PERCEIVING HEALTH AND THE ENVIRONMENT

PERCEIVING HEALTH AND THE ENVIRONMENT:

CONNECTIONS, CONCEPTIONS, AND COGNITION

By

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ABSTRACT

The present study is an exploratory qualitative analysis of public perceptions of health and the environment. In-depth interviews were employed to examine perceptions of the connection between health and the environment amongst a sample of men and women of both higher and lower socio-economic status in Greater Hamilton, Ontario. The study attempts to highlight the nature of health and environment perceptions in lay publics, the variations in perceptions of health and environment within and across social groups, as well as plausible reasons for these variations in perceptions according to cognitive information processing, value orientations, and cultural models.

Variations in perceptions of the connection between health and the environment were seen to exist across social groups, namely by gender and socio-economic status. Differences in perceptions amongst those in the sample result from a myriad of possible factors ranging from social characteristics to personality traits to information processing networks. While health was largely perceived to be concrete and personalized, the environment was largely abstract and nebulous. Health was clearly articulated by those in the sample, while environment was less well-understood.

Perceptions of the connection between health and environment were articulated usually with reference to the self, seemingly significant through possible threats to health. Health was viewed as under personal control through lifestyle choices, however, the environment was perceived to be external and not within the control or responsibility of individuals. A dichotomy in the form of "health is me" and "environment is external", representing power, control, and responsibility and nested in social values and normative frameworks, became implicit in the findings. Social cognition research was employed to account for variations in interpretation of information related to health and the environment in order to account for differences in perceptions. Cognitive structures were then employed in an attempt to locate perceptions of health and the environment with value orientations from within a cultural or mental model of these connections.

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CHAPTER ONE

Introduction

1.1 Context

The 1980s marked the crest of "environmentalism" as a prominent value to Canadians. Gallup polls from the late 1980s indicate that concern for issues such as pollution were on the rise, with over three-quarters of the Canadian voters viewing it as a problem of significance (Bakvis and Nevitte, 1992). In 1989, a national magazine survey indicated that nearly one-fifth of Canadians considered the environment to be a top priority (Macleans, January 1995). The environment has since been replaced by other concerns including employment and job creation in a tough economic climate, and by 1994, only one percent of Canadians considered it to be a major concern (Macleans, January 1995).

Though concern for environmental protection has waned in recent years, recognition of the possible impacts of environmental degradation on our lifestyles and well-being is seemingly on the rise. The quality of the environment is thought to play an ever-increasing role as an influence on human activity, and is now widely conceptually linked with our personal, physiological, and economic security and well-being.

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Perhaps the most salient example of the importance of environmental influence is that perceived to affect our health. A recent national environmental survey indicated that one in two Canadians believes that his or her long-term health is affected by the environment (Globe and Mail, Oct. 1995). Indeed, this threat to health from environmental agents is a widely held and relatively urgent public perception:

> '"environmental quality is no longer seen as a post-materialist value and that environmental degradation is increasingly recognized as a direct threat to human health and welfare. Indeed, protecting one's family from environmental hazard seems to be joining the provision of food, clothing, and shelter as a basic human goal" (Dunlap et. al, 1993, p.25).

Health is generally regarded as integral to our sense of quality of life, and becomes a value as it is integrally related to personal well-being (Campbell, 1976, 1981; Calnan, 1987; Eyles, 1985). Satisfaction with life is also thought to be affected by our environments, both local and global (Jeffres and Dobos, 1995). Increasingly it is perceived that one is integral to the other; that health and the environment together affect and jointly influence our quality of life, personal and economic security, and general well-being. Both health and the environment contribute to our overall life satisfaction both directly and indirectly, and in combination therefore form a prominent life domain in society.

The perceived relationships between our health and our environments are mediated by personal, social, scientific, and situational factors. Little work however has been conducted connecting perceptions of health and the environment together with the individual and social value systems which influence these perceptions. As noted by Zeidner and Shechter (1988):

> "at present, not much is known about the nexus of relationships between exposure to pollution at home or work, awareness of pollution, affective reactions towards pollution, behavioural intentions/tendencies, personality and health..." (p.194)

If relationships between perceptions of health and the environment such as these do exist, their interconnection and mutual reinforcement must surely hold critical ramifications for environmental policy (Arcury, 1990).

The purpose of this dissertation is threefold. Firstly, it seeks to explore the nature of public perceptions and concerns surrounding health and the environment. Secondly, it attempts to highlight differences in perceptions of health and environment amongst different social groups with a focus on the effects of gender and socio-economic status on these perceptions. Finally, it suggests plausible reasons for varying perceptions according to the means by which individuals come to interpret and understand their worlds through meaning systems and value orientations in the form of mental or cultural models.

1.2 Geographic Context

The subfield of medical geography is traditionally concerned with the examination of relationships between physical and social environments and the geography of societal health. Ecological approaches to the study of health reveal that heterogeneities in health status occur as a result of individual, social, economic, and environmental circumstances (Hertzman et. al, 1994). Eyles and Woods (1983) highlight the need to incorporate an analysis of patterns and processes related to social phenomena in examining the geography of health. Jones and Moon (1987) equally call for the incorporation of multi-disciplinary approaches to the geography of health:

> "the focus of research should now shift to the totality of health and society. This shift requires us to examine economic, social, and political processes which, in turn, necessitates the removal of academic boundaries to provide a full understanding of the social world" (p.359).

The connections between social and physical, spatial and temporal environments becomes increasingly important in the examination of these patterns and processes in medical geography. These connections have been addressed by environmental epidemiology and ecological studies of public health (see Anderson, 1987; Eyles, 1996; Eyles and Cole, 1995; Fischhoff et al., 1993; Frank et al., 1988; Hertzman et al., 1994).

Another means by which the geography of health may incorporate the influence of these factors is through research on lay conceptions of health and illness (Eyles and Woods, 1983). Individual beliefs and values may be included with socio-demographic factors to gain an understanding of the relationship between human perception and behaviour and the environment in which people live (Dyck, 1990). While interpretive geography emphasizes the immediate response of lay persons to their environments, it tends to neglect the long-term cognitive structures on which this response is founded (Lee, 1976). The fusion of geography and other social scientific disciplines allows for a more in-depth analysis, a wider range of methods, and the incorporation of social and physical phenomena in the analysis of health. Environmental cognitive psychology represents one such fusion, and provides a holistic means by which the social determinants of health and health perceptions within an environmental context may be analyzed. Through such analysis, this thesis attempts to join together some of the concerns of behavioural geography with those of health or medical geography and perception research.

1.3 Framework

This dissertation is an exploratory qualitative analysis of public perceptions of health and the environment. In-depth interviews were utilized to examine the perceptions

of 40 women and men of high and low socio-economic status on their perceptions of health and the environment. The findings were analyzed to highlight differences amongst individuals and social groups in their perceptions of relationships between health and the environment, issues of concern, and control and responsibility. A social-psychological examination of the cognitive structures possibly accounting for such differences in perceptions was then undertaken in an attempt to understand the conceptual mechanisms which result in public perceptions of these health and environment connections. It is hoped that in doing so, a more accurate understanding of information perception amongst lay publics as well as more effective means for risk communication to the public may be fostered.

CHAPTER TWO

Literature Review

2.1 Introduction

This chapter explores some of the existing literature involving perceptions of health and the environment. Current work is examined from research on social indicators, health perceptions, environmental concern, knowledge, and behaviour, and environmental epidemiology. The nature of public perception of health and the environment is examined through the literature as well as the role of norms and values in mediating these perceptions. The present literature review focuses primarily on the effect of gender and socio-economic status on public perceptions of health and the environment. Though considerable research has been conducted in each of the areas, little has been done to connect health, environment, and quality of life together. In examining research findings of each of the bodies of literature, interconnections between conceptions of health and the environment as well as their relation to quality of life become increasingly visible.

2.2 Quality of Life Indicators and Environment and Health

"A well society is one in which people can meet
their basic needs; where poverty has been reduced;

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where people are socially and economically mobile
and respectful of the dignity of others; and where
they have access to good services in a stable,
democratic and participatory environment" (Eyles,
1986, p.70)

Such definitions of well-being refer to life satisfaction in society and material security. Quality of life however is a concept encompassing life dimensions other than material well-being, and as such reflects our broad personal value systems. Quality of life may be defined as the fulfilment of needs not expressed in monetary terms (Campbell, 1976, 1981). It may also be defined as the psychological and individual aspects of social well-being (Eyles and Cole, 1995). Quality of life encapsulates our satisfaction with life amidst a broad range of life dimensions including social, economic, psychological, and environmental conditions, forming a mesh between our values and personal identities and our life conditions.

Campbell (1976, 1981) was one of the first to assess the role and relative importance of "domains of life" as contributors to life satisfaction and quality of life in North America. According to Campbell, the domains of life most critical to our overall quality of life include marriage, family life, friendships, standard of living, work, neighbourhood, city or town or residence, the nation, education, health, housing, and the self (Campbell, 1981). Campbell reported in 1981 that the most central of these to

personal satisfaction are the self, standard of living, family life, marriage, friends, and employment. Arguably, these self-related domains are the ones most tightly linked to the sense of personal economic and emotional well-being. It is these variables or a combination of these that determine our general sense of well-being as they are linked with our value systems and our personal experience.

Building on Campbell's earlier work, Jeffres and Dobos (1995) link quality of life to three dimensions, including achievement factors (race, gender), ascriptive factors (education, income, occupation), and life cycle factors (marital status, age) which in combination serve to link people with their environments and act as paths for judgements (Jeffres and Dobos, 1995). Accordingly, quality of life involves the satisfaction with life domains and social, cultural, and economic circumstances interacting with the environment. Socio-economic status affects the nature and perception of quality of life. Research by both Calnan (1987) as well as Jeffres and Dobos (1995) reveals that differential socio-economic status results in distinct concerns in certain life domains. Campbell (1981) also reported a correlation between education, affluence, and occupation with a satisfying life. Generally, those with higher incomes hold a higher satisfaction with life and are concerned more with happiness and standard of living, while the lower income are concerned

more with issues of economic security and employment (Calnan, 1987). Similarly, Jeffres and Dobos (1995) found that those in the executive and professional classes ranked highest in overall perceived quality of life, while those unemployed ranked the lowest.

Because the foremost life domain is that of the self, it follows that health should rank as a primary concern in satisfaction with life. Campbell (1981) reports that over 90 percent of those who say they are in good health also report satisfaction in life. Health as a life domain is juxtaposed against other life domains for importance. In researching health perceptions, Calnan (1987) found that 18 out of a sample of 20 working and middle class women stated that other things such as family security were more important than health, yet the same sample of women reported health to be more important than economic well-being. Fourteen out of the same twenty women in Calnan's sample said that they would take less pay for a job that posed less of a health risk. Socio-economic circumstances mediate this relationship, with lower income women citing employment as more important than health and higher income women citing happiness. Education, gender, and income are all correlated with reported health satisfaction, with female gender, low socio-economic status, and low education being associated with poorer subjective health appraisals (Campbell, 1981). Despite the fact that

health is a necessary prerequisite for a functional and satisfying life, it is clear that its importance is affected by other immediate life domains such as economic security in our overall quality of life.

The environment has also been found to affect our sense of well-being and quality of life. People's global satisfaction with life is thought to be affected by the larger environment and its possible impact on our personal economic and social well-being (Jeffres and Dobos, 1995). As Campbell (1976, 1981) notes, our satisfaction with local environments such as community and city situations affects our personal happiness and quality of life. Simmons and Binney (1992) illustrate the importance of "a clean environment" as a value when added to Rokeach's Terminal Value Survey, which assesses personal attributions of domains of life and "end-state" values (see Simmons and Binney, 1992). Findings of the Oregon study rank environment 6th out of 21 "terminal values" following freedom, family, health, world at peace, and self-respect (Simmons and Binney, 1992). The mean rating for "a clean environment" according to the survey was 4th out of 21 values, trailing only freedom, family security, health, and world peace. Environment is important then to quality of life in a North American context.

These and other domains contribute as important dimensions to our quality of life. Both health and environment

contribute to our overall life satisfaction, and in combination could form a prominent life domain. As stated by Eyles and Cole (1995):

> "Two fundamental dimensions are therefore involved in encapsulating a good society: an internal psycho-psychological component representing the sense of well-being, satisfaction or gratification or their opposites; and the external environment (the domains of social life) that impinges on the individual's ability to shape his/her living conditions" (p.71)

Health and environment are thus both part of what constitutes quality of life and a well society.

2.3 Perceptions of Health Research

For the majority of people, our quality of life is dependent upon the fulfilment of certain key life elements or goals which are considered intrinsic to our well-being as humans. Among the most highly ranked of these social elements is health. As Wolinsky (1980) comments, "assuming that America's most sacred principle is continued existence, [then] good health is naturally one of the most highly regarded values". Physical and mental well-being, or good health, may be viewed as the ultimate human value, and is integral to the proper functioning and quality of our daily lives.

The dominant approach to health and illness inherent to the Western world has been that embraced by the biomedical model in which both health and disease are construed according

to scientific and empirical observations and etiologies. Modern medical systems based upon this ideology support the scientific disaggregation, specialization, and categorization of humans and their health, utilizing the metaphor of "body as machine" and medical establishment as "body-mechanic" to determine cause-effect relationships of health and illness (Koblinsky, 1993). Because the ideology is rooted in expert scientific empiricism, by its very nature it leaves little room for the social context of disease or, by extension, lay perceptions of health and illness.

