of student movements on campus. Individuals who found affinity with such groups as students may be inclined to carry on activist involvement after leaving school. PRE logic suggests that with knowledge of whether an individual has post-secondary experience, errors in predicting their "Activist participation" score may be reduced by 6.7 percent, as compared to using the scale mean as an estimate or by chance alone.

There is also a linear relationship ( $r=-0.216$ ) between education and "More Demanding Recycling." On average, respondents who have had at least some university or college experience report engaging more often in recycling practices requiring more effort than those who do not have university or college experience. Again, it is possible that a higher level of education entails increased exposure to student cultures that condone practices such as composting or reusing bags or containers. As well, university life may foster awareness of the existence and feasibility of such habits—for example, Ithaca College has a dining-hall composting program (Ithaca College, 2004). The routinization of some of these behaviours may have been set during schooling and carried forward. PRE logic suggests that with knowledge of whether an individual has post-secondary experience, errors in predicting a "More Demanding Recycling" score may be reduced by 4.7 percent, as compared to using the scale mean as an estimate or by chance alone.

Overall, there is little evidence supporting relationships between the biographical factors included in this study and variables tapping Sustainable Practices (**H2**). Education correlates significantly with "Activist participation" and "More demanding recycling", indicating that higher levels of education may be associated with engaging more often in sustainable practices (**H2e**). Family responsibilities, tapped through the number of children at home, correlates with "Activist participation". This finding suggests individuals with family responsibilities are less likely to take on certain sustainable practices (**H2b**), particularly those that may involve higher costs or risks, such as participating in demonstrations.

Generally, for this sample, most of the biographical variables, including gender, marital status, age, flexible employment and household income, are not

significantly associated with selected Sustainable Practices, such as the degree of effort one puts in to acquiring more “ecological” food, activist participation, more demanding recycling, using greener transportation, and following a vegetarian diet. Nonetheless, with knowledge of a respondent’s highest level of education and the presence of dependent children at home, errors in predicting certain Sustainable Practices may be reduced.

In this part of the analysis, the Biographical Availability hypotheses **H2a** (gender), **H2c** (age), and **H2d** (flexible employment) remain largely uncorroborated. This lack of support may be due to the nature of the sample and its over-arching, green-leaning tendencies (i.e. skewness and diminished variability on the Practices measures). It also may be attributed to measurement issues, particularly the fact that the analysis considers indirect and single indicator measures of availability factors and not interactions between them, such as accrued availability that may stem from being more “available” on more than one of the factors. In the end, non-support for biographical availability can be spun positively: based on these results, individuals may not require large amounts of availability in terms of time, resources, and propensity, to take on more or stronger ecological views or to engage more often in sustainable practices. Of course, this supposition would need to be explored further before any confirmation can be made. In sum, based on these findings, standalone biographical factors as measured here are not strong or direct correlates of sustainable behaviour. However, at the same time, they do not seem to represent significant barriers to sustainable living insofar as strong, inverse relationships between biographical factors and Sustainable Practices are not manifested.

### **5.2.3. Ecological Views and Sustainable Practices**

Figure 5-5 presents a different arrangement for the correlation coefficients between Ecological Views, Sustainable Practices, and Spirituality. This correlation matrix is symmetrical, and statistics are included on the bottom half of the figure. As might be expected, most of the Views and Practices significantly correlate, both with themselves (i.e., Views with Views, Practices with Practices) and with each other (i.e., Practices with Views). However, “Importance of spirituality and spiritual practices” is significantly associated with only one Views variable (“Importance of local economy and fair trade”) and none of the Practices measures. The significant findings are grouped and discussed below.

**Figure 5-1: Correlation Matrix<sup>a</sup> for Ecological Views/Spirituality and Sustainable Practices (Calgary/Ithaca/Nelson, n=134<sup>b</sup>)**

		Ecological views				Sustainable practices				
		Importance of spiritual practices	Importance of local economy	Activist views	Importance of avoiding GM food	Ecological food	Activist participation	More demanding recycling	Greener transportation	Vegetarian diet
Ecological views	Importance of spiritual practices	<b>1</b>								
	Importance of local economy	<b>.208**</b>	<b>1</b>							
	Activist views	-0.009	<b>.522***</b>	<b>1</b>						
	Importance of avoiding GM food	0.113	<b>.376***</b>	<b>.212**</b>	<b>1</b>					
Sustainable practices	Ecological food	0.158	<b>.565***</b>	<b>.425***</b>	<b>.520***</b>	<b>1</b>				
	Activist participation	0.022	<b>.381***</b>	<b>.450***</b>	0.127	<b>.364***</b>	<b>1</b>			
	More demanding recycling	0.110	<b>.422***</b>	<b>.342***</b>	<b>.225***</b>	<b>.352***</b>	<b>.359***</b>	<b>1</b>		
	Greener transportation	0.119	<b>.215**</b>	<b>.188**</b>	0.089	0.016	<b>.337***</b>	0.169	<b>1</b>	
	Vegetarian diet (yes=1)	0.144	<b>.320***</b>	0.129	<b>.172**</b>	<b>.174**</b>	0.134	<b>.282***</b>	0.107	<b>1</b>

SOURCE: Calculated by the author using data from the Urban Nature/Sustainable Cities Survey, 2002-2003

NOTES: <sup>a</sup> Pearson correlation coefficients; \*\* $p \leq 0.05$ , \*\*\* $p \leq 0.01$ ; **bold** figures represent statistically significant findings; <sup>b</sup> ns range from 130 to 134 due to non-responses

**Spirituality:** As mentioned, "Importance of spiritual practices" correlates significantly ( $r=0.208$ ) with only one sustainability variable. Generally, higher scores on the Spirituality measure are associated with higher scores on the "Importance of local economy" scale, although why this may be the case is not immediately apparent. It may be possible that ideas or feelings fostered by spiritual practice (e.g., interconnectedness, fairness, compassion, etc.) may be carried over to views regarding sources of food and other products. By squaring the r-value, ( $r^2=0.043$ ), PRE (proportional reduction in error) logic suggests that with knowledge of an individual's score on "Importance of spiritual practices," errors in predicting scores on the "Importance of local economy" scale may be reduced by between 4.3 percent, as compared to using the scale mean as an estimate or by chance alone.

**Views with Views:** In the top left quadrant of Table 5-5 (excluding the Spirituality column), all three possible correlations within the Ecological Views variables are statistically significant. The r-values range from 0.212 to 0.522, indicating moderate to strong, positive, linear relationships between the Views measures. Generally speaking, higher scores on "Importance of local economy and fair trade" are associated with higher scores on "Activist views," and "Importance of

avoiding GM food.” From these figures, the Ecological Views measures in this study are significantly associated with the other Ecological Views measures. These results are expected, as the variables are supposed to tap different aspects of one major concept—Ecological Views. By squaring the r-values, ( $r^2$  ranges from 0.045 to 0.272), PRE logic suggests that with knowledge of a score on one significant Ecological Views variable, errors in predicting scores on other significant Views variables may be reduced by between 4.5 and 27.2 percent, as compared to using scale means as estimates or by chance alone.

Practices with Practices: In the lower right quadrant of Table 5-5, six out of ten possible correlations within the Sustainable Practices variables are statistically significant. The r-values range from 0.174 to 0.364, indicating moderate, positive, linear relationships between many of the Sustainable Practices variables. Generally speaking, higher scores on the “Ecological food” scale are likely to also have higher scores on “Activist participation” and “More demanding recycling,” and are also more likely to follow vegetarian diets. From these correlations, many of the Sustainable Practices variables in this study are associated with the other Practices variables. Again, these results are expected, as all of the variables are meant to correspond to different aspects of a single concept—Sustainable Practices. By squaring the r-values, ( $r^2$  ranges from 0.030 to 0.132), PRE logic suggests that with knowledge of a score on one significant Sustainable Practice variable, errors in predicting scores on other significant Sustainable Practices variables may be reduced by between 3.0 and 13.2 percent, as compared to using scale means as estimates or by chance alone.

Practices with Views: In the lower left quadrant of Table 5-5 (excluding the Spirituality column), 12 out of 15 possible correlations between variables tapping Sustainable Practices and Ecological Views are statistically significant. The correlations and range in value from 0.172 to 0.565, indicating moderate to strong, positive, linear relationships between these variables. Generally speaking, respondents who report higher scores on the Ecological View, “Importance of local economy” scale, are likely to also have higher scores on *all* of the Practices scales, and are more likely to follow vegetarian diets. Similarly, respondents with higher scores on “Activist views” are likely to also have higher scores on *all* of the Practices scales. “Importance of avoiding GM food” correlates with “Ecological food” and “Vegetarian diet,” which makes substantive sense, given the food and diet links. However, it is also associated with “More demanding recycling”. From these



statistics, Sustainable Practices are generally positively associated with Ecological Views. By squaring the r-values, ( $r^2$  ranges from 0.030 to 0.319), PRE (proportional reduction in error) logic suggests that with knowledge of a score on one significant Ecological Views or Sustainable Practices variable, errors in predicting scores on other significant Ecological Views or Sustainable Practices variables may be reduced by between 3.0 and 31.9 percent, as compared to using the scale means estimates or by chance alone.

Overall, the data support the hypothesis (**H3**) that holding more or stronger ecological views is associated with engaging more often in sustainable practices.

#### **5.2.4. Mindfulness**

In Table 5-5, zero-order correlations for biographical factors (including the Availability subset), Spirituality, Ecological Views and Sustainable Practices variables are presented for both of the dependent variables from the heuristic conceptual model, Mindfulness and Subjective Well-being. Interpretation and discussion of the results are split, with Mindfulness reviewed here, and Subjective well-being taken up in the next section. None of the Practices variables are significantly associated with mindfulness. Thus, overall, there is no bivariate support for the hypothesis that engaging in sustainable practices is positively associated with mindfulness (**H5**). Nonetheless, these relationships will be revisited in the multivariate analysis.

Two of the biographical factors, the Spirituality measure, and one of the Views variables are significantly correlated with Mindfulness. There is a linear relationship ( $r=-0.280$ ) between gender and mindfulness. That is, on average, the women in the sample tend to have higher Mindfulness scores, as compared to men. Thus, women may be more interested in, or inclined toward, mindfulness and its associated feelings. This finding is in line with the result regarding gender and spirituality. Mindfulness has clear spiritual foundations, and as such, those who are more spiritually-minded may be similarly predisposed to mindfulness. The direction of this relationship remains unspecified, however. Heightened awareness may be brought about by specific spiritual practices, such as yoga or meditation. Conversely, experiences of mindfulness may foster increased interest in and pursuit of other spiritual practices. PRE logic suggests that with knowledge of gender (male or female), errors in predicting Mindfulness score may be reduced by 7.8 percent, as compared to using the scale mean as an estimate or by chance alone.

Household income and mindfulness also show a moderate, inverse linear relationship ( $r=-0.327$ ). On average, as household income increases, Mindfulness scores tend to decrease. This indicates that generally, those with higher incomes are less likely to experience heightened awareness, acceptance, and similar feelings associated with mindfulness. This result is not surprising, as higher incomes are often brought about by occupations and activities that are competitive, forward-thinking and highly demanding of time and energy. Such practices tend to work in opposition to mindfulness, which cultivates awareness and serenity in the present moment. PRE logic suggests that with knowledge of household income, errors in predicting Mindfulness score may be reduced by 10.7 percent, as compared to using the scale mean as an estimate or by chance alone.

**Table 5-5: Correlates<sup>a</sup> of Mindfulness and Subjective Well-being (Calgary/Ithaca/Nelson,  $n=134^b$ )**

Dependent variables		Mindfulness	Subjective well-being
<b>Biographical variables</b>	Gender (male=1)	<b>-0.280 **</b>	<b>-0.206 **</b>
	# children at home	0.029	0.045
	Respondent age	0.015	-0.028
	Flexible employment (less flex=1)	-0.088	-0.069
	Marital status (partnered=1)	-0.060	0.161
	Education (no university or college=1)	0.144	0.062
	Household income (by category)	<b>-0.327 **</b>	-0.107
<b>Sustainable practices</b>	Ecological food	0.131	0.101
	Activist participation	-0.076	0.110
	More demanding recycling	0.156	<b>0.238 **</b>
	Greener transportation	0.031	-0.056
	Vegetarian diet (yes=1)	0.091	0.124
<b>Ecological views</b>	Importance of local economy	<b>0.213 **</b>	0.137
	Activist views	0.118	0.150
	Importance of avoiding GM food	-0.030	-0.050
	Importance of spiritual practices	<b>0.384 **</b>	0.095
	Mindfulness	---	<b>0.408 **</b>

*SOURCE: Calculated by the author using data from the Urban Nature/Sustainable Cities Survey, 2002-2003*

*NOTES: <sup>a</sup> Pearson correlation coefficients ( $r$ ); \*\* $p \leq 0.05$ ; bold figures represent statistically significant findings; <sup>b</sup>ns range from 117 to 132 because of non-responses*

There is a moderate, positive linear relationship ( $r=0.213$ ) between one ecological view, "Importance of local economy and fair trade" and mindfulness. On average, as scores on the "Importance of local economy" scale increase, Mindfulness scores also tend to increase. This indicates that those who report placing more importance on where and how their food and other products, like clothing or coffee, originate are likely to be inclined toward mindfulness. This association is interesting, as it suggests that there may be a link between mindfulness and worldviews that take into account concern about the environment, globalization, fair trade, and similar issues. In fact, it may also follow that being in the present moment fosters connections to place—particularly care and concern for community, the planet and its inhabitants. PRE logic suggests that with knowledge of an "Importance of local economy" score, errors in predicting Mindfulness scores may be reduced by 4.5 percent, as compared to using the scale mean as an estimate or by chance alone. Overall, there is modest support for the hypothesis (**H4**) that there is a positive correlation between holding more or stronger ecological views and mindfulness.

Finally, there is a moderate, positive linear relationship ( $r=0.384$ ) between spirituality and mindfulness. On average, as scores on the "Importance of spiritual practices" scale increase, Mindfulness scores also tend to increase. This indicates that generally, those who place more importance on spirituality and spiritual practices are likely to have more frequent mindfulness experiences. This finding is expected, as formal mindfulness practice stems from Buddhist meditative practice and has a strong spiritual dimension. However, in this case, the kind of mindfulness in question is a derived concept that is certainly more informal and eclectic than Buddhist mindfulness, yet it is perhaps comparable in its experience. What is also interesting is that when asked, most respondents (more than three-quarters) did not declare any formal religious affiliation. Moreover, there is no significant correlation between mindfulness and feeling part of a religious group or church, or between mindfulness and attending church or temple services. By squaring the  $r$ -value,  $r^2=0.147$ , PRE (proportional reduction in error) logic suggests that with knowledge of an "Importance of spiritual practices" score, errors in predicting an individual's Mindfulness score may be reduced by 14.7 percent, as compared to using the scale mean as an estimate or by chance alone. Overall, there is relatively strong bivariate support for the hypothesis (**H7**) that placing more importance on spirituality and spiritual practices is associated with increased mindfulness.

### 5.2.5. Subjective Well-being (SWB)

From Table 5-5 above, only three measures are significantly associated with subjective well-being. There is a linear relationship ( $r=-0.206$ ) between gender and SWB scale scores. On average, women in the sample tend to have higher SWB scores, as compared to men, meaning that the women are reporting more positive outlooks on their lives. This finding is not generally supported by large-scale quality of life studies, which suggest there is little difference in global happiness or satisfaction between women and men (e.g. Diener et al., 1999; Diener, 1984; Andrews and Withey, 1976). With a relatively small sample size ( $n=134$ ), the focus on only global satisfaction (i.e. no domains such as family, work, health, etc.), and the fact that this is not exclusively a happiness study, it is difficult to speculate much further on this result. By squaring the  $r$ -value,  $r^2=0.042$ , PRE logic suggests that with knowledge of gender (male or female), errors in predicting SWB scores may be reduced by 4.2 percent, as compared to using the scale mean as an estimate or by chance alone.

There is also a moderate, positive linear relationship ( $r=0.238$ ) between "More demanding recycling" and SWB, indicating that on average, respondents scoring higher on the SWB scale are also more likely to have higher scores on the "More demanding recycling" scale. While the numbers reflect this relationship, an explanation for why this may be the case is lacking, other than to say that perhaps engaging in more demanding practices contributes to a greater sense of satisfaction for respondents. However, why this particular Sustainable Practice is statistically significant for this sample, while other Practices are not, is an interesting question. PRE logic suggests that with knowledge of individual's "More Demanding Recycling" scale score, errors in predicting their SWB score may be reduced by 5.7 percent, as compared to using the scale mean as an estimate or by chance alone. Overall, there is little bivariate support for the hypothesis that engaging in sustainable practices is positively associated with SWB (**H6**); however, these relationships are considered further in the multivariate analyses.

Finally, the zero-order correlation between Mindfulness and SWB is  $r=0.408$ , indicating a rather strong, positive, linear relationship between these two variables. On average, those with higher scores on the Mindfulness scale will also tend to have higher scores on the SWB scale. This is an important finding, as it suggests that those individuals who report more frequent mindfulness experiences (as measured

by their Mindfulness scale scores) are likely to also feel more satisfaction with their lives, insofar as they provide generally positive evaluations. PRE logic suggests that with knowledge of the Mindfulness scale score, errors in predicting SWB scores may be reduced by 16.6 percent, as compared to using the scale mean as an estimate or by chance alone.

Interestingly, the Spirituality measure is not significantly associated with the SWB scale, even though it correlates with mindfulness. Mindfulness, with heightened awareness and the present moment at its core, is generally at odds with the future-looking, acquisition-driven consumer society. Moreover, other research has suggested that greater satisfaction and happiness are similarly oriented away from underpinning consumer-materialist values (e.g. Kasser, 2002; Sirgy, 1998). Prospects for future sustainability potentially may hinge on this triangle of mindfulness, well-being, and consumption/materialism. Thus, critical questions are raised about the nature of these relationships—specifically, whether mindfulness may cultivate greater SWB, or whether mindfulness can possibly be viewed as a subsidiary form of SWB. In any case, there is considerable bivariate support for the hypothesis that mindfulness is positively associated with SWB (**H8**). These relationships are also revisited in the multivariate analyses.

### **5.2.6 Review of Bivariate Findings**

In this part of the analysis, zero-order correlations have provided some insight regarding the nature of the relationships between these variables. Specifically, the Biographical hypotheses **H1** (Views) and **H2** (Practices), that individual biographical features are differentially associated with involvement in the sustainability movement, remain weakly supported in this analysis. However, the data strongly support **H3**, that holding more or stronger ecological views is associated with engaging more often in sustainable practices. As well, **H4**, that there is a positive correlation between holding ecological views and mindfulness, receives modest support. The associations entailed in hypotheses **H5** (sustainable practices and mindfulness) and **H6** (sustainable practices and SWB) received scant bivariate support, although as expected, there is a fairly strong relationship between mindfulness and spirituality (**H7**). Finally, there is a relatively strong correlation between mindfulness and subjective well-being (**H8**). These relationships, H5 through H8, are explored further using multivariate techniques in the next section.