It has been argued that health however is a multi-dimensional concept which is interpreted subjectively and perhaps uniquely by all individuals through varying social, psychological, and physiological conditions. It may not fit quite so neatly into biomedical terms. According to the World Health Organization (1985), health is "a state of complete physical, social, and mental well-being and is not merely the absence of disease or illness". Such a definition would imply that the experience of health is much more than just the absence of observable physical ailments and is more rightly determined by individual wholeness and wellness.

Thus there is a division between the conceptualization of health and illness from within the biomedical view and its adherents, and those which include personal and subjective interpretations of health and illness by individuals (lay

perceptions). In exploring some of our society's definitions and constructions of health and illness as well as some of the work conducted on lay perceptions, we may begin to see how it is that people come to understand, interpret, and experience their own health as it relates to the world and the environment around them.

Health as a Social Construct

As a concept, the notion of "health" embodies powerful connotations surrounding the values, morals, and normative frameworks that comprise our society. Health is a social construction by the very fact that both its determination and common representation reflect ideologies that are contextual and culturally-specific. Our experiences of health and illness are mediated by the normative structures found in societal values related to what should be considered good or poor health (Crawford, 1984; Herzlich, 1973; Kohler Riessman, 1987; Stacey, 1988; Twaddle, 1979; Williams, 1983; Woblinsky, 1980).

"Health" therefore stems not only from internal interpretation and logic, but from social constructions and representations shared by many in society (Stacey, 1988). As well, "health" as a cultural expression is implicated in other cardinal values in society, and as such is a conceptual means for personal and social evaluation beyond itself (Crawford, 1984). This notion of cultural construction is reflected in

the words of Douglas (1970):

> "The social body constrains the way the physical body is perceived. The physical experience of the body, always modified by the social categories through which it is known, sustains a particular view of society" (p.65).

Not only is health seen as a social construction, but it is also widely regarded by extension as a societal norm. Herzlich (1973) illustrates how our construction of social reality stems from the encounter between individual experience and cultural values, which together result in social norms connecting the individual's experience of health and illness with that of society. According to Twaddle (1979), the concept of health becomes a social norm to the extent that we must speak of "normal" health within the context of group and cultural definitions. The notion of health as a norm is negotiated within culturally-specific frameworks in which health is viewed as normal and illness or ill-health as a deviation and hence abnormal (Crawford, 1984; Herzlich, 1973; Parsons, 1979; Walters, 1993).

Just as health is negotiated through such normative frameworks, so too are illness and affliction which imply deviations from common experience requiring a cognitive re-ordering and re-integration of these shared cultural meanings and norms (Crawford, 1984). Likewise, illness designation results from social construction:

"Whether or not a particular behaviour or
experience is viewed by members of a society as a
sign or symptom of illness depends upon cultural
values, social norms, and culturally shared rules
of interpretation. This approach is in
contradistinction to the biomedical model of
diseases as defined by reference to universal,
culture-free criteria" (Mishler, 1981, p.141).

Such culturally constructed norms as health and
illness are therefore portrayed through several metaphors,
each reflecting the values inherent to the society. Perhaps
the most salient metaphor of health is that of morality.
Because our health is determined and measured according to
social constructions, our morality with respect to individual
commitment to the values of society is also measured by how we
interpret and experience our health and illness. It is through
this lens that good health is viewed as a morally worthy state
that one achieves from a virtuous lifestyle, and illness is
seen as discreditable and resulting from lack of moral
conviction. This metaphor of health as asceticism is
encapsulated by Cornwell (1984) in stating that the "moral
prescription for a healthy life is a kind of cheerful
stoicism, evident in the refusal to worry, or to complain, or
to be morbid" (p.129). Accordingly, health may be seen as a
moral imperative, and illness a moral failing (Kohler
Riessman, 1987).

Closely aligned with the metaphor of morality is that
of health as strength or resulting from self-control, self-

discipline, and power. Healthy behaviour as a moral prescriptive elevates good health to a goal obtained only through self-control, discipline, and self-denial. Health then becomes the object or goal of intentional moral action, subject to the judgement of others in society and hence with the capability of producing self-blame (Crawford, 1984). Good health is thus aligned with the concept of strength as the "power to hold up", relating to a positive stance maintained through moral effort, fitness, or goodness. Weakness is therefore viewed as integral to disease both literally and figuratively (Williams, 1983).

Health as Social Control

Social conceptualizations of health and illness also influence and control how individuals interpret their health experience. Parsons (1951, 1979) was the first to conceptualize this functionalist approach to health status designation. In defining health as a cultural norm, Parsons sees health and illness in relation to capacity for role fulfilment and deviance respectively. Parsons' conception of health is rooted in the notion that health is a functional requisite of social systems. Every society has an interest in maintaining levels of capacity in the form of productive people. This ideal which Parsons refers to as "instrumental activism" is especially prevalent in the values underlying the

capitalist production ethic of the Western world (Twaddle, 1979).

According to Parsons (1979), health is defined as the optimum capacity of an individual for the effective performance of roles and tasks for which he/she has been socialized. Conversely, illness is viewed as a form of deviance from an individual's capacity to perform roles, and is hence viewed as a state to be controlled by society. Illness designation forces the individual to seek help as a result of this deviance. A shared cultural norm of "sick role" results from an individual's deviance from functional capacity and the need to form a unique social role based upon this deviance (Herzlich, 1973; Parsons, 1951, 1979; Twaddle; 1979). We individually concede control over our health in assuming the sick role and becoming exempt from normal social roles and tasks (Herzlich and Pierret, 1986).

Similarly, medicalization serves to socially control the derivation of what is healthy and what is ill. Our experiences of health are often mediated and negotiated through our interaction with the medical establishment. Medicalization may be defined as the way in which modern medicine has expanded to encompass problems previously not defined in medical terms (Gabe and Calnan, 1989). Kohler Riessman (1987) discusses medicalization in terms of two inter-related processes:

"First, certain behaviours are given medical
meaning - that is, defined in terms of health and
illness. Second, medical practice becomes a vehicle
for eliminating or controlling problematic
experiences that are defined as deviant for the
purpose of securing adherence to social norms"
(p.102).

It is argued by many health sociologists that medicalization
occurs due to an unequal power structure in the health
negotiation process. This favours the medical practitioner who
designates the health status. It also supports the social
norms regarding health and illness embodied in our medical
institutions (Cornwell, 1984; Gabe and Calnan, 1989; Kohler
Riessman, 1987; Walters, 1993). Medicalization offers the
medical establishment the power to determine, treat, and
control health and illness through obedience to socially
accepted normative systems.

2.4 Lay Perceptions Research

The ways that we come to understand and interpret our
health stems from social representations expressing the values
of our society (Herzlich, 1973; Herzlich and Pierret, 1986;
Stacey, 1988) and from expressions of societal conflicts
resulting from these values (Crawford, 1984; Twaddle, 1979;
Parsons, 1951, 1979). Lay conceptions of health may be defined
as ordinary people's theories to account for their mental,
social, and bodily circumstances (Stacey, 1988).

There are connections between personal accounts of

health and illness and societal norms and values such as morality, strength, and normality (Blaxter, 1983; Cornwell, 1984; Crawford, 1984; Stacey, 1988; Wolinsky, 1980). Although unique to individuals and their life experience, lay perceptions are rarely completely extricated from etiological models in medicine (Herzlich and Pierret, 1986). Our perceptions of health are also mediated and influenced by differences in social circumstances and conditions. Social cleavages arising from socio-economic status, gender, education and other demographic variables alter the ways we interpret health, as does cultural context. Important differences arise in perceptions of health according to such criteria, and remain the reason why generalizations of lay perceptions are often tenuous and difficult to form (Calnan, 1987; Blaxter, 1983).

Early work conducted by Herzlich (1973) divulged the wealth of individual accounts of health and illness. Her analysis of health perceptions among a sample of the Parisian middle class revealed positive and negative accounts of health and illness relating to lifestyle choices. Health was viewed as a complex and multi-dimensional concept. Respondents defined health as absence of events of illness, a "reserve of health", or an equilibrium of health in which a positive balance is achieved (Herzlich, 1973). According to Herzlich, equilibrium serves as our social norm for health and it is to

this that we assess our own health status.

Lay perceptions of health are rarely uni-dimensional and sometimes contradictory. Williams (1983) revealed notions of health as strength and illness as weakness according to social norms, but as very separate dimensions. Health and illness according to Williams are logically distinct. Individuals may experience poor health without necessarily exhibiting disease, and conversely report having a disease while still experiencing good health, thus demonstrating that people interpret health independently of illness.

Other studies reveal that illness is conceived as exterior to oneself. Blaxter's (1983) work on lay perceptions of working class Scottish women demonstrates that individuals view the causes of illness as distinct from the causes of disease. Blaxter's sample cited the causes of disease as malevolent agents extraneous to the body. Individuals were therefore not personally responsible for their own state of ill-health. Only a small proportion of her sample admitted fault in contracting disease or being responsible for illness. Likewise, Herzlich and Pierret's (1986) report that lay accounts usually envision illness as resulting from an external force, thereby extricating personal responsibility for blame. As Cornwell (1984) suggests, once illness is aligned with "otherness" or exterior to the self, the individual may shift responsibility for it onto the medical

profession. Health too may be seen as arising from something else sometimes outside of oneself, as in fate, luck, and "lottery" (Cornwell, 1984).

Individuals regard the occurrence of illness in others as different than what they themselves experience. Although we locate the causes of illness as extraneous to ourselves in order to escape blame for its occurrence, most of us tend to view the health of others as personally ascribable to them (Stacey, 1988). There was general agreement amongst respondents in Cornwell's (1984) study that it is others (whether diseased or not) who are hypochondriacs and complainers about health. It would seem that ill health is conceived as something extraneous and uncontrollable in oneself, yet simultaneously something within other people's locus of control and responsibility.

Perceptions of health are seen to vary by social characteristics, such as socio-economic status. In researching both working class and middle class women's perceptions, Calnan (1987) discovered that differences between the two were not clear cut, though middle class women did refer to health more as the ability to cope through a good state of mind. At best, differences lay in women's conception of abstract health, in which middle class females cited health as multi-dimensional while lower class women viewed it primarily as uni-dimensional in terms of ability to work. Stacey (1988), in

reviewing work by Blaxter (1983) and D'Houtard (1984), also supports the notion that women of lower class tend to view health in terms of functional ability, while professional classes view health from a pleasurable way of life perspective with a greater sense of personal control.

Gender also seems to be a mediating variable in lay accounts of health. Anson et al. (1993) revealed gender differences in health perceptions. Females were more likely to report symptoms of ill-health than were males. When subjectively appraising health, the female sample was twice as likely than the male sample to evaluate their health as poor. Anson et al. account for these differences through differences in the gender perception of acquired risks. Women face more role-related risks to health than do men in the form of less education and less opportunity for paid employment plausibly resulting in heightened psychological and emotional risks to health. The researchers conclude that women are socialized to be "legitimately dependent" in a society that places value on personal achievement and paid work (Anson et al., 1993).

Similarly, Cornwell (1984) reveals gender differences between individuals' public and private accounts of health. Public accounts are those centred upon the moral and societally condoned aspects of health and illness while private accounts are more practical, pragmatic views specific to individuals' lives. Cornwell discovered gender differences

in private accounts of men and women in her sample such that males tended to view illness as something that has to be "worked off", while women were more accepting of illness as inevitable and unavoidable or "just the way it is" (p.134).

Seemingly women appraise their health qualitatively differently than men. Differences exist in health appraisals in women according to socio-economic status as indicated in the literature. For example, Walters (1993) found that psycho-social factors are central to women's evaluations of health, and that in interpreting both physical and mental health women rarely refer to biomedical explanations. Mental health is interpreted among women differently according to socio-economic status, family structures, and position in the labour market (Walters, 1993). Like Anson et al.(1993), Walters accounts for women's differential health perceptions as arising from the socialization of women into nurturing roles.

Gabe and Calnan (1989) illustrate differences in women's views about biomedicine according to class. The researchers discovered that females held more faith in technology designed for major ailments than medical technology aimed at minor health problems. This differential in trust of technology was thought to arise from differences in lay perceptions of medical technology according to personal experience and social circumstances. Gabe and Calnan (1989) reported the influence of socio-economic status on these

perceptions in finding that working class women were more skeptical of technology than were their middle class counterparts.

Lay perceptions of health and illness follow individualistic and subjective rules of logic that do not always adhere to the biomedical view of cause and effect. In fact, lay perceptions of health are often contradictory and contextual, and are heavily reliant upon personal experience and ways of knowing. Although largely influenced by biomedical etiologies and the social constructions and norms which underlie them, lay perceptions are influenced by factors inherent to the individual including their social, economic, and environmental circumstances, as well as through personal worldviews as expressed in value orientations.