### **5.3 - MULTIVARIATE ANALYSIS**

This analysis uses regression to further probe some of the findings from section 5.2 above, specifically H5 through H8. Ordinary Least Squares (OLS) regression is applied to investigate two sets of relationships between the major concepts. "Multiple regression analysis allows us to use two or more interval-level or ratio-level variables simultaneously as predictors of an interval-level dependent variable" (Elifson et al., 1998: 248). Multiple regression assesses each independent variable in terms of its unique contribution to explaining variance in the dependent variable. Regression requires a large number of cases to be effective, and it is used typically to test causal hypotheses and also to make predictions for the dependent variable. However, the technique is being applied here primarily as a means of investigating potential relationships between variables. Because the sample is non-random and relatively small (n=134), there are no generalizations to a population. Instead, the objective of this analysis is to explore hypotheses regarding how sustainable practices, ecological views, mindfulness and well-being may connect.

In line with assumptions underpinning OLS regression, the relationships between variables are assumed to be linear in nature. All of the variables are measured at the interval-ratio level or modified appropriately (i.e., dummy coded or scaled). As well, all of the available, theoretically relevant variables are included in the heuristic conceptual model and the analysis. Sample sizes for the regressions range from n=105 to n=126. These are small, but still adequate as long as the number of independent variables is not too large. The regression sample sizes are lower than the full sample of n=134, as some cases or measures may have missing values due to non-response: "By default, SPSS excludes all cases that have missing values for any of the variables in the regression. ... This is known as a listwise deletion" (Norusis, 2000: 460). Finally, the distributions of Mindfulness and Subjective Well-being both approximate normal distributions.

For this work, there are two series of regressions calculated, one for each of the two dependent variables—Mindfulness and Subjective Well-being. With the small sample size and also to preserve degrees of freedom, regressions of the dependent variables on the Biographical factors were run separately first, and then followed up with two expanded models that include sets of other independent variables, tapping, as appropriate, Spirituality, Ecological Views, and Sustainable Practices. These sets of independent variables are specified below.

### 5.3.1. Mindfulness Regressions

Mindfulness is first regressed on the biographical variables to explore if these standard demographic factors may account for some of the variation in Mindfulness scores. Following that, the statistically significant biographical factors are combined with measures of Sustainable Practices, and the Spirituality measure. The sets of independent variables used in these regressions appear in Table 5-6 below.

**Table 5-6: Sets of Independent Variables for Mindfulness Regressions**

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**Dependent Variable: Mindfulness**

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<b>Equation 1:</b>	Biographical variables: <ul style="list-style-type: none"> <li>▪ Gender (male=1)</li> <li>▪ Age (in years)</li> <li>▪ Number of children at home</li> <li>▪ Flexible employment (less flexible=1)</li> <li>▪ Marital status (partnered=1)</li> <li>▪ Household income (by category)</li> <li>▪ Education (no college or university=1)</li> </ul>
<b>Equation 2:</b>	Significant biographical variables: <ul style="list-style-type: none"> <li>▪ Gender (male=1)</li> <li>▪ Household income (by category)</li> </ul> Sustainable practices variables: <ul style="list-style-type: none"> <li>▪ Ecological food</li> <li>▪ Activist participation</li> <li>▪ More demanding recycling</li> <li>▪ Greener transportation</li> <li>▪ Vegetarian diet (yes=1)</li> </ul>
<b>Equation 3:</b>	Significant biographical variables: <ul style="list-style-type: none"> <li>▪ Gender (male=1)</li> <li>▪ Household income (by category)</li> </ul> Sustainable practices variables: <ul style="list-style-type: none"> <li>▪ Ecological food</li> <li>▪ Activist participation</li> <li>▪ More demanding recycling</li> <li>▪ Greener transportation</li> <li>▪ Vegetarian diet (yes=1)</li> </ul> Spirituality variable <ul style="list-style-type: none"> <li>▪ Importance of spirituality and spiritual practices</li> </ul>

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The results for the first Mindfulness regression (Equation 1) are presented in Table 5-7 below. This equation includes only the biographical variables and accounts for 15.3 percent of the total variation in respondents' Mindfulness scores. The

magnitude of this number is relatively large, given that there are only two of seven statistically significant ( $p \leq 0.05$  level) regression coefficients: gender and household income. The figure may actually be artificially inflated due to the relatively small number of cases. Nonetheless, these biographical factors are relevant to this study, and the significant findings and their interpretations are briefly discussed here.

**Table 5-7: OLS Regression Coefficients for a Model Testing the Effects of Biographical Factors on Mindfulness Scores (Calgary/Ithaca/Nelson, n=134)**

Independent variables	Equation 1 (biographical)	
	<i>b</i>	<i>Beta</i>
<u>Biographical variables</u>		
<sup>BA</sup> Gender (male=1)	-1.043 **	-0.188
<sup>BA</sup> Number of children at home	0.274	0.105
<sup>BA</sup> Age (in years)	0.009	0.038
<sup>BA</sup> Flexible employment (less flexible =1)	-0.111	-0.019
Marital status (partnered=1)	-0.008	-0.001
Education (no university or college=1)	0.497	0.071
Household income (by category)	-0.293 **	-0.269
Constant	14.509	
R <sup>2</sup>	0.153 **	
Valid n (listwise)	107	

**DEPENDENT VARIABLE: MINDFULNESS SCORE**

SOURCE: Calculated by the author using data from the Urban Nature/Sustainable Cities Survey, 2002-2003

NOTES: \*\* $p \leq 0.05$ ; <sup>BA</sup>: Biographical Availability subset; R<sup>2</sup> = coefficient of multiple determination

Unstandardized regression coefficients (*b*) may be used to assess the direction and magnitude of the effect of each independent variable on the dependent variable in units that have concrete meaning, such as scale points. For males, the average Mindfulness score is expected to be 1.043 points *less* as compared to females, and controlling for the other biographical variables. The Mindfulness scale has a theoretical range of scores from 4 to 20, and thus a one-point difference is noteworthy. This finding supports the bivariate result that women tend to have more frequent mindfulness experiences, as compared to men. Turning to household income, for each category increase in income (i.e., \$10,000 increments), the average Mindfulness score is expected to decrease by 0.293 points—a relatively small decrease on its own. Nonetheless, there may be upwards of a three-point difference between respondents with very low incomes (i.e., less than \$10,000/year)



and very high incomes (i.e., greater than \$100,000/year), and this differential is more striking. This result also supports the bivariate analysis, indicating that those with higher incomes may be less likely to experience mindfulness.

A relative evaluation of the effects of each independent variable may be conducted by comparing the magnitudes of the standardized regression coefficients (*Betas* from Table 5-7): the larger the coefficient, the greater the relative effect. The biographical variable having the greatest independent effect on mindfulness is household income (Beta=-0.269 standard deviations, as contrasted to the second-largest effect of gender, Beta=-0.188). The *Betas* are calculated in standard deviation units (the amount a set of values differs from the mean), and their usefulness is largely comparative. This statistic lacks tangible, standalone meaning, other than to say that as an individual's household income increases by one standard deviation, the average mindfulness score is expected to decrease by 0.269 standard deviations, controlling for all of the other variables in the analysis.

The two statistically significant variables are important; however, also of interest is the fact that five of the regression coefficients for the biographical factors, Marital status, Number of children at home, Age, Flexible employment, and Education, are *not* statistically significant. This result suggests that these demographic factors may not adversely influence the propensity to experience mindfulness, thus potentially leaving it accessible to a wide range of individuals. Of course, a more detailed study of correlates of mindfulness would be required before such generalizations could be made.

The results for the second Mindfulness regression (Equations 2 and 3) appear in Table 5-8 below. In Equation 2, only the two significant Biographical variables (gender and household income) are carried over and five Sustainable Practices variables are included. In Chapter 2, it was proposed that individuals engaging in Sustainable Practices might be more likely to experience mindfulness, as their actions entail greater consciousness and attention to situation, choices, and behaviour (**H5**). This is followed by a third equation that includes "Importance of spirituality and spiritual practices," which acknowledges the spiritual basis of mindfulness and attempts to account for its effect. It was hypothesized that individuals who place a greater degree of importance on spirituality and spiritual practices (i.e., are more spiritually-minded) may be more inclined toward mindfulness (**H7**).

**Table 5-8: OLS Regression Coefficients for Models Testing the Effects of Sustainable Practices and Spirituality on Mindfulness Scores (Calgary/Ithaca/Nelson, n=134)**

Independent variables	Equation 2 (practices)		Equation 3 (spirituality)	
	<i>b</i>	<i>Beta</i>	<i>b</i>	<i>Beta</i>
<u>Significant biographical factors</u>				
Gender (male=1)	-1.077 **	-0.186	-0.689	-0.119
Household income (by category)	-0.338 ***	-0.304	-0.333 ***	-0.294
<u>Sustainable Practices</u>				
Ecological food	0.178 *	0.177	0.124	0.123
Activist participation	-0.227 ***	-0.262	-0.202 **	-0.233
More demanding recycling	0.158 *	0.172	0.164 **	0.178
Greener transportation	0.013	0.013	-0.026	0.026
Vegetarian diet (yes=1)	0.602	0.102	0.365	0.062
<u>Importance of spirituality and spiritual practices</u>				
	-	-	0.213 ***	0.299
Constant	13.889 ***		11.828 ***	
R <sup>2</sup>	0.242 ***		0.318 ***	
R <sup>2</sup> change	0.095 <sup>a</sup>		0.077 ***	
Valid n (listwise)	119		119	

**DEPENDENT VARIABLE: MINDFULNESS SCORE**

*SOURCE: Calculated by the author using data from the Urban Nature/Sustainable Cities Survey, 2002-2003*

*NOTES: \*p≤0.10 \*\*p≤0.05 \*\*\*p≤0.01; R<sup>2</sup> = coefficient of multiple determination*

<sup>a</sup> Reflects a slightly reduced R<sup>2</sup> value for only the significant biographical factors (gender and household income)

In Equation 2, gender, household income, and the five Sustainable Practices variables account for 24.2 percent of the total variation in Mindfulness scale scores. This represents a 9.5 percent improvement in the predicting capacity of the model, as compared to using the significant biographical factors alone. Inclusion of "Importance of spiritual practices" in Equation 3 results in a significant R<sup>2</sup> change of 0.077, and 31.8 percent of the total variation is being explained.

However, the inclusion of the spirituality measure produces changes in significance levels for other variables. Firstly, gender, which was statistically significant in Equations 1 and 2 is no longer so in Equation 3. This finding suggests that the significant effects established for gender in the first two equations are likely accounted for by the spirituality measure. In this case, bivariate findings suggested that women in the sample tended to view spiritual practices as more important to them than men. Similarly, "Ecological food" was significant in Equation 2 but is no

longer so in Equation 3. A sound theoretical explanation for why this variable loses significance is not immediately apparent. It is possible that some of the views underpinning spiritual practices may also be tied to how an individual chooses his/her food and dietary practices. For example, seeking more ecological food may involve a greater degree of consciousness and reflection on the relationships between one's body and the complex operations and issues related to food production and consumption in modern society.

As Equation 3 represents the "full" model for this regression, its significant findings are followed up in detail here. Four of the eight regression coefficients are statistically significant: Household income, Activist participation, More demanding recycling, and Importance of spiritual practices. For each category increase in income (i.e. \$10,000 increment), the average Mindfulness score is expected to decrease by 0.333 points, controlling for all of the other variables. This is a small, but consistent effect. This finding supports the first regression model, as well as the bivariate result, demonstrating that even with the addition of Sustainable Practices and Spirituality, income is still inversely associated with mindfulness.

For each scale point increase on the "Activist participation" scale, the average Mindfulness score is expected to decrease by 0.202 points, controlling for all of the other variables in the model. This is an interesting finding that connects increased activist participation with decreased mindfulness. Given that the Mindfulness measure includes the item "accepting things as they are," it is not surprising that those involved with groups working toward social change may be less inclined to put up with the status quo. Similarly, while involvement in activism in theory might involve a greater awareness of a variety of issues, such activity may also increase the frequency of other feelings, such as impatience, frustration, stress, or fear, that may not be conducive to mindfulness states.

Turning to the recycling indicator, for each scale point increase on the "More demanding recycling" scale, the average Mindfulness score is expected to increase by 0.164 points, controlling for all of the other variables in the model. This is a very small effect, however, its potential impact is interesting. Respondents who devote time and resources to pro-environmental practices may have more frequent mindfulness experiences. Participating in such activities could potentially involve a greater degree of consciousness and reflection on the relationships between one's personal actions, their effects, and the state of the planet.

Once again, there is consistent support for the relationship between mindfulness and spiritual practice. In this case, "Importance of spiritual practices" emerges as a predictor of mindfulness. For each scale point increase on the "Importance of spiritual practices" scale, the average Mindfulness score is expected to increase by 0.213 points, controlling for all of the other variables in the model. Those individuals who value spirituality may have a greater propensity toward mindfulness, either as a part of their spiritual practice or as a result of such practices (e.g. meditation or yoga). Thus, it is not unanticipated that "Importance of spiritual practices" has the greatest effect on Mindfulness scores (Beta=0.299), edging out income (Beta=-0.294) and activist participation (Beta=-0.233).

In sum, the findings from this analysis partially support **H5**, that individuals engaging more often in sustainable practices are more likely to experience mindfulness. The data also support **H7**, that individuals who view spirituality and spiritual practices as more important are also more likely to experience mindfulness.

### 5.3.2. Subjective Well-being Regressions

Subjective well-being (SWB) is regressed on the seven Biographical factors to explore how these demographic variables may account for some of the variation in respondents' SWB scores. As with the Mindfulness regressions, the significant biographical factors are then combined with the Sustainable Practices variables and Spirituality measure, followed by the inclusion of the Mindfulness measure. Table 5-9 presents the sets of independent variables used in the Subjective Well-being regressions.

**Table 5-9: Sets of Independent Variables for Subjective Well-being Regressions**

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**Dependent Variable: Subjective Well-being**

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<b>Equation 1:</b>	Biographical variables: <ul style="list-style-type: none"> <li>• Gender (male=1)</li> <li>• Age (in years)</li> <li>• Number of Children at Home</li> <li>• Flexible Employment (less flexible=1)</li> <li>• Marital Status (partnered=1)</li> <li>• Household Income</li> <li>• Education (no college or university=1)</li> </ul>
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*Table 5-9: Sets of Independent Variables for SWB Regressions (continued)...*

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<b>Equation 2:</b>	<p>Significant biographical variables:</p> <ul style="list-style-type: none"> <li>▪ Gender (male=1)</li> <li>▪ Marital Status (partnered=1)</li> </ul> <p>Sustainable practices variables:</p> <ul style="list-style-type: none"> <li>▪ Ecological Food</li> <li>▪ Activist Participation</li> <li>▪ More Demanding Recycling</li> <li>▪ Greener Transportation</li> <li>▪ Vegetarian Diet (yes=1)</li> </ul> <p>Spirituality variable:</p> <ul style="list-style-type: none"> <li>▪ Importance of spirituality and spiritual practices</li> </ul>
<b>Equation 3:</b>	<p>Significant biographical variables:</p> <ul style="list-style-type: none"> <li>▪ Gender (male=1)</li> <li>▪ Marital Status (partnered=1)</li> </ul> <p>Sustainable practices variables:</p> <ul style="list-style-type: none"> <li>▪ Ecological Food</li> <li>▪ Activist Participation</li> <li>▪ More Demanding Recycling</li> <li>▪ Greener Transportation</li> <li>▪ Vegetarian Diet (yes=1)</li> </ul> <p>Spirituality variable:</p> <ul style="list-style-type: none"> <li>▪ Importance of spirituality and spiritual practices</li> </ul> <p>Mindfulness</p>

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The results for the first SWB regression (Equation 1) are summarized in Table 5-10 below. The  $R^2$  value ( $R^2=0.128$ ) indicates that 12.8 percent of the total variation in SWB scale scores is accounted for by the seven biographical variables in the model. More than 85 percent of the total variation remains unexplained. However, the magnitude of the  $R^2$  value is again sizeable, given that only two of the seven regression coefficients, or slopes, are statistically significant: gender and marital status. These significant findings are considered here.

Considering the statistically significant unstandardized regression coefficients (b), for males, the average SWB score is expected to be 3.62 points less, as compared to females, and controlling for all of the other individual-level biographical variables. Women in the sample are reporting higher ratings of subjective well-being. This represents a remarkable almost four-point differential on a scale for which scores may range from 7 to 56. While this finding supports the bivariate result, gender is typically not considered a significant factor in larger scale well-being studies. With a small sample size, it is possible that female respondents were more positive by chance; however, the difference is nonetheless quite interesting. There are the associations between mindfulness and well-being, as well as between gender,

spirituality and mindfulness. Thus, it is possible that women in the sample are more inclined toward mindfulness and spirituality than men, and may be reaping positive benefits from the mindfulness/well-being connection.

**Table 5-10: OLS Regression Coefficients for a Model Testing the Effects of Biographical Factors on Subjective Well-being Scores (Calgary/Ithaca/Nelson, n=134)**

Independent variables	Equation 1 (biographical)	
	<i>b</i>	<i>Beta</i>
<u>Biographical variables</u>		
<sup>BA</sup> Gender (male=1)	-3.619 **	-0.254
<sup>BA</sup> Number of Children at Home	0.341	0.051
<sup>BA</sup> Age (in years)	-0.052	-0.081
<sup>BA</sup> Flexible Employment (less flexible =1)	-1.401	-0.092
Marital Status (partnered=1)	3.801 **	0.264
Education (no university or college=1)	0.253	0.014
Household Income	-0.355	-0.127
Constant	49.405	
R <sup>2</sup>	0.128 **	
Valid n (listwise)	105	

**DEPENDENT VARIABLE: SUBJECTIVE WELL-BEING SCORE**

SOURCE: Calculated by the author using data from the Urban Nature/Sustainable Cities Survey, 2002-2003

NOTES: \*\* $p \leq 0.05$ ; <sup>BA</sup>: Biographical Availability subset; R<sup>2</sup> = coefficient of multiple determination

For individuals who are partnered (married or cohabiting), the average SWB score is expected to be 3.801 points *more*, as compared to single individuals and controlling for all of the other biographical variables. Marital status is also the biographical variable having the strongest effect on SWB score, with a Beta-value of 0.264. While marital status has little bearing in the face of the primary variables of interest relating to sustainability and mindfulness, this is a substantial result. That partnered respondents tend to be more satisfied with their lives confirms findings in other SWB and happiness research (e.g. Diener, 1984; Andrews and Withey, 1976).

It is interesting to note that, while not statistically significant, the coefficient for household income ( $b = -0.355$ ) has a negative effect on SWB score, indicating potential support for the inverse relationship between material wealth and happiness. As with the Mindfulness calculations, once again, five of the biographical factors, Number of children at home, Age, Flexible employment, Education, and Household income, are *not* statistically significant. This finding is in line with other well-being

research, suggesting that social factors often have only small effects on experiences of happiness and satisfaction. Some research camps advocate a threshold approach, whereby individuals have a set predisposition in terms of their “amount” of happiness. While there may be transient fluctuations corresponding to life events, individuals will return to their set point. However, other research has been suggesting that this threshold is, in fact, changeable: “The emotion set point can shift, given the proper training” (Goleman, 2003: 2). What is more striking here is the connection of this shift to mindfulness: “In mindfulness, people learn to monitor their moods and thoughts and drop those that might spin them toward distress” (Goleman, 2003: 2). Thus, the lack of a significant relationship between many social factors and SWB, coupled with a promising link between SWB and mindfulness, suggests that a more positive outlook on life may be accessible for the average individual, regardless of his or her social position or circumstances.