2.5 Environmental Perceptions Research

Though health remains one of the most highly regarded values, the environment is also considered an important life domain and is viewed as having an impact on well-being and quality of life. Increasingly, the environment is being linked with personal, economic, and social security. The environment becomes a value to society especially as a result of its influence on lifestyle, health, and safety. Just as health perceptions arise from personal values and social norms, perceptions of the environment stem from and are mediated by

individual and social characteristics, values, and dominant worldviews. Environmental concern, knowledge, and behaviour literature reveals the nature of perceptions of the environment as well as concerns related to its influence upon us as individuals and a society.

Environmental Concern

Like health perceptions, environmental perceptions and concerns vary according to individual and social characteristics. For instance, environmental concern has been positively related to education and income or socio-economic status (Van Liere and Dunlap, 1980, 1981). Environmental concern has also been seen to vary by gender. Much of the empirical research on gender and environmental concern has revealed mixed and inconsistent findings (Arcury, Scollay, and Johnson, 1987; Blocker and Eckberg, 1989; Borden and Francis, 1978; Brody, 1984; McStay and Dunlap, 1983; Schahn and Holzer, 1990). Inconclusivity of the effects of gender on concern have been noted as early as Van Liere and Dunlap's (1980) research on the social bases of environmental concern. In summing the results of 21 studies on the effects of five theoretically influential variables related to concern (age, class, residence, political orientation, and sex), Van Liere and Dunlap concluded that only age, education, and political ideology could be consistently associated with concern. The

effects of gender and class unless related to education remained negligible. Research conducted by Arcury, Scollay, and Johnson (1987) on concern for acid rain also finds no support for the hypothesis of sex differences in attitudes towards environmental issues, revealing no significant difference in concern for acid rain between women and men. Later research by Arcury (1990) also demonstrates the inconclusive nature of associations between gender and environmental concern. Results revealed that while environmental knowledge is associated with being male and having a higher income or more education, the overall association of environmental concern to gender is inconsistent.

Despite contradictory findings, other empirical research on environmental concern does suggest that women are more environmentally-oriented than men on a global scale. Women are seen as ecologically minded due possibly to more altruistic value orientations resulting from differential sex role socialization. That there are gender differences in environmental concern is theoretically consistent with much ecofeminist theory. This supports the feminine view of a world of inherent interconnections (Gilligan, 1982; Merchant, 1981; Nelkin, 1981, Stern et al., 1993). When the environment is viewed as a commodity for human consumption, the socialization processes inherent in Western society coupled with the

gendered economic and occupational structure are thought to encourage females to be more ecologically benign and males more ecologically destructive (Barbour, 1980; Blocker and Eckberg, 1989; Brody, 1984; McStay and Dunlap, 1983; Merchant, 1981; Nelkin, 1981; Stern et al., 1993; Steger and Witt, 1989). As suggested by Steger and Witt (1989):

> "If women are actually socialized to be nurturing and protective and if women perceive themselves to have a special link to a natural order wherein all living things are interconnected, it follows that women ought to be more supportive of a pro-environmental, spaceship earth belief system than men" (p.629).

Many have noted the plausible effect of gender as a mediator of environmental concern, especially with reference to the effect of gender on moral development and value orientations. Early work by Borden and Francis in California (1978) on personality determinants of ecological concern of men and women found a strong sense of concern to be related to value orientations and altruism. Their work on environmental concern revealed that females scored higher on responsibility, femininity, communality, and socialization subscales. Studies on gender, values, and environmental concern conducted in New York State by Stern, Dietz, and Kalof (1993) indicate that women are more ecologically oriented due to a heightened perception of the plausible consequences of the environment for personal well-being, social welfare, and the health of the biosphere. Stern et al. attribute this difference in gendered

beliefs as possibly reflecting different ways individuals are attuned or attentive to information about consequences of environmental problems.

Others have also reported a link between gender and environmental concern. Van Liere and Dunlap (1981) reported that although political ideology and education were by far the strongest/most consistent correlates of concern, women were significantly more concerned than men with environmental issues. Research by McStay and Dunlap (1983) examined male/female differences in environmental quality concern in Washington State, finding that women are more concerned about all aspects of environmental problems than men. Women also tend to express their concern on a more private level than men, mostly through environmentally-safe household activities.

Perceptions of threat to health and well-being from environmental influences also seems to vary by gender. Baldassare and Katz's California study (1992) on the sense of personal threat as a predictor of environmental practices demonstrated that the strongest demographic predictors of personal threat from environment are age, sex, and political orientation with young, female liberals being most concerned about the threat of the environment on their health, and hence most likely to engage in environmentally-friendly practices. In a cross-national study of gender differences in environmental orientations amongst both the public and

environmental activists, Steger and Witt (1989) found female subjects to be more ecologically concerned and more concerned about possible harmful effects of the environment on health. They discovered that sex had an effect on all pro-environmental measures including protective orientations, perceptions of risk, support for the New Environmental Paradigm, and support for an acid rain moratorium revealing that, on the whole, women are more concerned and hence more pro-environmental.

Perhaps the best support for gender differences in concern stems from studies of local or specific environmental issues. Although research shows that women are on average more concerned than men with the environment on a general scale, the implication of women's ecological orientation seems to be most potent at the local level. Gender differences in concern may be noted in specific environmental issues such as nuclear power. For instance, Nelkin's (1981) work on gender differences in concern surrounding nuclear power allies feminism with anti-nuclear attitudes. Women were more likely to identify themselves as being "anti-nuclear" than men who tended to identify themselves as "pro-nuclear". Similarly, Brody's work (1984) on sex differences in support for nuclear power reports that women are less supportive and more concerned than men. This is explained by their heightened concern about issues of health, safety, and reproductive

effects. Women seem to be more aligned with safety issues than economic or technological issues. Other studies support the notion of women's concern for local hazards. Blocker and Eckberg (1989) found the strongest evidence of gender differences in environmental concern to be related to local environmental hazards in which a distinct "motherhood" effect or a feminization of concern may be seen related to immediate and proximal environmental issues. Blocker and Eckberg do concede that these "motherhood" effects are only noted with regards to local environmental hazards posing threats to health and family while no significant gender difference was reported for general environmental hazards. Thus Nelkin (1981), Brody (1984) and Blocker and Eckberg (1989) suggest that women are most concerned with local as opposed to global environmental hazards, resulting from what is thought to be an innately female concern for the immediate safety and welfare of the family and hence a focus on local issues.

As well as environmental concern, knowledge of environmental issues and their influence on humans has been found to vary according to social characteristics including gender and socio-economic status. Research by Arcury, Johnson, and Scollay (1986) on ecological worldviews and environmental knowledge demonstrates that males with higher income hold more environmental knowledge than other social groups. Zeidner and Shechter (1988) also reported a higher level of

affective concern corresponding with cognitive awareness of pollution (knowledge, intellect) and also with higher socio-economic status.

Environmental knowledge seems to vary by gender as well. Schahn and Holzer (1992) found that gender has an effect on levels of environmental knowledge. Although women held higher values and attitudes related to environmental quality and concern as well as self-reported pro-environmental behaviour, they held significantly less knowledge than their male counterparts. Men generally held more concrete knowledge than women about issues such as environmental action strategies (ie-household water conservation, identification of environmentally-harmful products), and more abstract environmental knowledge (ie-description of "ecology"). Arcury, Scollay, and Johnson (1987) and Steger and Witt (1989) also show that men possess more information concerning the causes and effects of acid rain than did their female counterparts (see also Arcury; 1990).

So while women seem to be more concerned with environmental influences, the literature suggests that it is men who hold more concrete and abstract knowledge of environmental issues and their possible effects on humans. Clearly environmental concern and knowledge are not always linked. Arcury (1990) suggests that there is a direct relationship between environmental attitudes and knowledge,

with knowledge leading to concern. According to this finding, men should logically be more concerned about the environment resulting from a higher level of environmental knowledge. In fact, the literature suggests the exact opposite: that men are indeed more knowledgable, but yet are less concerned over all with environmental issues than women.

2.6 Environmental Values

Of central importance to environmental perceptions and concerns seems to be the value that we place on the environment. Values differ from attitudes as they are not directed at objects, activities, or situations, but provide the superstructure for both attitudes and actions (Dunlap, Grieneeks, and Rokeach, 1983). Borden and Francis (1978) found that those with high environmental concern are also those with stronger value orientations towards the environment and those with more altruistic dispositions as well. Simmons, Binney, and Dodd (1992) revealed that the greater importance given to a "clean environment" as a value, the greater the interest reported in the environmental issue in their survey about the transportation of radioactive wastes and possible public health effects.

Neuman (1986) also reveals values as being strongly related to perceptions of personal commitment to pro-environmental behaviour rather than to actual behaviour:

"values are an important level of analysis to consider in the context of resource consumption issues because they correlate with qualitative aspects of people's lifestyle preferences and goals" (p.55).

It is exactly these "lifestyle preferences and goals" related values that are reflected in individual environmental attitudes and choices. An individual's value system has a great deal of influence on the nature of relationships between environmental concern, knowledge, and behaviour.

Gender differences in value orientations relating to altruism and the environment have been reported. Women have been shown to have different value systems than men resulting from differences in socialization and hence moral reasoning and development (Bussey and Maughan, 1982; Crow et al., 1991; Gilligan 1977, 1982; Hoffman, 1975; Merchant, 1980; Steger and Witt; 1989; Stern et al., 1993). McClintock and Allison's (1989) study of social value orientations and helping behaviour reveals differences between women and men. With respect to gender differences in three social values, namely cooperative, individualistic, and competitive orientations, McClintock and Allison classified a higher proportion of females as cooperative, and a higher proportion of males as competitive. Since altruistic dispositions have been linked to environmental orientations, these results would suggest that women's value structures are more closely connected to environmental orientations. Stern et. al (1993) reported a

link between altruistic environmental orientations and gender, finding that women are more likely to view the environment as having consequences for personal well-being, social welfare, and the health of the biosphere than their male counterparts. Stern et. al attribute this to what they perceive to be an increased likelihood of females connecting the environment with their value systems.

2.7 Environmental Behaviour

Although much work has been done which attempts to estimate the determining factors of pro-environmental action, there are very few accurate and consistent predictors of environmental behaviour. It is generally expected that pro-environmental attitudes and a high threshold of knowledge with an altruistic or biospheric value orientation are likely to lead an individual to act in an environmentally-conscious manner. Attitudes and knowledge related to environment, though the most reasonable predictors of action, are not always congruent with behaviour (Axelrod and Lehman, 1993).

A recent poll on environmental concern and action by Angus Reid (1992) revealed that the North American public remains very concerned about issues of environmental quality, but is nonetheless primarily inactive in pro-environmental behaviour (Axelrod and Lehman, 1993). One of the few public actions consistently reported by the survey is recycling. This

finding may reflect a low sense of personal control over a common good (the environment) resulting in lessened pro-environmental behaviour. In fact, Neuman (1986) suggests that personal commitment to conservation behaviour is most likely to develop from a higher order concern about collective goods like the environment. This may be reached when individuals have fulfilled or are less concerned with lower order concerns such as housing or employment. It also suggests that environmental commitment would be related in some way to socio-economic status and level of actualizations of needs. Theoretically, then, environmentalists should therefore place higher value on higher order needs such as self-actualization, self-esteem, and aesthetics (Dunlap, Grieneeks, and Rokeach, 1983). Yet our valuing of the environment might be more related to our perception of commitment to conservation practices than our actual commitment. Although we might strongly value acting in a pro-environmental manner, our individual decision to act or not to act stems from a combination of attitudinal, efficacious, and motivational factors which combine our desire and sense of control over altering or benefiting the environment (Axelrod and Lehman, 1993). Costs and benefits to act are thus weighed with ability to alter the environment depending upon personal perceptions.

In relation to air pollution, Zeidner and Shechter (1988) illustrate how factors such as an individual's actual

or perceived exposure to harmful environmental agents as well as personality factors such as locus of control, anxiety, and intellectual ability, contribute to environmental action. This seems to imply that action results from our perceptions of personal harm from environmental agents as well as our perceptions of individual capacity to alter the environment. They found that passive reactions towards the environment stem from perceived powerlessness or lack of a sense of control. Baldassare and Katz (1992) found that those who perceive environmental problems such as air and water pollution as having serious effects on their health and well-being are more likely to engage in environmental practices. Stern et al. (1993) also suggest that those who perceive the environment as a personal threat are more likely to engage in pro-environmental behaviour. Schwartz (1970) developed a theory of altruism suggesting that people act in an altruistic manner when aware of harmful consequences to others as well as when they see themselves as personally responsible for an alteration in the present state. Stern et al. (1993), in adapting the Schwartz model of altruism, demonstrated how acceptance of harmful environmental consequences and personal responsibility for the environment served as motivators for pro-environmental action. Steger and Witt (1989) suggest too that environmental behaviour results from increased perception of personal risk and not necessarily from increased knowledge

or awareness surrounding the environment.

Research on the relationships between demographic factors such as gender and income to environmental behaviour reveal an inconsistent and at best indirect link though they may be arbitrarily linked with environmental concern and personal threat (Arcury, 1990; Baldassare and Katz, 1992; Neuman, 1986; Schahn and Holzer, 1992; Zeidner and Shechter, 1988). Neuman (1986) for instance, refutes any significant association between gender and socio-economic status and behaviour despite their plausible relationship to environmental values.