The results for the second SWB regressions (Equations 2 and 3) appear in Table 5-11. Equation 2 entails the addition of the five Sustainable Practices variables and the Spirituality measure to the two significant biographical variables from Equation 1 (gender and marital status). In Chapter 2, it was proposed that individuals who engage in Sustainable Practices may potentially have a greater sense of satisfaction in terms of their activity and choices, and this may be manifested in increased SWB (**H6**). It was also hypothesized that individuals who experience mindfulness more often will report higher ratings of SWB (**H8**). Equation 3 includes mindfulness and will test this relationship. However, it is also anticipated that Sustainable Practices might influence mindfulness experiences. It is expected that the effect of Sustainable Practices may be diminished with the addition of Mindfulness to the equation (**H6a**).

In Equation 2, Gender, Marital status, and the Sustainable Practices and Spirituality measures account for 14.1 percent of the total variation in SWB scale scores. The addition of Mindfulness in Equation 3 results in a statistically significant  $R^2$  change of 0.140. This accounts for a remarkable increase, virtually doubling the predicting capacity of the model to 28.1 percent of the variation in SWB scores. However, including Mindfulness also produces changes in significance levels for a few of the variables. Gender, which was significant in Equations 1 and 2, drops in significance level for Equation 3, indicating that part of the effect established for gender in the first two calculations is likely a result of mindfulness.

It was anticipated that the effect of Sustainable Practices might diminish between Equations 2 and 3, with the inclusion of Mindfulness. However, the results are inconsistent. "More demanding recycling" loses significance in Equation 3. An explanation for this effect is not immediately apparent, other than to say that perhaps it is also enveloped in part by Mindfulness—engaging in recycling practices that require more effort involves some degree of reflection on the relationships between one's actions and the Earth. Conversely, "Activist participation" becomes significant in Equation 3. It is possible that those who strive for change via work with activist groups may gain a sense of satisfaction from their endeavours. These inconclusive results may be due in part to the fact that a few of the Practices variables were found to be significant factors in the Mindfulness regressions, and thus may be distorted when they interact with SWB. Equation 3 represents the "full" model for this analysis, and its statistically significant findings are discussed below.

**Table 5-11: OLS Regression Coefficients for Models Testing the Effects of Sustainable Practices, Mindfulness & Spirituality on Subjective Well-being Scores (Calgary/Ithaca/Nelson, n=134)**

Independent variables	Equation 2 (practices)		Equation 3 (mindfulness)	
	<i>b</i>	<i>Beta</i>	<i>b</i>	<i>Beta</i>
<u>Significant controls</u>				
Gender (male=1)	-0.306 **	-0.222	-2.002 *	-0.145
Marital Status (partnered=1)	2.509 **	0.181	2.597 **	0.187
<u>Sustainable Practices</u>				
Ecological Food	0.020	0.008	-0.147	-0.060
Activist Participation	0.188	0.091	0.386 *	0.188
More Demanding Recycling	0.381 *	0.166	0.275	0.120
Greener Transportation	-0.214	-0.089	-0.277	-0.115
Vegetarian Diet (yes=1)	0.569	0.04	0.558	0.040
<u>Importance of Spirituality</u>	0.112	0.065	-0.107	-0.062
<u>Mindfulness</u>	-	-	0.997 ***	0.424
Constant	39.062 ***		29.013 ***	
R <sup>2</sup>	0.141 **		0.281 ***	
R <sup>2</sup> change	0.055 <sup>a</sup>		0.140 ***	
Valid n (listwise)	126			

**DEPENDENT VARIABLE: SUBJECTIVE WELL-BEING SCORE**

SOURCE: Calculated by the author using data from the Urban Nature/Sustainable Cities Survey, 2002-2003

NOTES: \* $p \leq 0.10$  \*\* $p \leq 0.05$  \*\*\* $p \leq 0.01$ ; R<sup>2</sup> = coefficient of multiple determination

<sup>a</sup> Reflects a reduced R<sup>2</sup> value for only the significant biographical factors (gender and marital status)



Four of the nine coefficients are significant: Gender, Marital status, Activist participation, and Mindfulness. As mentioned, the coefficient for gender drops in significance level between Equations 2 and 3. The average SWB score for males is expected to be 2.00 points *less* than that for females, controlling for all of the other variables. Thus, women in the sample are reporting slightly higher SWB ratings, even with the addition of Mindfulness. Marital status retains its significance throughout the calculations. In this case, for individuals who are partnered (married or cohabiting), the average SWB score is expected to be 2.60 points *more*, as compared to single individuals and controlling for all of the other variables. These are reasonable effects for a scale that ranges from 8 to 56.

Only one out of the five Sustainable Practices variables has a significant regression coefficient. For each scale point increase on the "Activist participation" scale, the average SWB score is expected to increase by 0.386 points, controlling all of the other variables in the analysis. Thus, on average, respondents who report greater involvement in activist groups also report higher SWB scores, although the effect is small. This finding connects increased activist participation with slightly increased SWB, suggesting that individuals working toward social changes may derive additional benefit in terms of satisfaction. Interestingly, it appears that the negative impact of "Activist participation" on Mindfulness is not being reflected in SWB reports. While activism may foster feelings not conducive to mindfulness, such as impatience or frustration, these are not carrying over to well-being.

Finally, not only is Mindfulness statistically significant, it also has the greatest effect on SWB scores by far (Beta=0.424), compared to the other variables in Equation 3. In fact, the effects of the next closest variables, Activist participation (Beta=0.188) and Marital status (Beta=0.187) are noticeably lower. For each point increase on the Mindfulness scale, there is a comparable increase (0.997 points) expected on the SWB scale, controlling for all of the other variables. Thus, individuals having more frequent mindfulness experiences are more likely to also have a greater sense of SWB. This is a remarkable finding, indicating that there is a nearly point-for-point match between Mindfulness and SWB, although the scale ranges (4-20 for Mindfulness and 8-56 for SWB) temper this slightly. Nonetheless, mindfulness experiences may be viewed as highly beneficial, potentially increasing one's subjective experience of quality of life. This is a particularly important result, indicating that mindfulness, while not synonymous, is closely linked to positive SWB.

In sum, there is little support in this analysis for **H6**, that respondents engaging in sustainable practices are more likely to have a positive sense of SWB. Moreover, when Mindfulness is added to the equation, there is no clear evidence of diminished effects for Sustainable Practices. Thus, the findings with respect to **H6a** are inconclusive. However, the data strongly support **H8**, that respondents who experience mindfulness are likely to have higher subjective well-being, as evidenced by more positive evaluations of their lives.

### **5.3.3 Review of Multivariate Findings**

In this analysis, insight is provided with respect to the nature of some of the relationships between the variables. Specifically, there is only partial support for the hypothesis that individuals engaging more often in sustainable practices are more likely to experience mindfulness (**H5**). However, the data indicate that individuals who view spiritual practices as more important are also more likely to experience mindfulness (**H7**). Regarding the SWB hypotheses, the analysis presents little support for an association between sustainable practices and subjective well-being (**H6**), and evidence for diminished effects of sustainable practices when mindfulness is added is inconclusive (**H6a**). Nonetheless, the relationship between mindfulness and subjective well-being is borne out in the work (**H8**). There is fairly strong support for the hypothesis linking mindfulness practice to positive SWB.

## **5.4 SUMMARY**

The analyses in this chapter have developed a picture of how biographical factors, mindfulness, and well-being might fit together in the context of sustainability. Results demonstrate that only a few biographical characteristics (i.e., gender, education, and family responsibilities) are influential variables with respect to ecological views and sustainable practices. Similarly, in considering Mindfulness and SWB, some biographical factors (gender, income and marital status), while significant, are not central characteristics. Spirituality is an important variable when considering mindfulness. More importantly, mindfulness emerges as a key factor for positive subjective well-being. The next chapter takes into account the findings from Chapters 4 and 5, and revisits the guiding questions from Chapter 1. Additional questions generated by these results, as well as suggestions for future research in the areas of sustainability, mindfulness, and well-being, are also discussed.

## **CHAPTER 6 - CONCLUSIONS AND DISCUSSION**

The research and findings in the previous chapters have helped to shape a story of sustainable living endeavours in three North American communities. This final chapter brings together the many elements of this complex story by reflecting on the main results as they pertain to the study objectives. The first section revisits the heuristic model and hypotheses in a more general sense, presenting the findings in summary form, and then discussing them with respect to the three principal questions guiding the study. From issues and questions raised in this work, suggestions for future research on the intersections of sustainability, mindfulness and well-being are presented. Finally, a closing section provides speculation on longer-term sustainability prospects in light of this thesis.

### **6.1 REVISITING THE GUIDING QUESTIONS**

A broad theoretical framing and systematic research design have helped to set the foundations for a story of lighter footprints and living a “good” life. Sustainability and simplicity together form a context for individuals who are not only starting to critically question their experiences and place in the world, but also to seek changes in the parameters of a consumer society that embodies many detrimental views and habits for people, communities, and ecosystems. In the end, transforming the consumer society and halting destructive patterns of behaviour may begin with the individual.

Results from this work have revealed important connections between internal states, such as views, and outward performance in the form of more sustainable practices. Findings indicate that individual-level biographical factors may not represent significant obstacles or constraints for those who wish to begin processes of questioning and changing behaviour. Interestingly, it appears that mindfulness can further channel these processes by providing tools and resources from which individuals may draw greater resolve and understanding in their quests. Finally, a strong relationship between mindfulness and well-being suggests that there may be an array of benefits accessible to those willing to adjust their habits and lifestyles in more ecologically sustainable directions.

In Chapter 2, a heuristic conceptual model was outlined, and a series of hypotheses was derived from it. Table 6-1 below briefly revisits these hypotheses in light of the findings in Chapters 4 (descriptive) and 5 (bivariate and multivariate).

**Table 6-1: Summary of Findings for Hypotheses stemming from the Heuristic Conceptual Model**

<b>Hypothesis</b>	<b>Analytic technique(s)</b>	<b>Findings</b>
<b>H1:</b> Biographical Factors and more or stronger Ecological Views	Univariate Bivariate Multivariate	Supported by profile data Little support (3/28 correlations*) n/a
<b>H2:</b> Biographical Factors and more frequent engagement in Sustainable Practices	Univariate Bivariate Multivariate	Supported by profile data Very little support (3/35 correlations*) n/a
<b>H3:</b> More or stronger Ecological Views and more frequent engagement in Sustainable Practices	Univariate Bivariate Multivariate	Supported by descriptive data Strong support (12/15 correlations*) n/a
<b>H4:</b> More or stronger Ecological Views and increased Mindfulness	Univariate Bivariate Multivariate	Supported by descriptive data Partial support (1/3 correlations*) n/a
<b>H5:</b> More frequent engagement in Sustainable Practices and increased Mindfulness	Univariate Bivariate Multivariate	Supported by descriptive data No support (0/5 correlations*) Partial support (2/5 regression slopes*)
<b>H6:</b> More frequent engagement in Sustainable Practices and positive Subjective Well-being	Univariate Bivariate Multivariate	Supported by descriptive data Little support (1/5 correlations*) Little support (1/5 regression slopes*)
<b>H7:</b> More importance placed on Spirituality and Spiritual Practices and increased Mindfulness	Univariate Bivariate Multivariate	Supported by descriptive data Strong support (1/1 correlation*) Strong support (1/1 regression slope*)
<b>H8:</b> Increased Mindfulness and positive Subjective Well-being	Univariate Bivariate Multivariate	Supported by descriptive data Strong support (1/1 correlation) Strong support (1/1 regression slope*)

*NOTES: \*statistically-significant; n/a=not considered in the analysis*

This thesis began with three guiding questions addressing biography, values, behaviour and well-being in the context of sustainability. These questions are revisited here with reference to the study findings, heuristic conceptual model and hypotheses, and the loose-knit theoretical framework.

### **6.1.1 Biography, Barriers, and Behaviour**

Firstly, a question was posed regarding the influence of individual biographical features on the propensity to take on more pro-environmental practices and choices in daily life, in spite of convenience, cost, and other daunting factors. This query was largely underpinned by academic literature on social movements, in particular, the biographical availability framework—that certain personal characteristics will allow individuals to be differentially “available” to participate in social movements. Specifically, gender, family responsibilities (i.e., the presence of dependent children), age, and having flexible employment situations were hypothesized to be important factors in influencing participation in the sustainability movement. From the descriptive data in Chapter 4, the sample appears to fit the biographical availability profile rather well. Moreover, the group also conforms to descriptive accounts of voluntary simplifiers. Respondents are on average slightly older, with more flexible family and employment situations.

In the bivariate and multivariate analyses, some biographical factors were mildly significant, however, there was little support for the availability hypotheses. Results demonstrate that most biographical variables do not appear to influence engagement in sustainable practices, an indicator of involvement in the sustainability movement. Although it is not part of the availability framework, education appears to be the biographical factor of greatest consequence in this work. It is significantly correlated with two Views and two Practices measures. In all cases, higher levels of education (i.e., university or college experience) positively impacted the respective ecological views (activist views and importance of avoiding GM food) and sustainable practices (activist participation and more demanding recycling).

This thesis utilizes single-item measures for the biographical variables, and while these captured a reasonable range of variation, they are not particularly ideal in terms of handling potential intersections between one or more of these variables. Unfortunately, measures that more directly address availability, perhaps asking respondents unequivocally about having time and resources for certain activities, were not available in the Urban Nature/Sustainable Cities questionnaire. These would serve to better evaluate the efficacy of biographical availability in this context.

Nonetheless, this lack of support is spun positively: whereas biographical availability is used typically to explain participation in high-risk, high-cost activism (e.g. Wiltfang and McAdam, 1991 on the sanctuary movement), it is applied here as

a way of deconstructing false barriers to sustainability. The descriptive findings in Chapter 4 indicated that, overall, respondents in the sample were fairly “green-leaning” in terms of their ecological views and sustainable practices. While there were no overall compelling, positive correlations found between the availability subset of biographical factors and engaging in sustainable practices in the bivariate and multivariate analyses, there were no strongly negative associations evident either. Combining these findings, it seems that people need not require large amounts of “availability” to participate in many sustainability initiatives. Pro-environmental practices are, by and large, accessible for most.

### **6.1.2 Sustainability Ideas vs. Performance**

A second guiding question probed the connection between having ecological views on various issues and engaging in sustainable practices. As mentioned, the descriptive results indicate that by and large, the sample embraced an assortment of measures of ecological sustainability, in terms of both beliefs and performance. Aggregate responses to survey items tended to be skewed toward the “greener” end of things, with respondents assigning considerable importance and effort to sustainability ideals and activities, including local economy, food and diet, fair trade, recycling, transportation, activism, and spirituality. The bivariate analysis in Chapter 5 further confirms that there generally are strong correlations between the measures of Ecological Views and Sustainable Practices.

The measures tapping Views and Practices here are somewhat limited, but they are nonetheless adequate. A comprehensive list of sustainability values and behaviours would not only be difficult to distil, but it would be nearly impossible to capture the entire range with reasonable consensus. The measures available in the Urban Nature/Sustainable Cities questionnaire allowed many “hot button” sustainability issues to be addressed directly or by proxy, including: climate change (via transportation), consumption (dietary practices, purchase habits), pollution (food production, transportation, organic farming), waste reduction (recycling), globalization (fair trade, local economy and trans-national corporations), social justice (fair trade coffee, sweatshops), and technology (genetically-modified food).

There is some debate in the literature as to the match between values and behaviour, and whether or not self-reports of these line up appropriately. Nonetheless, it follows that there must be *some* value placed on the environment, if

one is to participate in sustainability initiatives that are potentially inconvenient, disruptive, or costly. Continued exploration of the role of values and belief systems in the context of sustainability is required to continue to build understanding with respect to incentives or disincentives that may influence actual behaviour.

### **6.1.3 Lighter Footprints, Mindfulness and Well-being**

Finally, the third guiding question speaks to the relationship between sustainable living and quality of life. Hypotheses were formulated to link sustainability, mindfulness and well-being. There is little doubt that ecosystem health is essential for a "good" life anywhere; however, attempting to isolate specific factors relating to sustainability is complicated and challenging. This thesis approaches the issue by considering only one aspect of quality of life, subjective well-being, and also by looking at individual-level factors, as opposed to national or global characteristics. The descriptive results point to an overall green-leaning sample that has, on average, a pretty positive outlook on life. When asked to rate how happy they were at the present time, taking everything together, respondents overwhelmingly reported relatively high levels of happiness. Respondents also provided positive assessments of their lives in general using a series of semantic differential global satisfaction indicators.

Bivariate findings were less clear on sustainability correlates of well-being, as they were measured in this study. However, this analysis yielded one of the most interesting results of the study: the effect of mindfulness. Mindfulness, described as awareness of one's thoughts, ideas, emotions and activities, is highly, positively, and significantly correlated with reports of subjective well-being. The multiple regression analysis confirmed this bivariate finding, and mindfulness emerged as a strong predictor of SWB for respondents. This striking result suggests that individuals who experience mindfulness are also, on average, happier or more satisfied with their lives in general, at least for this group of individuals. Given that the community currency sample is quite unique in nature, it would be important to explore how mindfulness might be taken up more generally in other groups before further conclusions may be drawn as to the efficacy of mindfulness for well-being.

Overall, the results of this thesis have confirmed the notion that mindfulness matters for well-being. Clearly, the relationship between mindfulness and subjective well-being in a sustainability context is more complicated than what is currently

available in terms of theory and literature. Further exploration of sustainable and simplicity lifestyles, and particularly the examination of mindfulness as an important mediating factor, may provide greater insight for well-being—of individuals, communities and ecosystems. The findings of this thesis evoke a definite need to further investigate mindfulness, particularly with respect to its potential benefits for, and influences on, other sustainability and well-being factors.

## **6.2 SUGGESTIONS FOR FUTURE RESEARCH**

While the results of this work have added insight and knowledge to bodies of social scientific literature on sustainability, mindfulness, and well-being, lessons from this study may serve to also inform future research in these areas. For this thesis, a broad theoretical framework was patched together from a range of academic and popular sources. While this has proven useful for a basic, foundational work on correlates of sustainable living, it will be important to establish and test more systematic theories that can provide a comprehensive picture of what is happening. The broad framework used here could be broken down to explore fewer relationships in greater detail. Moreover, drawing and testing ideas from other areas of specialization in sociology, as well as from other disciplines, may serve to build an improved framework on which future studies may be developed.

This study considered a very specialized sample of community currency participants, for which select sustainability and simplicity attributes were applied or inferred. It would be important to work with other so-called “green” groups, as well as self-identifying simplicity practitioners, in order to isolate a more accurate range of related views and practices. As well, getting a better sense of the prevalence of sustainable behaviour in more general (i.e., less specialized or “green”) populations would be helpful, particularly for generalization and inference work, and also when attempting to isolate more succinctly some of the incentives and disincentives influencing sustainable living.