Gender differences in reported pro-environmental behaviour have been noted by others. Schahn and Holzer (1992) found that women held stronger values and attitudes and self-reported behaviour than did men despite having less environmental knowledge. This finding may be attributable to women's differential role socialization or possible position within the household accounting for a majority of environmental actions conducted within the home. Baldassare and Katz (1992) suggest that women are more likely than men to engage in environmental practices such as recycling, conserving water, purchasing safe products, and limiting driving. McStay and Dunlap (1983) found women less likely than men to engage in environmental practices outside of the home (public), but more likely within the home (private),

demonstrating that environmental action by women might well assume a more private face, while men prefer to act in the public realm.

2.8 Perceptions of Environmental Health Risks

Although perceptions of health are based upon personal experience, perceptions of the impact of the environment on health are often based upon fears and suspicions of environmental hazards. From the previous sections, it is evident that environmental attitudes, concerns, and behaviours vary according to the value placed upon the environment as well as perceived personal threat posed by the environment to humans. Perceptions of environmental threat are value-based and socially reinforced phenomena that may well exist outside of and are not necessarily based upon evidence of environmental impact. Just as perceptions of health may exist outside of biomedical explanations of health and illness, so too may perceptions of environmental risk to health exist outside of "scientific" evidence.

In the case of environmental epidemiology, little is known about the nature and extent of exposure as it is often at low levels and poorly defined (Frank et al, 1988). According to Anderson (1987), environmental contaminants can and do occur in the form of mixed chemical exposure at unknown doses. Little is often known about the interactions of

chemicals and changes in contaminants as they travel through the environment in various ways. Health effects of environmental exposures are also often difficult to assess. As stated by Eyles and Cole (1995), "most diseases are caused by multiple factors, while a specific environmental exposure may have different health effects which may in turn have different latency periods" (p.51). Even when the nature of chemical exposure may be assessed, there are often "no adequate methods for assessing human risks for most toxicological effects" (Anderson, 1987, p.186). As stated by Frank et al. (1988), "the unfortunate biological truth is that almost no human health effects known to result from a chemical exposure are completely specific to that exposure" (p.136). Although dose-response is the most convincing of epidemiological evidence, it is often difficult to establish with environmental agents owing to difficulties in classifying populations at risk, low levels of exposure, multi-toxic conditions, and often long disease latencies (Eyles and Cole, 1995).

It is not within the realm of this dissertation to examine the scientifically assessed threats posed to health by the environment, but rather to examine public perceptions of these threats. Most of the scientific literature suggests that a conclusive relationship between environmental agents and the onset of disease is often tenuous given the nature of exposure and the methods of study. The importance of this

inconclusivity of research findings for public perceptions is that even when scientific evidence of environmental risk is unsubstantiated, perceptions of risk prevail based upon what is known and reinforced in society, ususally in the form of "worst-case senarios". Even when evidence of risk to health is absent, perceptions of risk which rely upon easily recalled instances of environmental threat may override because they are socially formed and reinforced.

2.9 Conclusions

Literature on perceptions of health suggests that health is given meaning in lay accounts through value-based and experiential judgements of what is meant by the term "healthy". Lay perceptions of health are not only individually value-based, but are socially constructed and reinforced through normative frameworks. Environmental perceptions are also differentiated through value orientations as is evident in the literature. Perceptions of the environment are formed around personal values and worldviews which are socially reinforced as well. Just as lay perceptions of health are defined as people's theories to account for their mental, social, and bodily circumstances (Stacey, 1988), environmental perceptions are our theories of how the world around us works and impacts upon us. Environmental attitudes, values, and concern may be seen to be guided by perceptions and "theories"

about risks and personal threat associated with the environment. Despite the fact that proof of actual environmental threat to health is rarely conclusive according to the literature, perceptions of environmental risk to health are largely based upon these value judgements. Lay perceptions of health and the environment differ according to our values, our own ways of knowing, and what we deem important to our quality of life. Not only do health and environment perceptions vary according to normative and value structures, but they also differ according to social characteristics such as gender and socio-economic status. This dissertation provides a Canadian case study of these relationships.

CHAPTER THREE

Methodology

3.1 Introduction

Perceptions of health and the environment arise from social meanings which are often shared. In order to examine the nature of these perceptions, an analytical method must be utilized which allows the researcher to account for and interpret views and understandings of events and relationships. Interpretive analysis is used by social geographers to analytically examine the understanding of social phenomena resulting from such experience. Ley (1977) points to a paradigm shift inherent in social geography, altering the research agenda from a geographical analysis of place to events and meanings:

> "As social geography follows its agenda and dips beneath spatial facts and the unambiguous objectivity of the map, it encounters the same group-centred world of events, relations and places infused with meaning and often ambiguity" (p.504).

The present study seeks to explore the nature and meanings of public perceptions of health and the environment within a human geographical context. This research agenda requires a methodology that focuses on the discovery of perceptions. It utilizes in-depth interviews as the basis for the collection,

analysis, and interpretation of data.

Interpretive geography lends insight into the study of such perceptions. According to Schwartz and Jacobs (1979), the approach of interpretive sociology involves the attempt on the part of the researcher to develop representations and constructions that take place in the social world itself. It is through interpretive methods that lay perceptions and accounts are given validity amidst scientific worldviews of events and situations. As an attempt to "set out to learn to see the world of individuals and groups as they see it" (Baxter and Eyles, 1995), interpretive geography uses methods that allow for the understanding and analysis of meaning arising from human interaction.

3.2 Qualitative Methods: The In-Depth Interview

According to Baxter and Eyles (1995), qualitative approaches to the study of human geography increasingly focus on human agency and social interactions and negotiations in places. Qualitative research methods may be seen as "an attempt to uncover social, cultural, or normative behaviours and interactions, describing the events and beliefs underlying them" (Rothe, 1994). One such qualitative method is the in-depth interview. In-depth interviews were chosen as the method of exploration for the present study because of their suitability for involved discussion and basis for inductive

analysis. Qualitative interviews may be structured along several lines ranging from formal structure in which an informant is asked a series of structured questions, to informal interviews in which an informant is asked a series of un-structured or open-ended questions. In in-depth interviews, the respondent is asked a series of questions on specific topics and is asked to reply in their own words which are then recorded verbatim as data. Unlike formal or structured interviews, informal in-depth interviews using open-ended questions allows for a richer exploration of topic areas in a conversational setting. While both interview techniques require that the researcher guide the discussion through the use of a checklist of thematic topics and questions, informal interviews with an unstructured checklist promote a freer exchange of ideas and encourages an interconnection of these ideas on the part of the informant through semi-structured conversation with the interviewer.

The data derived from qualitative in-depth interviews is in the form of the respondent's spoken words. Because the researcher him\herself is the methodological instrument, he or she may become an active participant in data collection. Though the possiblity of bias resulting from this method is high, it equally allows for a deeper exploration of topics through in-depth discussion. Through qualitative interviews, the researcher is able to develop a first hand understanding

of informants viewpoints through the role of conversationalist and mediator of discussion. This methodology therefore requires that the researcher be adept at personal discussion, linking ideas and introducing fruitful new topics to informants, as well as being proficient at an evolving interview style throughout the process of data collection.

The checklist used for interviews in the present study was designed to initiate the exploration of viewpoints surrounding perceptions of health, perceptions of the environment, perceptions of risk to health from the environment, as well environmental ethics and personal moral responsibility. The checklist consisted of roughly 27 questions related to these topics. While some of the questions were semi-structured in nature, most were open-ended to encourage informants to speak freely about their own understandings and perceptions as well as allowing them to discuss their perceptions of interconnections between topic areas. Conversation between the researcher and informant was facilitated as well by the use of probes designed for each question to further the informant's flow of ideas surrounding health and the environment. A list of questions administered to all informants is presented in Appendix 1.

3.3 The Sample for Study

The sample for the present study consisted of a total

of forty respondents. Because the study seeks to explore the nature of public perception of health and the environment across social groups, a sample of respondents from both higher and lower socio-economic status of both men and women was deemed appropriate. Because the sample size is small, generalizability of results with significance is problematic. Instead, a sample of forty was chosen for exploratory analysis based upon representativeness and richness of qualitative data from in-depth interviews. Census tract data for the Region of Hamilton-Wentworth was used to select one higher and one lower income area for sampling (eg- Ward 3 in Ancaster, and Wards 5 through 11 in Hamilton). Polling listings from October 1994 for both the City of Hamilton and the Town of Ancaster provided the names and addresses of all residing in the areas as of that year, and hence formed the sampling frame.

According to Baxter and Eyles (1995), credibility of research, or the accurate reconstruction of multiple "realities" of individual experience by the researcher, is facilitated and enhanced by respondent selection procedures. For this reason, random sampling for four sub-populations was chosen for the study to avoid methodological pitfalls related to self-selection biases. Ten male and female respondents were randomly selected from the entire populations of each of the two areas to form a total sample of forty respondents. Letters were sent to prospective respondents to request an interview,

followed by a phone call to arrange for an interview. Resampling occurred in order to generate a total sample of forty. A total of 127 letters were sent to prospective respondents in order to achieve this mark, resulting in a response rate of approximately 31 percent.

Respondents ranged in age from 18 to 80 years old. Ethnic composition of the sample was varied, but was mainly individuals from Italian, British, French, and Canadian heritage. The twenty male and female respondents held a variety of occupations in both white and blue collar employment. Of the total forty respondents, one was chronically disabled, four were students, four were housewives, and eight were retired. A brief description of respondent's pseudonyms, ages, and occupations by social group may be found in Appendix 2.

3.4 Data Collection and Analysis

One-on-one, in-depth interviews using a questionnaire of semi-structured and open-ended questions were conducted with forty respondents by the researcher between June and August of 1995. Though most interviews took place in informants' homes, some were conducted in a restaurant setting. Interview time ranged from one-half hour to one hour in total. All interviews were tape recorded with the informant's permission, and were transcribed verbatim

following the interview in order to preserve the integrity of respondents viewpoints. Transcription was conducted by the interviewer which both ensured accuracy of its transmission, as well as further increasing interviewer intimacy with the data set.

The first phase of analysis involved the preliminary coding of transcripts by the researcher. Once collected, transcribed interview data was read over once in order to establish general themes. Transcripts were read over a second time, and were manually coded. Coding was cross-checked by an external reviewer in order to assess researcher reliability. Theme analysis was a constantly evolving process involving the integration of emerging themes with each sweep of the data set. According to Baxter and Eyles (1995), "flexibility typifies qualitative research procedures, whereby methods, methodology, and analytical strategies may be continually revised as new information is acquired". The ongoing analysis involved recording and marking emergent codes and themes in the data which resulted in the reinforcing of certain themes, the weakening of others, and the collapse of other data into more prominent categories. This phase of manual analysis consisted mainly of re-reading transcripts and making notes related to themes which resulted in the development of a preliminary code and theme book.

The second phase of data analysis involved the recoding of the data using a qualitative software package called THE ETHNOGRAPH (VERSION 4). THE ETHNOGRAPH (v4) is described by its developers Seidel, Friese, and Leonard (1995) as "a computer program designed to facilitate the analysis of data collected in qualitative research" through aiding in the processes of "noticing interesting things in your data, marking those things with code words, and retrieving those things for further analysis" (pg1, User's Guide). The program was originally developed in 1985 for the microcomputer-assisted management and analysis of text-based data, notably for sociological qualitative analysis (Tallerico, 1991). The developers themselves admit that the program originated during fieldwork in a chronic pain control centre in which they needed to qualitatively analyze the social construction of chronic pain syndrome in patients (Seidel and Clark, 1984). As a result, the program is especially adept at aiding in the analysis of qualitative interviews and focus-groups. THE ETHNOGRAPH'S basic functions include: receiving and storing textual data; numbering lines of data in transcripts; coding and indexing of numbered segments of data; developing and modifying codewords or the entire coding system; searching and retrieving coded segments; sorting data segments according to single or multiple codes; and counting and providing summary information about frequencies of codes in the text.

In the present study, THE ETHNOGRAPH was used to build and expand upon the manual coding, mark segments of single and multiple codes for storage and retrieval, develop and modify the code and theme book, and sort the data by code and theme. Frequencies of coded segments were also provided through the use of the program. A final code and theme book was developed through the two-stage analysis resulting in a total of 45 primary codes and numerous sub-codes within ten major themes.

In selecting software for analysis, it is integral that "the choice includes careful consideration of program performance and its compatibility with both the purpose of the research and the researcher's previously developed schema for the management of qualitative data" (Walker, 1993). The choice of this particular program for analysis in the present study can be easily justified. Firstly, THE ETHNOGRAPH is a highly user-friendly qualitative software package, a quality that is attractive to first-time users of such software such as the researcher in the present study. Although it does not provide much analytical power when compared to newer and more complex qualitative software such as THE NUDIST, THE ETHNOGRAPH is appealing in that it allows the user to quickly sort, store, and retrieve coded segments through a less complex process. Another positive feature of THE ETHNOGRAPH is its ability to "provide a convenient mechanism for contracting/simplifying the classification system and "pulling together" multiple

preliminary or minor themes into a workable and supportable number of major topic-categories or conceptualizations" (Tallerico, 1991). As well, THE ETHNOGRAPH'S capability of displaying co-occurring codes suggests connections in the data that otherwise would not have been apparent (Walker, 1993).