Other social scientific methods and analysis techniques also may serve to better capture the various angles involved. For example, this analysis did not address interactions between variables, and these might be helpful when considering availability factors as well as gaps between values and performance. As well, use of more open-ended, qualitative interviewing techniques could be beneficial in terms of



getting at respondents' views and opinions and how these relate to behaviour, choices, and survey responses.

Lastly, there are also key measurement issues that should be addressed in future studies. Some of these have been introduced already in the data limitations discussion. For example, measures that tap biographical factors more directly will serve to provide a better sense of how availability may or may not come into play. This will contribute to better understanding how biographical constraints might promote or dissuade sustainability initiatives. As well, more accurate and universal measures for ecological views and sustainable practices would serve to also enhance future work. Establishing and testing measures that directly match specific views and performance would be especially helpful. Moreover, questions that directly address the impetus for taking on certain practices (e.g. solely, partly or not at all pro-environmental) would improve the ability to link ecological views and behaviour. Finally, measures that explicitly address the simplicity angle, and the degree to which respondents subscribe to simplicity ideals and behaviours would be important. Such questions would provide a more direct line and insight regarding how and why individuals are prompted to challenge the consumer society and change their personal patterns of beliefs and behaviours.

### **6.3 CLOSING WORDS**

At long last, this story of sustainable living is drawing to a close; however, it is not the end of the saga. The findings from this thesis have helped shape an initial exploration of key intersections between biography, worldviews, behaviour and well-being, in the quest for leaving lighter footprints. The elements of this story provide some insight into long-term prospects for ecological sustainability, including well-being advantages that may stem from sustainable living. The most important message conveyed is that there is no formula for lighter footprints. Many of the relevant factors are not only interconnected, but also linked quite strongly to the social fabric and the consumer society. Nonetheless, this work has shown that there is the possibility of enacting a different story, to live so as to make a sustainable alternative to the consumer society a reality. However, the attainment of a sustainable future entails that each individual must make his or her own way, drawing from available tools such as mindfulness. At present, leaving lighter footprints is a choice; this will not always be the case.

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## APPENDIX A: Urban Nature/Sustainable Cities Interview Schedule

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**Calgary/Ithaca/Nelson Interview Schedule  
Urban Nature/Sustainable Cities Research Team  
University of Calgary  
June 2002**

### ***Local Currency Participation***

1. Describe the kinds of goods and services you sell and buy.
  
2. How long have you been involved with local currency?
  
3. Are any of the goods and services you offer by way of local currency (Calgary Dollars, Ithaca Hours, Kootenay Hours) your primary source of income? Y N  
Describe further:
  
4. How would you describe your participation in local currency? (circle as many as apply): (1) full-time store owner/operator, (2) part-time store owner/operator, (3) full-time service provider, (4) part-time service provider, (5) full-time home-based business, (6) part-time home-based business, (7) private or personal selling of goods and services, (8) other (elaborate):
  
5. Do you consider your participation in local currency a business? Y N (elaborate):

### **#6 for those who answer 'yes' to #5:**

- |   |
|---|
| <ol style="list-style-type: none"> <li>6. How many customers or buyers of your goods and services does local currency bring you?<br/>(1) all of them (2) 75% or more (3) 50 to 74% (4) 25 to 49%<br/>(5) 10 to 24% (6) 5 to 9% (7) 4% and less</li> </ol> |
|---|
7. How often do you attend local currency social events like potlucks, dances, etc.?  
(1) more than once a month (2) once a month (3) once every two to three months  
(4) once every four to six months (5) at least once a year (6) less than once a year
  
  8. During the past year, what is your estimate of the dollar value in local currency (Calgary Dollars, Ithaca Hours, Kootenay Hours) you **spent** for the **purchase** of goods and services?
  
  9. During the past year, what is your estimate of the dollar value of local currency (Calgary Dollars, Ithaca Hours, Kootenay Hours) you **received** for the goods and services you **sold**?
  
  10. During the past year, in a typical month, what would you estimate are the number of transactions (either buying or selling) on average that you do with local currency?  
(1) 30 or more (2) 15 to 29 (3) 10 to 14 (4) 5 to 9 (5) 1 to 4 (6) zero, in some months
  
  11. What is the value, in dollars, of local currency (Calgary Dollars, Ithaca Hours, Kootenay Hours) you now have?

### **Appendix A: Urban Nature/Sustainable Cities Interview Schedule**

Please tell me the extent to which the following statements reflect your experience with local currency, in terms of Strongly Agree, Agree, Disagree, and Strongly Disagree:

1. Local currency has helped me increase my circle of friends.  
(1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
2. Local currency has given me access to goods and services that I would not have otherwise been able to purchase.  
(1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
3. Local currency has given me buyers or customers for my goods and/or services that I otherwise would not have had.  
(1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
4. Local currency has helped me dispose of unneeded or unused items.  
(1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
5. I consciously try to shop or purchase services at stores or practitioners who accept local currency.  
(1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
6. Local currency has helped me establish relationships of trust for ongoing or future exchanges.  
(1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
7. Local currency has helped me develop my self-confidence.  
(1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
8. Local currency has given me the ability to help people.  
(1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
9. Local currency has helped me improve my quality of life (satisfaction with my life in general).  
(1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree
10. Local currency has helped me to use skills I would not have otherwise used.  
(1) Strongly Disagree (2) Disagree (3) Agree (4) Strongly Agree

### **Local Economy Support & Production**

1. Does your residence/home have room for a vegetable or fruit garden? Y N
2. Do you have a vegetable or fruit garden at your principal residence? Y N
3. Do you have garden space away from your residence? Y N
4. Do you grow any food inside or in containers (window sills, pots, greenhouses, etc.) at your residence? Y N (Elaborate):
5. What percentage of food you consume do you estimate that your household produces?
6. When you shop for food, how much effort do you make to buy locally grown and/or produced food?  
(1) none (2) not very much (3) some (4) a great deal
7. How important is it to you to buy locally grown food or produce?  
(1) not at all important (2) somewhat important (3) important (4) very important
8. Are you a vegetarian? Y N Ovo-Lacto? Y N Vegan Y N Practice Macrobiotics? Y N
9. When you shop for food, how much effort do you make to buy organic food and/or produce?  
(1) none (2) not very much, (3) some (4) a great deal
10. How often do you eat outside of your home/residence? [e.g. at a restaurant, café, fast-food, etc.]  
(1) less than once a week (2) about once a week (3) about 2-3 times a week  
(4) 4-6 times a week (5) at least once a day

**Appendix A: Urban Nature/Sustainable Cities Interview Schedule**

11. When you eat out, how much effort do you make to eat at locally owned and operated restaurant?  
(1) none (2) not very much (3) some (4) a great deal
12. How often do you purchase prepared food? (i.e. food that can be eaten as is [e.g. frozen burritos or lasagna] or only needs to be warmed up or cooked)  
(1) rarely or never (2) occasionally (3) often (4) quite often
13. How often does your household prepare meals from basic ingredients? (i.e. from scratch)  
(1) rarely or never (2) occasionally (3) often (4) quite often
14. How important is it to you to avoid eating (not to eat) at national or big regional chain establishments? [e.g. McDonald's, Pizza Hut, Denny's, etc.]  
(1) not at all important (2) somewhat important (3) important (4) very important
15. How important is it to you to avoid eating (not eating) food products from large national or international corporations? [e.g. Coca Cola, Frito Lay, Nestlé, etc.]  
(1) not at all important (2) somewhat important (3) important (4) very important
16. How important is it to you to avoid eating (not eating) genetically modified food or organisms?  
(1) not at all important (2) somewhat important (3) important (4) very important
17. How important is it to you to drink fair traded coffee? (i.e. organically grown coffee whose growers and workers receive a fair return on their labour or investment)  
(1) not at all important (2) somewhat important (3) important (4) very important
18. Do you have chickens? Y N
19. To what extent do you and your partner or spouse agree on food purchasing and consumption issues?  
(1) very close agreement or harmony (2) quite a bit of agreement (3) some agreement  
(4) very little or no agreement

*How much of your household's food is purchased at the following sources:*

Chain supermarket: (1) Most of our food (2) quite a bit (3) some (4) very little or none

Local supermarket/grocery: (1) Most of our food (2) quite a bit (3) some (4) very little or none

Co-op: (1) Most of our food (2) quite a bit (3) some (4) very little or none

Convenience store: (1) Most of our food (2) quite a bit (3) some (4) very little or none

Farmers' markets: (1) Most of our food (2) quite a bit (3) some (4) very little or none

Other: Community Supported Agriculture, Food Clubs, U-Pick and Farmer Direct, etc. (specify):

**Clothing**

1. How important is it to you to avoid purchasing (not purchasing) clothing made in low-wage, non-union factories?  
(1) not at all important (2) somewhat important (3) important (4) very important
2. How difficult is it for you to purchase or find clothing not made in low-wage, non-union factories?  
(1) very difficult (2) difficult (3) somewhat easy (4) very easy

*How much of your household's clothing needs are purchased or acquired from at the following sources:*

Chain store: (1) Most of our clothing (2) quite a bit (3) some (4) very little or none

Internet or mail order: (1) Most of our clothing (2) quite a bit (3) some (4) very little or none

Local retailer: (1) Most of our clothing (2) quite a bit (3) some (4) very little or none

Used/consignment store: (1) Most of our clothing (2) quite a bit (3) some (4) very little or none

Barter/local currency: (1) Most of our clothing (2) quite a bit (3) some (4) very little or none

From family/friends: (1) Most of our clothing (2) quite a bit (3) some (4) very little or none

## **Appendix A: Urban Nature/Sustainable Cities Interview Schedule**

### **Recycling Practices**

*How often do you do the following recycling, reuse or composting behaviours?*

1. Recycle newspapers:  
(1) rarely or never (2) sometimes (3) quite often (4) always or almost always
2. Reuse envelopes:  
(1) rarely or never (2) sometimes (3) quite often (4) always or almost always
3. Recycle computer, office and/or writing paper:  
(1) rarely or never (2) sometimes (3) quite often (4) always or almost always
4. Pop cans and beverage cartons:  
(1) rarely or never (2) sometimes (3) quite often (4) always or almost always
5. Glass bottles and containers:  
(1) rarely or never (2) sometimes (3) quite often (4) always or almost always
6. Plastic bags and containers:  
(1) rarely or never (2) sometimes (3) quite often (4) always or almost always
7. Tin and metal cans:  
(1) rarely or never (2) sometimes (3) quite often (4) always or almost always
8. Cardboard and other packaging materials:  
(1) rarely or never (2) sometimes (3) quite often (4) always or almost always
9. Kitchen and food scraps:  
(1) rarely or never (2) sometimes (3) quite often (4) always or almost always
10. Leaves, grass clippings and other yard "wastes":  
(1) rarely or never (2) sometimes (3) quite often (4) always or almost always
11. Take your own bags or containers when shopping:  
(1) rarely or never (2) sometimes (3) quite often (4) always or almost always

### **Transportation**

How much do you use the following means of transportation to get around Ithaca/Calgary/Nelson?

1. Walking: (1) very little or not at all (2) some (3) quite a bit (4) a lot or most of the time
  2. Biking: (1) very little or not at all (2) some (3) quite a bit (4) a lot or most of the time
  3. Roller Blades: (1) very little or not at all (2) some (3) quite a bit (4) a lot or most of the time
  4. Public transit: (1) very little or not at all (2) some (3) quite a bit (4) a lot or most of the time
  5. Motorcycle/moped: (1) very little or not at all (2) some (3) quite a bit (4) a lot or most of the time
  6. Car pooling: (1) very little or not at all (2) some (3) quite a bit (4) a lot or most of the time
  7. Car Sharing: (1) very little or not at all (2) some (3) quite a bit (4) a lot or most of the time
  8. Car/truck: (1) very little or not at all (2) some (3) quite a bit (4) a lot or most of the time
- Other (specify): (1) very little or not at all (2) some (3) quite a bit (4) a lot or most of the time

## **Appendix A: Urban Nature/Sustainable Cities Interview Schedule**

### **Activism**

1. Do you sympathize with the goals of any community, national, or international groups working to solve environmental, social or economic problems? (1) not at all (2) to a certain extent (3) have definite sympathy (4) sympathize very much with these groups.
2. Do you work with or belong to any of these groups working to solve environmental, social or economic problems? Y N

Which specific groups do you belong to or work with?

3. How much do you support financially the groups working to solve environmental, social or economic problems? (1) no financial support (2) some (3) quite a bit (4) a great deal
4. How much time do you spend in working with the groups working to solve environmental, social or economic problems? (1) no time (2) some (3) quite a bit (4) a great deal.
5. To what extent do you sympathize with groups, like those in Seattle in 1999—the “Battle in Seattle” — who demonstrate against global free trade? (1) don’t sympathize at all with them (2) have some sympathy (3) quite a bit of sympathy (4) a great deal of sympathy
6. Have you ever participated in a demonstration against corporate or government policy? Y N  
Details:
7. To what extent would you be willing to demonstrate, again or for the first time, against government or corporate policy, if you had the opportunity to do so? (1) not at all interested (2) have some interest (3) have definite interest (4) would love to do it
8. To what extent do you stay current or up-to-date with the activities and intentions of the protestors — for example, through the internet, receiving newsletters, attending lectures or workshops, etc.? (1) have little or no interest (2) make some effort to stay current (3) make a definite effort to stay current (4) make a great deal of effort to stay current
9. In regard to demonstrations and protests, to what extent do you agree with the following statement: demonstrators must respect all property rights, even those of corporations? (1) strongly disagree (2) disagree (3) agree (4) strongly agree

### **Religion and Spirituality**

*How important to you are the following practices?*

1. Formal meditation: (1) not at all important (2) somewhat important (3) important (4) very important
2. Yoga: (1) not at all important (2) somewhat important (3) important (4) very important
3. Prayer: (1) not at all important (2) somewhat important (3) important (4) very important
4. Mindfulness—more informal meditation practice or conscious awareness of your thoughts and activities: (1) not at all important (2) somewhat important (3) important (4) very important
5. Sabbath or rest-day observance: (1) not at all important (2) somewhat important (3) important (4) very important
6. In general, how spiritually-minded would you say you are (not necessarily related to formal or institutionalized religion): (1) very little or not at all spiritually minded (2) somewhat spiritually minded (3) quite spiritually minded (4) very spiritually minded

**Appendix A: Urban Nature/Sustainable Cities Interview Schedule**

7. Do you presently feel part of a religious group or church? Y N  
If 'yes,' which group or church?
8. In the past year, how often have you attended church (temple, synagogue, mosque) services?  
(1) not at all (2) less than once a month (3) once a month (4) 2-3 times a month  
(5) once a week (6) more than once a week

**Children's Education**

1. Do you have school-aged children at present? Y N  
If 'yes,' where do they attend? (1) public schools (2) other (please elaborate):
2. Have you had school-aged children? Y N  
If 'yes,' where do they attend? (1) public schools (2) other (please elaborate):

**Respondent Profile**

1. Male Female
2. Marital Status (married, living with a partner, single/divorced, widowed)
3. Number of children:
4. Number of children at home:
5. Ages of children:
6. Respondent age:
7. Education self:
8. Education spouse or partner
9. Self: job/employment:
10. Self: what you do at job/employment
11. Spouse or partner: job/employment:
12. Spouse or partner: what he/she does at job/employment:

**Political Party Preference & Philosophy**

1. Do you identify with a political party? Y N  
If 'yes,' which one?
2. With which of the following broad political positions do you feel most comfortable?  
(1) capitalism (2) socialism (3) anarchism (4) with no broad political position  
(5) other (elaborate):

*We're coming up to the last page or so of questions. We'll let you fill these out yourself, and then I'll put them in the envelope, and I'll seal the envelope when I put the rest of my notes in the envelope after we've finished the interview.*





**APPENDIX B: Correlation Matrix<sup>a</sup> for variables included in the bivariate and multivariate analyses (Ithaca/Nelson/Calgary, n=134<sup>b</sup>)**

DVS	SUBJECTIVE WELL-BEING			Biographical factors										Sustainable practices					Ecological views				
	MINDFULNESS	Gender	Marital status	# children at home	Age	Flexible employment	Education	Household income	Ecological food	Activist participation	More demanding recycling	Greener transportation	Vegetarian diet	Importance of local economy	Activist views	Importance of avoiding GM food	Importance of spirituality						
	1																						
	<b>.408***</b>	1																					
	<b>-.206**</b>	<b>-.280***</b>	1																				
	0.161	-0.060	<b>.185**</b>	1																			
	0.045	0.029	-0.037	0.138	1																		
	-0.028	0.015	-0.026	0.055	-0.007	1																	
	-0.069	-0.088	-0.021	-0.038	0.059	-0.060	1																
	0.062	0.144	-0.035	-0.072	-0.037	-0.111	-0.095	1															
	<b>-0.107</b>	<b>-.327***</b>	<b>.246***</b>	<b>.433***</b>	0.157	0.104	0.072	<b>-.201**</b>	1														
	0.101	0.131	0.054	0.036	-0.082	-0.033	0.162	-0.146	-0.039	1													
	0.110	-0.076	0.010	-0.044	<b>-.211**</b>	0.048	0.088	<b>-.259***</b>	-0.045	<b>.364***</b>	1												
	<b>.238***</b>	0.156	-0.072	0.147	0.085	-0.063	0.128	<b>-.216**</b>	0.028	<b>.352***</b>	<b>.359***</b>	1											
	-0.056	0.031	0.017	-0.115	-0.090	-0.087	0.093	-0.041	-0.088	0.016	<b>.337***</b>	0.169	1										
	0.124	0.091	-0.066	0.076	0.099	-0.155	0.088	0.048	0.136	<b>.174**</b>	0.134	<b>.282***</b>	0.107	1									
	0.137	<b>.213***</b>	-0.068	0.003	-0.134	-0.074	0.190	-0.143	-0.023	<b>.565***</b>	<b>.381***</b>	<b>.422***</b>	<b>.215**</b>	<b>.320***</b>	1								
	0.150	0.118	0.071	0.010	-0.120	0.131	0.166	<b>-.317***</b>	-0.053	<b>.425***</b>	<b>.450***</b>	<b>.342***</b>	<b>.188**</b>	0.129	<b>.522***</b>	1							
	-0.050	-0.030	-0.031	-0.072	0.145	-0.036	0.077	<b>-.215**</b>	-0.024	<b>.520***</b>	0.127	<b>.225***</b>	0.089	<b>.173**</b>	<b>.376***</b>	<b>.212**</b>	1						
	0.095	<b>.384**</b>	<b>-.225**</b>	-0.155	0.155	-0.035	0.036	0.078	-0.069	0.158	0.022	0.110	0.119	0.144	<b>.208**</b>	-0.009	0.113	1					

SOURCE: Calculated by the author using data from the Urban Nature/Sustainable Cities Survey, 2002-2003  
 NOTES: a Pearson correlation coefficients (r), \*\*p < 0.05, \*\*\*p < 0.01; b n's range from 110 to 134 because of non-responses