In combination, the two-stage theme analysis served to simplify and regroup data along coherent lines which in turn facilitated data interpretation. Although suitable for use in categorizing, sorting, and retrieving segments, THE ETHNOGRAPH was useful only in combination with manual coding by the researcher as the program itself holds little analytical power. As stated by Walker (1993), "while programs might vary in terms of the specific operations they perform, such functions serve only to modify, retrieve, and display data; the analytic expertise needed to identify relationships and draw inferences must be provided by the researcher" (p.94). This notion is also reinforced by Tallerico (1991), building on Bogdan and Taylor (1984), who states that although programs aid the process of data analysis, "microcomputers cannot be used as a substitute for the researcher's insight and intuition in interpreting data" (p.281). Indeed, the original developers Seidel and Clark (1984) themselves admit that although THE ETHNOGRAPH "facilitates this process by enhancing the efficiency of the mechanical parts of the work", its role in interpretive analysis is secondary to that of the

researcher as "it relies on the researcher to make sense of the data" (p.123).

3.5 Research Findings

Following analysis, findings were prepared and written up according to theme. The data in the present study are presented in the form of quotations from the respondent's themselves. Their words have been recorded and displayed verbatim throughout the following chapters in order to preserve the quality and originality of respondents' own expressions of their perceptions. Interpretation and contextualization of the data are provided with the presentation of quotations by the researcher to facilitate a clearer understanding of commonalities and differences, understanding and meaning of these perceptions.

According to Baxter and Eyles (1995), credibility of qualitative research "refers to the connection between the experiences of a group(s) and the concepts which the social scientist uses to recreate and simplify this experience through interpretation" (p.18). Further, they suggest that credibility does not depend upon "confirmation from respondents but [is] a commentary from them on the plausibility of the interpretations that is required" (p.18). Because validity in qualitative social research is internal to the discourse itself and is justified in terms of the

presented evidence (Eyles, 1988), the voices of respondents themselves are used to ground research findings within the context of shared meanings. Interpretation of findings is inductive in that these shared meanings are construed from a sum of individual meanings as seen in particular cases. Source triangulation, or the use of more than one report from a data set to corroborate a construct involving the presentation of quotations from several different respondents was used in and lends credence to this inductive interpretation (Baxter and Eyles, 1995; Eyles and Donovan, 1986).

3.6 Conclusions

Interpretive methods in social geography allow for inductive analysis of shared meanings of social events and situations across individuals and groups. Since perceptions of health and the environment are socially constructed and reinforced, the methodologies chosen for their exploration and analysis must be adept at representing the observer's vision of reality. Qualitative methods such as in-depth interviews allow for the exploration of public perceptions and understandings of these issues as well as the interpretation of shared meanings across groups. Manual coding in conjunction with the use of THE ETHNOGRAPH resulted in the effective sorting and organization of the data according to theme, which in turn resulted in ease of interpretation. This particular

method of data collection and analysis was especially suited to the study of perceptions of health and the environment as it allows for the interpretation and verification of findings through lay accounts themselves.

CHAPTER FOUR

Perceptions of Quality of Life

4.1 Introduction

This section explores public perceptions of quality of life according to several indicators. Respondents were asked how important their health and the environment were in comparison with other things that they might value in order to achieve a relative assessment of life domains. Individuals were asked to rank twelve domains of life into their top three and top five most valued life aspects. The chosen life domains as adapted from Eyles (1985) are: family; friends; health; religion; marriage; standard of living; environment; education; job or career; law and order; house; and spare time. Rankings for each of the four social groups into total frequencies were then compiled to present trends according to gender and socio-economic status. Differences exist in the ranking of life domains across social groups.

4.2 Quality of Life Perceptions

All groups ranked health and family as their first and second most important life domains respectively. This finding is consistent with the work done on quality of life indicators

by Campbell (1981) in which those aspects in life related to the self are deemed most important for personal satisfaction. For women in the sample, these domains were trailed by friends, marriage, and law and order respectively. Males in the sample ranked their next three most important life domains as friends, law and order, and marriage. Only a small difference may be noted between the overall top five rankings of life domains of women and men, with the importance of marriage being more important to females than law and order. The opposite occurs in the rankings of the males in the sample, with law and order holding more importance than marriage.

Though only subtle differences exist between the overall rankings of men and women, more obvious differences may be seen in comparing the rankings of higher vs. lower socio-economic groups. Higher socio-economic groups also ranked health and family as the primary and secondary life domains, adding to this marriage, friends, and education as their top five concerns. Lower socio-economic groups cited health and family, and trailed these domains with friends, law and order, and marriage.

Differences exist in the importance of life domains across socio-economic categories. The relative concern for education as the fifth most important domain in higher socio-economic groups reflects their status and the role of

education in its acheivement. Lower socio-economic groups
instead cited law and order as their fourth most important
life domain, reflecting perhaps a different set of needs and
concerns from higher SES groups related to safety. The ranking
of marriage also differed between higher and lower income
groups, each ranking marriage as 3rd and 5th respectively. A
basic conclusion may be drawn that while higher socio-economic
groups are concerned with their standard of living and
personal satisfaction, lower SES groups are more concerned
with personal security.

While health was reported to be the number one concern
of all groups, the environment did not rank in the top five of
any groups or individuals. The environment was apparently not
as central to quality and satisfaction with life as those
domains associated with the self such as health. Both lower
and higher SES groups on average reported the environment to
be their 6th most important concern out of the twelve life
domains, indicating what seems to be consistency across socio-
economic groups. Gender did account for what seems to be a
differential ranking of the environment as a personal
priority. Women in the sample ranked the environment on
average 8th out of 12 domains, while their male counterparts
ranked the environment on average as the 7th most critical
life domain. On average, women seemed to be less concerned
with the environment as a life domain than men, indicating

that the perception of importance of the environment as a life domain might be affected by gender. These differences, however, appear slight.

CHAPTER FIVE

Perceptions of Health

5.1 Introduction

This chapter explores public perceptions of health. Informants were asked to describe their own health, what is meant by the term healthy, and how they viewed the health of others around them. They were also questioned about the nature of their ill-health if any, and the causes they attributed to ill-health or disease. Subjective health appraisals about oneself as well as others were expressed by the entire sample with relative ease. It seems that the meanings of these terms are shared and experienced by most people as something intrinsic and valuable to their being. Though similarities exist, men and women of high and low SES differ in their definitions of their own health and ill-health as well as their description of the health of others. The nature of these differences may be seen in the words of the informants themselves used to define and describe these terms.

5.2 Perceptions of Health as Mental and Physical

Health was defined by the majority of informants as having both physical and mental components. Women of both high

and low socio-economic status seemed to be more expressive and articulate in their definitions of these components as compared to their male counterparts. Perhaps this finding reflects the ecofeminist contention that women view the world as inherently interconnected stemming from a relational rather than instrumental morality (Gilligan, 1982). High SES women tended to speak of their health in very holistic terms as related to a "healthy outlook" or "balance in life", thus connecting physical with mental health through a positive mind-body relationship:

> Kathleen - "Healthy to me is a healthy outlook.
> It is having a balance in your life".

> Catherine - "I think healthy is a state of being
> whole. So whether you envision yourself being a
> whole person. You can be unhealthy in your body
> and still be whole in your mind. Or you could be
> broken in your mind and whole in your body. So I
> think it's a balance of those".

Women of lower SES frequently spoke of their health in terms of physical and mental components, but tended to concentrate more on the factors that make a person unhealthy as opposed to the positive health "balance" depicted by high SES women:

> Melissa - "Obviously any negative factors are going
> to affect health. It may not be obvious, or an
> obvious connection, but anything that makes you
> less than happy or less than comfortable..."

> Melissa -- "Stresses and your interactions with
> people are going to affect your health".

> Jane - "[Health is] Just taking care of yourself in
> general. Well, except for mental health then, doing
> more stuff that makes you feel good about occupying

your spot on the face of the earth".

In general, the male sample was less articulate and integrative about health. Men of high SES made no reference to health as a combination of mental and physical aspects. Men of lower socio-economic status however did make reference to the interrelation between these components, as well as the role of personal attitude as a mediator of health status:

> Edward - "Hamilton's a pretty grey place. I think its affecting my mental mood right now actually. If I wipe my finger on the window sill out front its all black...I'm almost wondering if it's headaches"

> Garry - "I think it [health] has a lot to do with a person's personality, and their attitude"

5.3 Perceptions of Health as the Absence of Disease

Both men and women of high and low SES viewed health as the absence of illness and disease, reflecting biomedical explanations of health in opposition to illness. All groups also spoke of health as not having to seek or rely upon medical care, visit a physician regularly, or go to hospital:

> Barbara (high SES) - "I consider myself a healthy person because I have never been in hospital, and I have no medical problems that I am aware of. You know, no high blood pressure, no diabetes. So that's why I consider....I don't miss a day at work. I still work full time. So that's why I would say that I am a healthy person"

> Sonya (high SES) - "I define healthy as you know, no problems on a day to day basis. I wouldn't say that I am physically fit, but I am healthy in the sense that you know, not that I have any problems or am running to a doctor a lot or that sort of

stuff"

Rory (high SES) - "Well, I don't have to run to a doctor every day, every week. That is healthy"

George (high SES) - "Well, at my age, just being here I guess is healthy. No, I have had sickness, but I am over that. It seems to have corrected itself about ten years ago so I am fine now. I don't have any visitations to the doctor every month like my wife does, so I can say I am pretty healthy. If you don't have to go to the doctor then you are pretty healthy"

Lower socio-economic groups, notably women, defined health according to the absence of illness and not having to seek medical care as well. Lower SES women especially made reference to health as being essentially disease-free, but in conjunction with being able to go to work and have "life go on". This could reflect a more functionalist approach to health inherent to individuals of lower socio-economic status as detailed by Parsons (1979), as well as the notion of lower SES groups envisioning health in terms of functional ability rather than through a lifestyle and pleasurable way of life perspective (see Blaxter, 1983; D'Houtard, 1984). This finding in women of lower SES also supports Cornwell's (1984) gender differences in health perceptions that women are more accepting of illness as "just the way it is" - an inevitable fact of life:

Helen - "I define healthy as the person who would be energetic and free from disease of course. Just someone who is not taking a lot of medication...don't have to rely on a lot of medication"

Heather - "Healthy? I don't have cancer. I am not majorly ill. I get migraines and stuff, but my life goes on"

Jane - "Well, I don't know healthy according to what. I only see my doctor usually about once a year, and its usually for a check-up and a pap smear. I had a scare with cancer a few years ago, but they treated it and its gone away. I don't go to emergency rooms or this or that. Don't take much sick time off"

Marie - "I've only been in hospital once in my lifetime. I have worked for forty years and left them with one pile of sick leave. So I guess I haven't been very sick in 42 years. I've never had any childhood diseases, only measles"

Lower SES men were less articulate about their health, but also spoke of health as a lack of "major" health problems:

Thomas - "Never get colds or anything like that. No major health problems"

Garry - "I have never had any problems with illness. I am lucky that way. The worse thing I get is a cold"

One lower socio-economic respondent, Gregory, describes his health and ill-health as contradicting one another and yet simultaneously existing. Gregory, who suffers from Multiple Sclerosis, describes how he feels healthy but yet knows that he is not considered to be healthy by conventional standards:

Q - "Would you describe yourself as a healthy person?"
Gregory - "Yes, except for the obvious, my M.S."
Q - "How would you define healthy?"
Gregory - "I guess I would retract that first statement. I guess I am not healthy. I feel healthy, but I cannot get out of bed and go and walk down the block and do some work"

Gregory's definition of health reinforces Williams (1983) "sometimes contradictory" versions of health and illness in which an individual may experience having a disease but still report good health. People tend to interpret their health independently of their illnesses as a separate and distinct subjective feeling.

5.4 Health as the Ability to Assume Normal Activity

All groups identified their health as the ability to assume normal daily activity, being unconstrained and uninhibited to do things and to assume a normal life. Normality and function seemed to be critical to the concept of health. Females in the sample seemed to concentrate on health as functional ability to do household chores and perform tasks:

> Mary (high SES) - "Being able to get up every day and do your everyday chores and greet people"

> Sonya (high SES) - "Normal daily activities, you know, things you do day to day - go to work or at home, and activities you do around the house"

> Shirley (low SES) - "Well, for me it means I am able to get around and do things. Normally, in my condition I might be in a wheelchair and not able to do things for myself"

> Marion (low SES) - "Oh I am 80 years old, and I get along very well. I do all my own shopping, I do my own housework. So I don't know what the description of health is, but that's my definition of health"

Males in the sample tended to focus on health as "freedom from

constraints" to assume normal activity, including that of
functional ability in employment:

> Kevin (low SES) - "Healthy in that I am thirty-one
> years old and I am active with my children who are
> nine, ten, and six, and able to do anything that I
> feel that I would like to with them"

> Michael (low SES) - "Well, I have carpal tunnel in
> my hand, but that's just a minor discomfort. I
> don't need to take any time off work"

Although they speak of functional ability as well, health was
perceived by men of higher socio-economic status especially to
be related to quality and standard of life:

> Christopher - "I think that healthy is compared to
> how I am able to do everything I want. The standard
> of life I want. I am not prohibited from doing
> anything because of my health"

> Marvin - "I just look at it as a personal thing. If
> you feel healthy, you are healthy. I don't smoke, I
> don't drink excessively. I'm still active. I do
> everything I want to do. Health certainly doesn't
> constrain me in any way"

All groups compared their own health in some form with
the health of others around them, providing evidence that
people's concepts of health are indeed socially constructed
and reinforced:

> Joy (high SES) - "You just need to look at other
> people and then you make a decision about yourself.
> That's my main criteria"

Lower socio-economic men seemed to concentrate on defining
health as "normal" or "average" in comparison with others,
speaking of their health as being "just like the next guy":

> Nelson - "Well, just like average. Like I play a

lot of sports and all that and I keep fit and I
work. Try to eat healthy sometimes. Average"

Edward - "Just as healthy as the next guy I guess.
Well not off half the year sick from work with
something. Like I am in good shape"

Thomas - "Compared to everybody else I guess [I am
healthy]. Most people I guess get ill a lot. I
don't. I don't have the time. I think a lot of it
is the way you think. If you don't have time to get
sick, you don't get sick"

5.5 Individual Health as Qualitatively Different

Despite social comparisons, all groups spoke of the
health of others as qualitatively different from their own.
The experience of health as well as influences on health were
generally perceived to be individualistic:

Kathleen (high SES) - "...there again I think it is
quite personal. Things that affect one person might
not affect another"

Marvin (high SES) - "You can't really compare
yourself to anyone else cause everyone is
different. So I don't know if there is a model
person who you could say "Now that is healthy". I
think it is a matter of you know your body best"

References were made by all groups of respondents to other
people's health as generally worse than their own, especially
from women of lower socio-economic status, reflecting the
notion of health as virtuous and moral for the self but not
for others. This is in accordance with Stacey's (1988) finding
that although we locate the causes of illness in ourselves as
extraneous to us in order to escape blame for its occurrence,

we tend to view the health of others as poorer than our own
and personally ascribable to them:

> Frank (high SES) "Friends. It seems all my friends,
> male friends, have heart problems. Yes, mild heart
> attacks, one has a pacemaker, or replacement, oh
> gosh, I could go on. Triple by pass, double by
> pass. But without exception. And one's wife said
> that you are the only one who seems to be healthy,
> and that's probably because they had a great time
> when they were teenagers, and I exercised all the
> time. I didn't drink, didn't smoke. These male
> friends, they all have these minor problems. And
> that's without exception, they all have these
> health problems"

> Violet (low SES) - "If you are constantly with
> people who are always complaining, you know, "Oh, I
> have had an operation", and all this business, and
> they go on and on....And that's the sort of thing
> you have to forget and just think of the positive
> side and look to the future. Like when I had my
> cancer"

> Jane (low SES) - "We have a lot of complainers at
> work, but it might just be that people complain in
> general, I don't know. You see, I am forty. I just
> turned forty-one. It seems to me there is a fast
> breakdown when people reach forty. They get a lot
> of things or they just let it get to them or
> something, I don't know. I think almost everybody I
> know is complaining of something. A sore back or
> something"

5.6 Conclusions

Some differences exist in perceptions of health across
gender and socio-economic categories. Women of both high and
low SES tended to speak of their health in terms of having
mental and physical components, and were more articulate with
their descriptions and expressions of the subjective feeling

of health than their male counterparts. Lower SES respondents seemed to view health more in terms of functional ability to perform tasks, notably those included in employment, while higher SES respondents tended to speak of health in terms of life enjoyment associated with standard of living. It would seem that differing social and economic circumstances which alter an individual's needs also alter conceptions of health as they pertain to certain lifestyles.

It is clear that there are also similarities in the way all informants described their health as well as the health of others. All groups emphasized good health as an important domain necessary for everyday life and as something of great value. Health was widely viewed as the absence of illness, suggesting that our conception of health is indeed mediated by medical definitions and socially agreed-upon conventions. All groups referred to health as "normality" with relation to others in society and individual function within society, reinforcing the notion of health as a social construction in that individuals refer to others and societal definitions of what normal health should be for description and definition. Individuals also seem to revise and renegotiate perceptions of health accordingly.

Despite social constructions of health, all groups perceived their own health to be qualitatively different from the health of others around them, ascribing blame to others

for their lack of health but seemingly little to their own experience of ill-health. This perception of "my health as different from yours" would seem to reinforce individualism and moral worthiness of the self but not of others in interpreting the subjective experiences of both health and disease.

CHAPTER SIX

Perceptions of the Environment

6.1 Introduction

This chapter explores people's perceptions and definitions of the environment. Respondents were asked to define "environment" in their own terms. Though the concept of health was relatively easily defined as it is subjectively experienced, respondents had difficulty in defining what they meant by environment. It was generally described in abstract and nebulous terms, and was referred to as an all-encompassing entity. Most felt that environment had a strong influence on human life and activity owing to its all-pervasive nature. Differences may be noted in the relative definitions of environment across gender and socio-economic categories.

6.2 Definitions of the Environment

The majority of the sample defined environment as a very broad concept, usually with reference to their total surroundings. Environment was conceived of in terms varying from physical surroundings to nature to culture, society, and lifestyle. Most respondents found it difficult to provide a precise explanation of environment in comparison with a self-

referent term such as health, and accordingly described
environment as a nebulous entity. Women of high SES defined
environment as a broad concept or as "everything":

> Mary - "How do I define environment is our
> surroundings and what happens when we eat our
> vegetables when you've put chemicals into the
> ground, or whether the air control is visibly clear
> or if we are not seeing the additives. What the
> fish look like in the ponds, lakes or streams, or
> whatever. When we go canoeing, I'd like to see nice
> clean water and all, so its the nice environment.
> It's what we live in"

> Kathleen - "To me, environment is everything. It's
> the family you grow up with, it's where you live,
> it's education, it's religion, it's society, it's
> the culture that we live in. I think it's
> absolutely everything. It's not just the physical,
> external environment in my mind - it's absolutely
> everything"

> Elizabeth - "I think it's your total complete
> surroundings. Day to day, where you live. And that
> runs the whole gamut from the time you get up in
> the morning to the time you go to bed at night..."

> Beverly - "I know what I want to say, but I just
> can't think of the right word. Its virtually
> everything that surrounds us in our life. Something
> to that effect. That's a very simple way of saying
> it. The air, the ground - everything from earth to
> infinity"

Men of higher SES take on an equally broad view of the
environment as being their total surroundings and
circumstances:

> George - "I think it is everything. I think it's
> life...and everything that happens to you in your
> life has something to do with that environment.
> From the time that you are born its your
> environment, and everything affects you in some
> way"

> Keith - "The environment is the ecosystem around us. Just everything around us - the air and the plants and that's our environment"
>
> Robert - "I would define environment as the context under which we are all fit"

One higher SES respondent, Marvin, describes environment according to different scales (local or global), emphasizing that what is meant by environment is dependent upon an individual's perspective:

> Marvin - "Well it could be local. It's really up to the person's perspective. It's the town you live in. Really I look at the environment as the whole planet because what goes on in other countries is very important to our weather systems. If Russia continues to burn brown coal, that soot is going to land in our Arctic which it does. So you have to look at it globally. You have to look at the balance"

Women of lower SES also define environment through a broad lens, as "anything and everything", though slightly less articulately than higher income groups:

> Jane - "Environment is any place that you are in"
>
> Helen - "Clean air, the people around you, including everything from music to noise if you've got a high noise level. Garbage, anything"
>
> Heather - "Everything around you. Grass, trees, buildings, air - everything. In here is our environment. Everything is"
>
> Melissa - "It's everything in your surroundings. The people, air, water, ground, the animals. Everything"

Environment was defined by lower SES men with reference to humans and surroundings, and is quite broad as well:

Thomas - "My environment would be things immediately around me - where I am working, or where I am living. The neighbourhood, the places I work, the people, factories, the air. Anything immediately surrounding where I am at the time"

Simon - "It's hard to put into words. The environment is just about everything around you, nature and man-made, that has any contact with you. Its pretty well all-encompassing"

Edward - "It's the way the city works, the way nature works. It's the way the farms work. It's everything put together"

6.3 Environment as Physical and Social

Environment was also defined as having both physical and psycho-social components, namely from the female sample, reflecting perhaps a more holistic view of the environment. Women of higher SES spoke of the environment as having social and emotional influence:

Sonya - "There's a saying that says "the environment shapes you" type thing, so I guess it could be the people you are together with, and that you have contact with, and that sort of thing"

June - "It's not just the atmosphere in which you live, as far as day to day sunshine and rain. It's also the people with which you live. And I think that the way they conduct themselves I think is rather important. I think of children growing up in very crowded conditions with parents who are not tolerant because of the conditions they are living in and I think that affects the child. So it's not just atmospheric"

Catherine - "So I think we have just included everything there [in defining environment], so the physical or social environment, your psychosocial environment - I think it's all wrapped up together"

Men of lower SES also made reference to physical and social
components of environment as having influence on humans:

> Gregory - "A healthy environment could be...like
> stress could play a factor. If there's a lot of
> stress, even if it's in a beautiful clean area,
> there can still be a lot of the same. It's all
> stress. Like it doesn't have to be the noises of
> manufacturing building, constant bang-bang. It
> could be just mental"

> Thomas - "It's just environment encompasses so much
> that almost everything fits into it. Except for
> social maybe, but even that could probably be
> environment"

Men of higher SES placed much less emphasis on the social
aspects of the environment, and emphasized the physical
aspects as well as those related to work environments. Again,
the scale of environment (local or global) is mentioned as a
"narrow" or "broad" view:

> Peter - "I guess you can take a narrow and broad
> view of the environment. A narrow view would
> probably be the areas indoors and outdoors that you
> come into contact with regularly on a daily basis,
> so your house. You spend a lot of time in your
> house - a third of your life, probably more. And
> you know, your working environment. And a broader
> view of the environment I suppose would be, you
> know, the entire world"

Higher SES men also tended to view the environment with
reference to humans:

> Christopher - "Environment is what we have created
> for ourselves more than what's already there. I
> look at environment more as the environment we have
> created for ourselves rather than of course what
> was there before, like the sun, the clouds, the
> sky, you know"

6.4 Environment as Natural vs. Human-Made

While some respondents spoke of the environment as that which is created by them, others spoke of it as the surroundings untouched by humans, illustrating the difficulty involved in defining the environment. There were several references by respondents to the environment as something that may be defined according to human influence. Environment was viewed as something contaminated or polluted by humans, and dirt was seen as the malevolent bi-product of this contamination:

> Rory (high SES) - "It's very difficult for me to define. Environment has to be...I think, no waste is the main thing, no waste. I mean you can see some trees around here - it's a good surrounding. When people chop them down and burn them, that kind of thing"

> Michael (low SES) - "I'd say it's everything. Like the air, water, ground. Anything that we can contaminate I would say is the environment"

Women of lower SES also defined their environments through human's negative influence. Dirt was viewed as being the negative consequence and reflection of human's influence:

> Eileen - "Environment? That's all the dirt. That's what I would call the environment - dirt"

> Marie - "Healthy air, clean surroundings, clean water, clean plumbing. Toilet facilities. Where I live - that's my environment. I don't like dirty things. I don't like things that are messy. I think litter is one of the biggest problems in the environment, and that's caused by people"

Others tended to speak of the environment as surroundings untouched by human influence as that which naturally occurs outside of human activity:

> Marvin (high SES) - "To me the environment is nature, like without people's influence - that's the environment. So you would walk over to the woods and there's no clearing or anything like that - that is the environment. Or something, a mountain untouched. Or if there are houses around, then you cut it down to whatever the environment is, like a tree would be the environment, the air would be the environment. It's pretty much anything natural. If I sound influenced by people unfortunately the air is influenced by people, but before people were here, that would be the environment to me"

> Nelson (low SES) - "I think of nature and trees. When I think of environment, I think of trees and all that green grass"

6.5 Improvements in Environmental Quality

Both women and men of lower socio-economic status made reference to improvements in environmental quality in recent decades. There were no such references from men and women of higher SES. A lower SES woman, Marie, spoke of general environmental improvements resulting from technological advance in recent years, though in very vague terms:

> Marie - "The industries in our particular area, they have all kinds of filtering systems on there and smoke stacks now. Your cars have got your clean air system and that, so it's not as bad as it was"

Men of lower SES also saw environment as something that is improving today in comparison with the quality of the environment of years past:

Larry - "Well right now, they have cleaned up the city a lot from what it used to be"

Simon - "In the 1920s and 1930s it [environment] wasn't bad, and in the 1950s and 1960s its getting worse. With the loss of jobs it's getting better cause all the pollution is getting less, and all the factories are losing production. But I would think, yeah, it's starting to come around. The lakes are getting cleaner and the air is starting to get a little better"

6.6 Conclusions

The entire sample experienced difficulty and vagueness in describing the environment. While physical surroundings seemed to be the most prevalent description, some referred to the environment as enveloping social aspects as well. While women in the sample tended to regard the environment as having both physical and social aspects viewing it as a holistic entity, men tended to view the environment with reference to human activity. All groups perceived the environment to be an all-pervasive force, speaking of it in terms of being "everything" and "anything". Contradictions often occurred in the respondents' attempts to define environment. While some viewed it as an entity caused by human influence and generally one which represents the negative impacts of human pollution on our surroundings, others spoke of the environment as that which is untouched by humans and that which is naturally occurring. Clearly the environment is most easily defined by respondents with reference to humans, but remains a force that

is removed from human control and influence in general. Because the environment largely remains an external force and entity, difficulty arises in defining it as is seen in the variety of descriptions given by the respondents.

CHAPTER SEVEN

Perceived Risk to Health from the Environment

7.1 Introduction

This chapter examines individual perceptions of the connection between health and the environment. Individuals were questioned about their perceptions of health problems thought to be related to environmental influences. Lastly, respondents were asked about the relative importance they place upon their health in comparison with the environment. Issues of quality and safety of urban environments as they relate to health and well-being were also discussed.

All groups in the sample perceived a strong connection between their health and their surrounding environments, viewing the environmental contribution to ill-health to be a substantial one. Specific environmental concerns were reported by several respondents. Differences do exist in the perception of the connection between environment and health according to social characteristics and individual frame of reference.

7.2 The Interconnection Between Health and the Environment

All groups in the sample perceived a connection between their health and the quality of their surrounding

80

environments. Most cited a strong correlation between the two as being "inextricably linked". Interestingly, men in both socio-economic groups made more frequent reference to the interconnection between the two than did women, a finding which contradicts ecofeminist contentions that women perceive more worldly interconnectivity (Gilligan, 1982; Merchant, 1982). Environment was viewed as one of the most critical influences on health, and most reported that good health cannot exist without a beneficial environment. This is not surprising given the nature of environmental definitions from the previous section in which people spoke of the environment as being an all-encompassing entity which has influence on all facets of life. Women of high SES perceived health and environment to be strongly linked:

> Mary - "And there again, it all wraps up into one package, doesn't it? Because if the environment isn't healthy, my loved ones aren't going to be healthy. I won't be a viable person in the community and all. They go hand in hand"

> Elizabeth - "Once again, I think they are all so intertwined. We depend, I mean our health depends upon the health of the ecosystem. And I do worry about that, yes"

> Elizabeth - "Human beings are totally dependent upon our environment, what we can grow for food, and the water that we drink. If we destroy both of those, then our health will be gone"

> Sonya - "Yes, I think it is related. I think the more we do for our environment, it gives ourselves a healthier life I guess. You know, think about the sun for example. That hole in the ozone layer is getting thinner and thinner all the time. I mean

obviously I think that has some effect as to what products we produce here or things that we use that are maybe discharged into the air that have caused that to happen, you know, and that's a direct relation to health"

Men of higher SES also viewed health and environment as related and mutually reinforcing entities. Environment was viewed as having ill-effects on health:

Rory - "I think both are important. If you have a terrible environment, then your health is just deteriorating. You have to have both"

Peter - "I think the environment very much influences your health. In the case of my father, who I haven't mentioned because he died in '81, I think he may well have got cancer or maybe being predisposed to it because of his exposure to chemicals in the years in his jobs"

Trevor - "Yes, again, I think that the air we breathe in and the air around us affects us. I am sort of just pointing out that some types of cancers could be related to the environment and are thus directly affected"

Lower SES women spoke of the environment as being intrinsically related to health as well:

Melissa - "I think they are so linked that it's hard to say whether one is more important than the other"

Jane - "I am beginning to realize that they are probably equal, they are all related, and they bounce off of one another"

Similarly, men of lower SES perceived the environment to be strongly related to health, some describing it as "the only influence on health", and as health and environment "working together". Health was viewed as dependent upon positive

environmental circumstances:

> Michael -- "I think the environment is the only influence on our health. If you contaminate the soil and we grow our food in it we are going to suffer. If we contaminate the air we breathe we are going to suffer. And if we contaminate the water, then what are we going to do? So its the biggest influence on our health"

> Gregory - "They kind of work together. Like if I put myself first totally, then I would be creating that environment around me. They have to work together"

> Garry - "You can't have any health if you have got an out of control environment and you are destroying it"

7.3 Perceived Risk to Health from the Environment

Many in the sample reported health problems that they perceived to be a result of environmental influences. Considerable risk was attributed to health from the environment from a variety of sources, most commonly from air and water pollution. It was difficult however for most respondents to pinpoint exact environmental causes, hence risks to health were described vaguely in terms of "pollution" and "environmental damage". Health problems resulting from these sources ranged from respiratory ailments, to cancers predominantly, to poor mental health. Reported ailments were not only wide-ranging, but multiple. Women of higher SES perceived the environment to be a direct threat to their health, using examples from their own experience as well as

the experience of others as instances of risk:

> Beverly - "Actually I think there's an unusually high instance of cancer in women in like their late 30s and early 40s around Ancaster. We've never been sure why, but you almost feel like there is something in the water. Too much iron or too much copper or something, cause for a while there, like I knew three women or four women at 39 or 40 or 41. Just seems odd that there are so many around this area"

> Catherine - "So I think it's terrible, and I think there is much more increased level of cancer in the population as a whole because of the environmental damage that we are doing to ourselves"

> Catherine - "Well, I am convinced that different types of cancer are environmentally caused. I think that people who suffer from lung disease are very influenced as well from the deterioration of the air"

> Heather - "Well, they talk about SAD disorder (Seasonal Affective Disorder). I guess that's one way the environment can affect health. I guess high levels of pollution, that can affect people with respiratory problems, probably the heat this past week would be a prime example for people with cardiac problems"

> June - "My husband died of cancer. My husband was born here in Hamilton. His mother had cancer - she died of cancer. My neighbours all around me have had cancer. And you do wonder if it has anything to do with our environment right here. I sometimes think I should move while I can"

Higher SES men also cited health problems that they felt were related to the environment, notably referring to cancers and respiratory problems resulting from vaguely described "pollution":

> Trevor - "I am just taking a stab at it that it could be related to forms of cancer, certain pollutions in the air. I know close to you factors,

I mean, for a couple of summers in University I worked at Stelco and from what they say all the pollutants can do to you directly I am sure that it could all turn out to be something else. Cancers, I would say that would be the major thing"

Keith - "Well if the air is polluted and stuff, that's pretty bad. In fact, it causes a lot of problems in breathing, and I've had a few times that I have had to go to the hospital because of my asthma up in cottage country"

Rory - "You know, like respiration, breathing, asthma, cancer. I think Hamilton is very bad for cancer. That's what I heard"

Robert - "I'm concerned about drinking the water out of Lake Ontario, breathing the air of the Golden Horseshoe. I don't know, I think we could easily pollute it so that it would kill us all"

Peter - "Well, I am sure there are all kinds of things - the environment causing all types of cancer, and hearing loss as I mentioned. I guess no one really knows what the balance is between environment and your heredity. And another thing as an example, you know, all the chemicals that people dump down on their lawns in search of the perfect lawn. They are willing to breathe that stuff in"

More than any other group, women of lower SES cited numerous and varied health problems related to the environment. Though their reports of health problems were numerous and varied, environmental impacts reported to contribute were described in abstract terms of "pollution":

Joan - "I think it can cause a lot of problems in people with sinus problems. I know my sister-in-law can never sit outside in this weather...in this heat. She just dies because she has such a sinus problem"

Heather - "Well, the hayfever, and the grass, that's all. If the pollution count is high, it bothers my allergies cause everything settles"

> Marion - "When it is very smoggy and very heavy air. The environment can be so heavy that you can't breathe"

> Jane - "People talk about colds lasting longer, and they are heavier. And allergies seem to be...more people suffer from allergies, stuff like that. All this junk about cancer from being out in the sun. And you just hear about all that stuff so much more"

> Melissa - "Once again, if we keep putting stuff into the air, its going to affect people's breathing. Like the asthma. There is more people in Hamilton that have asthma that I know of than in entire areas elsewhere. I am sure that it is because the air is so poor"

Lower SES men also viewed health problems as related to the quality of the environment, citing respiratory problems and cancers primarily. Environmental influences thought to contribute to ill-health mainly included generic references to air pollution:

> Michael - "I think that Hamilton is disgusting with all the smog. You go to a smaller city and there is no...its like breathing different air. I think a lot of this industry...you see all this smog coming out and you know its going to affect you"

> Larry - "I have always felt like it's all the chemicals in the air that gives people diseases"

7.4 Health as More Important Than the Environment

Individuals in the sample readily connected environmental influences with instances of ill-health both in personal experience as well as in citing the experience of close others. When asked whether their health was more

important to them than the state of the environment, the sample overwhelmingly rated their own personal health and the health of friends and family members as more important. The majority of respondents said that their health was the most important thing to them, outweighing concerns related to environmental quality. When asked if they would be environmentally unfriendly to save or preserve their health, most individuals stated that it would depend upon the situation and whether or not it was "life or death".

It seems that the scale of destruction to the environment for the cause of preserving health must outweigh the costs in order to be justifiable. Even hypothetically, the decision to be environmentally unfriendly for health was a difficult one which seemed to weigh on the consciences of many respondents. Women of higher SES spoke of being environmentally unfriendly to save their health in these terms, as being something that must be weighed for benefits vs. consequences:

> Sonya - "Well, depends upon what extent. I would say, yeah, probably I would be environmentally unfriendly [for my health], but I don't think it would be such great damage. I can't think of an example right now, but I don't think it would be such a big deal"

> Catherine -- "But if it is a question of do I have another kick at the cat, or are all these U-trees going to die because I want to live? It's really a tough question"

> Kathleen - "Would I be environmentally unfriendly if it was to benefit my own personal health, I probably would. Especially if you are talking about anything that is like a life or death situation. If it was simply a convenience or something...if you are talking health, I hate to say it but I probably would"

> Heather - "I wouldn't put the environment in grave danger just for my health's sake. I think there could be some compromises"

Men of higher SES also spoke of their health as more important than the quality of the environment. Like higher SES women, they too viewed a decision to be environmentally unfriendly for health as a decision to be weighed against the scale of destruction:

> Peter - "Only if it were something important I think. If I only stood to make a trivial gain, then no I wouldn't be environmentally unfriendly. But if it was something very important to myself, then I just might do it"

> Robert - "I guess it depends upon the scale of unfriendliness. I've never been in that situation that I know of. If it just amounted to not recycling something that I should of, that would be unfriendly. But if it were something that was of immediate danger to my health or others, then I would probably be unfriendly to the environment"

Women of lower SES also placed their own health as more important than the environment according to the scale of potential destruction vs. the severity of the health concern:

> Marie - "If I don't have my health, I don't have anything. Doesn't matter what the environment is if I don't have my health"

> Marie - "Well, you are not in your right mind if you don't appreciate your good health. If you haven't got your health, you haven't got anything.

It doesn't matter where you live or where you go or what the environment is. If you don't have your health, what difference does it make?"

Melissa - "I guess it would be the extent. If it's a minor health consideration, and major to the environment, then no I wouldn't do it for my health. But if it was the other way around - if it was a life or death situation and the effects to the environment were nominal, then obviously I would"

When asked if she would be environmentally unfriendly to help her health, Heather, a lower SES female respondent made reference to this scale of destruction as something that we as individuals all must weigh:

Heather - "No. If it could save my life, yeah, but I wouldn't do anything that would hurt someone else intentionally. It would have to be life. If it meant going and cutting down a tree that was going to save my life, then, yeah, I would. I think anybody would"

Men of lower socio-economic status also placed their health above the quality of the environment in importance, rating its importance according to context and scale of destruction as well:

Michael - "If someone else has to die for me to live, then I don't think I would do it. But if it was one little shot of CFCs to make me breathe easier, I would do it"

Kevin - "If it meant that my kids were wearing shoes, and had food in the fridge, and I had no other choice but to work that job [an environmentally unfriendly one] to feed my family, then yes, I would"

One lower SES respondent, Gregory, who suffers from a chronic and debilitating disease, demonstrates how our priorities are

related to our particular situations. For some, like Gregory, the scale of costs vs. benefits between health and the environment is tipped depending on our needs:

> Gregory - "If I was in good health, then I would be more worried about the environment, and if I was in bad health, then I wouldn't be worried about the environment"

7.5 Specific Environmental Threats

Environmental agents contributing to ill-health were perceived to be omni-present and almost unavoidable in keeping with environmental definitions. Often the perceived threat of environment to health is great even when exact knowledge of health effects from contaminants is not known. One lower SES respondent, Thomas, spoke of environmental influences contributing to disease as being "everywhere":

> Thomas - "Well, respiratory problems for sure. Cancer. It can go from stuff from chemicals in the water table being absorbed by cows and we are eating their meat. It's everywhere"

7.6 Concerns About the Urban Environment

Several respondents in the sample made reference to specific environmental concerns related especially to the quality of urban environments. Health was seen as being at risk from a variety of sources in urban environments, including air pollution from industry, overpopulation in cities, and pollution from cars. Women of higher SES described

urban threats to health as related to industrial pollution especially in Hamilton:

> Mary - "It's not only the aggravation that affects the health, and the greed as far as building and spewing chemicals into the air and the water and all. That happens because of population, and not so much of what the land was before. It would definitely be more risky with the more people you have living in a concentrated area"

> Elizabeth - "Cars in the city. I don't think there is any question about the prevalence of asthma. When I was growing up, I knew one person all through school with asthma. And now there are so many young children who seem to be having it. You can't spew all that stuff into the air day in and day out. So I don't think there is any question that it is far riskier today"

> Kathleen - "My brother lives in Tobermoray, and used to live in Hamilton his whole life and when he comes down and sees the smog and sees the traffic, he feels terrible about even thinking of coming down and approaching all that"

> June - "As for air pollution and things of that nature, my family now lives away. And my son now lives north, and he says, 'Oh Mother, I can smell Hamilton the minute we hit Burlington'"

Men of higher SES were also concerned with the health effects associated with quality of the urban environment in Hamilton. Specific environmental threats such as water quality, dirt, and smog were mentioned. Some respondents spoke of the environment in their communities in Ancaster as being qualitatively different from Hamilton, using their local environment as a reference point:

> Frank - "I think our water here in Ancaster is very, very good. And I have had that proven by a company that came to try to sell me a water

purifier, and they could not. They wouldn't even believe that we were on Hamilton water. And the parting remark was maybe its because we are so far away from the plant"

Rory - "I think if you live downtown somewhere in all this pollution, I think even the lungs get choked with all these things. I know that when I go down to Toronto for a day, Chinatown, I get very uncomfortable. I feel very dirty, that kind of thing"

George - "Oh, I think living in Hamilton is very detrimental to anybody's health. With the pollution, you just have to stand up on the mountain and look down at the city to see it. And especially when it comes up the Dundas Valley there...Have you noticed it?"

One higher SES man, Marvin, spoke of the threat of overpopulation in cities as contributing to social decay and urban demise through overcrowding and competition. Cities and city life were seen by Marvin to be the culprits of human demise as well:

Marvin - "You get people in huge cities and populations are all packed in, stress level is high, and everyone is worried. And there is competition for limited resources. There's limited jobs, there's limited food out there. And I think that just brings out the bad behaviour you could call it of man. And that's why you get huge crime rates and assaults. I think it's a big problem. Overpopulation is a big problem"

Lower socio-economic women were also concerned about the quality of the urban environment as it relates to health. Again, the local community was used as a reference point for the description of environmental threat and they spoke of their concerns related to living in downtown Hamilton:

> Melissa - "Stress is an obvious factor. I am not
> very fond of cities, so I don't think a city
> atmosphere is particularly healthy for anyone in
> that kind of proximity to people all the time...it
> is wearing on people"

> Joan - "Smog. I don't remember smog like we see
> now. I used to live on Lakeshore in Burlington, and
> I used to be able to look out (that's when my
> daughter was five) and you could see across the Bay
> for miles. But not today. You can't see, very
> seldom"

One lower SES respondent, Jane, spoke of environmental threats

as being directly related to the social and physical aspects

associated with living in a lower income section of downtown

Hamilton:

> Jane - "And I'd say this section of town being one
> of the poorer sections of town has an effect on the
> way you feel, your surroundings, and the way people
> take care of things and that"

Helen, another lower SES respondent, made reference to poor

urban environments as contributing to ill-health but in very

unspecific terms. Although quite certain that the urban

environment posed a threat to health, Helen found it difficult

to articulate these threats directly:

> Helen - "Well, there is more guck in the air, and
> stuff. And it's not like out in the country. Uhm,
> with the factories and all these things"

Men of lower SES similarly found the urban environment to be

a threat to health. Air pollution from cars was viewed to be

the major threat associated with city life:

> Michael - "When I was a kid, I grew up in the
> country, so there was no...we didn't know what
> pollution was or anything. Now in the city I don't

find it as healthy"

Larry - "I drive a cab, and when you get up, see on the mountain up there, even in the mornings like this morning there is a haze over the city. You can't even see the Bay some mornings"

Paul - "You just go walk up and down on the city streets and you'll practically gag on the fumes of the buses and trucks. And they seem to be the biggest offender, buses. They don't have an exhaust on top of their cabs like trucks do. At least trucks are blowing it 12 feet in the air. The buses are blowing it 12 feet at your ankles"

7.7 Safety and the Urban Environment

Not only was the urban environment viewed as a threat to health, but many respondents also saw urban areas as a direct threat to personal safety and well-being due to adverse social conditions. Differences occur between socio-economic groups on issues of safety which reflect differing status and quality of life in their particular residential areas. Although most women in the higher SES area of Ancaster viewed their community as a safe one, concern was voiced about personal and family security in neighbourhoods and on streets:

Beverly - "I think we live in a relatively safe community. But you can't trust that any community is safe now. The kids, when they were little, always took the radio line to school. Then there'd be a flasher on the radio line, or somebody chasing the kids. And then all of a sudden it wasn't safe anymore. It's the society, okay, it's society. We live in a sick society. There is no safe town anymore"

Barbara - "Where I work is probably one of the more, how shall I say, well, it's been known to

have some undesirable people. I wouldn't even walk
on Main St. myself. And I don't know why, you know.
Nobody's going to attack me, but you never know.
That would be my fear more"

Though most men in the higher SES area of Ancaster viewed

their community as relatively a "safe haven" in comparison

with other areas or cities, they still recognize threats to

safety in the urban environment:

Trevor - "And you mean sort of in Ancaster? I think
socially it's safe...uhm...I am not afraid to keep
things unlocked and open. My little brother leaves
bikes outside all the time, overnight, and nothing
really happens. I know my sisters walk around, like
not, like midnight, but dim light - eight and nine
o'clock. They walk around on their own and we are
not really too concerned about that"

Peter - "Well there is the whole issue of crime,
which isn't a factor where I live. I mean, I can't
imagine the kinds of problems that happen in
Toronto happening in Ancaster. And we just had a
burglary on our street which is the first that any
of the neighbours can remember in decades"

The safety concerns related to city life noted by

lower SES groups are qualitatively different than higher SES

groups. Those of lower socio-economic status residing in north

and central Hamilton spoke more of safety issues related to

crime, violence, prostitution and drugs, reflecting the

different nature of their communities. Lower SES women viewed

environmental safety to be related to these issues:

Violet - "And drugs especially. A lot of drugs
here. Especially in this community here, down in
the park here"

Joan - "In this area right now - this used to be a
really safe area - the trouble we are having in

this area right now is a block from us. And we are
having a very bad problem with prostitution, which
we never had the years and years I had lived in
this area. But that's the drugs too"

Helen - "People are a problem. Let's face it.
Prostitution goes on in this area. Violence - we
had a murder just down the street not too long ago,
within this year. And yet this is a fairly quiet
apartment building"

Heather - "Well, the whole country has gone to pot.
What do you want? I have had the swat team outside
my window with guns. I mean it's...it doesn't
matter even where you live. I think everybody has
just gone crazy with these social cuts and
everything else. Everybody is just stressed beyond
their limits"

Safety issues related to urban environments were also cited by

men of lower SES, mostly related to poor or dangerous social

circumstances in the downtown area:

Michael - "I have a three year old. When I was a
kid, I could go anywhere, but now I won't let him
out of my sight. I am worried that there are a lot
of crazy people out there who would steal him or do
something to him. So if you are counting people in
the environment, then I don't think it's safe at
all"

Larry - "Like in this area here, they are starting
to get a lot more crime. It's hard. I have never
been bothered by it myself. I don't go out at night
anymore. People stay up at the corner and that.
People hang out there all the time making trouble.
They have had trouble over here sometimes. It seems
to be more of these gangs"

7.8 Safety and The Occupational Environment

The occupational environment was viewed as another

source of threat to health. Most references to this in the

sample were vague and non-descript referrals to general

occupational hazards, especially by higher SES women. Men of both socio-economic groups spoke of occupational threats to health more frequently than their female counterparts. Women of lower SES made no reference to occupational environments as a potential threat to health. Women of higher SES did however make reference to occupational environments, though in very general terms, as illustrated by Barbara:

> Barbara - "Painters, or people in chemical factories, or people whether they are working with dust products all the time. In the long run, that would have to influence their health"

Kathleen, another high SES woman, spoke of her occupational environment as affecting her health directly. Kathleen made reference to her mental well-being as related to her workplace:

> Kathleen - "For ten years, I had an office with a window. And now I got a promotion, but I lost my office with a window, and I'm stuck in this little corner office in concrete walls. I literally can't stand it. I am having a really hard time coping and dealing with that particular situation. I find it very claustrophobic and confining. And even not to see the light of day in your own office is really difficult. So I believe the environment affects our health in all kinds of ways"

Higher SES men also cited occupational environments as being related to health. Either from their own workplace experience or from the experience of close others, place of employment was seen as a very real cause of ill-health:

> George - "Well, ever since I retired eight years ago, I have stayed away from the flu and colds and bronchitis which I used to get before, probably

because I was working in a factory where the air was dry in the winter time. And of course, other people were carrying germs. So I have been much healthier since I quit work"

Peter - "And then at our family business in Mississauga, my father used solvents. He had a lot of exposure to that because initially he was running the machines himself before hiring people in the plant to do that, and working in the office. And even when you work in the office in a place like that you're always going back to the plant to ask questions, so there is a lot of exposure to airborne solvents. And he did that for over ten years, and I forget how long he was manager of the chlorine plant. So I always suspect that his cancer might have something to do with that"

Men of lower SES most frequently made reference to the direct relationship between their occupational environments and their health. This reflects the particular work experience of this group as employed most often in industrial or factory work, as well as being the group who most probably endure the poorest workplace conditions resultingly. When asked if his health was at risk at work, one low income respondent, Kevin replied:

Kevin - "To most office workers, no. If you are working in industry, yes. People who have WHMIS, people who have all of that, they are still dealing with things that they have really no control over, and they don't know. They don't understand. They don't know what the long-term buy-out is going to be. Every day they come up with a new product, but they don't tell you what happens when you deal with that product 20 years down the road"

Although recognizing that potential threat to health exists in some workplace conditions, Kevin finds this source of threat to be almost inevitable and something that must be "accepted" by those who work in industry:

> Kevin - "Everybody who works in a very heavy industrial area and realizes that is being pumped out into the air and in the water is going to have to live with that"

Another lower SES respondent, Paul, spoke of health threats related to the workplace in recounting the experiences of a close friend:

> Paul - "Well, there are a lot of guys who work down at Stelco that have silicosis is it called, the lung disease from dust. Including the funeral I should be going to today. Coal miner or steel worker. I have a friend up in Dunville and he worked in a chemical plant, and he is dying right now. He's younger than me, he's about 60 or 58. Thirty years of breathing chemicals in. It was a fertilizer plant"

7.9 Environment as Unthreatening to Health

Though most in the sample found certain environmental agents to be of threat to their health, a considerable proportion also reported that the environment was of little direct threat to their own health. Many reported that they could see how the environment could be a potential threat to health, but perceived it to affect the health of others primarily. A majority of respondents said the environment was merely a secondary factor influencing health. These contradicting views of the environment as unthreatening to health demonstrates that individuals oscillate in their perceptions of environmental impacts depending upon the situation and past experience. Women of higher SES spoke of

the environment as being a threat to the health and welfare of others, but not directly to themselves. When asked whether the environment influenced their health, three higher SES women replied:

> Joy - "No, no, I don't think it does. Like if we are driving along, we keep our car windows shut around the time that pollen is falling because if not, my eyes will water. But it's so minor. We notice that when the smog is heavy over Hamilton, I am not aware that it is difficult to breathe, but then after a while I think and I will go in and I will realize that it is harder to breathe. But I don't consider that it bothers me"

> Mary - "I don't know. I think the environment is merely...I was going to say an excuse...that's hardly right. It's a factor, that's true, but I don't think it's the strongest factor in your health"

> Heather - "I don't think so. I don't think it does influence my health. I don't suffer from any allergies or any sort of respiratory problems that some people do in this area"

Some men of higher SES also viewed the environment as unthreatening to their health directly, but recognized it as a potential threat to the health of others:

> Christopher - "I think if you are...most people in the middle income group that you are probably targeting...I don't think the environment at this point is a huge issue"

> Trevor - "Well, yes, I see it as a risk but not really to me. I know that if I am breathing in this air that I don't really have a choice. Maybe I am keeping my definition of environment too narrow. I mean if you take the environment as being just good. It was dangerous, the sun you know what it did to the people in Chicago, especially the elderly. But all in all, I don't see it as being risky to myself, but I do see it as being a risk to

probably unfit people"

Peter - "I suppose there is the risk of disease and there is the risk of death. Well, in my own case, I don't think it is particularly risky because I have an office-type job. I'm not exposed to any kinds of chemicals at work. I live in a very quiet sort of neighbourhood in Ancaster. You'd swear sometimes all the neighbours have left without telling you. So I suppose the main risk for me is when I get onto the QEW"

Women of lower socio-economic status also spoke of the environment as a threat primarily to others. When they did view environmental agents to be of detriment to health, lower SES women saw this as an inevitable and unavoidable conclusion:

Heather - "Not a major risk. I think it's always a risk, but I don't think its a 90 percent risk. Maybe a 50 percent risk with your ozone and stuff like that"

Marie - "I'm not really too concerned with the environment. I'm really not. Like I've never had any problems with it"

Shirley -- "Probably it could cause ill-health. Well, I don't know. Well everybody is always saying when you are out on the street, the traffic you know...And pollution is in the air and all that. In fact, my niece was in yesterday, and her husband said well they don't need to worry about smoking because it's all in the air anyhow. So you can die with anything, you know?"

Though recognizing that the environment poses an indirect threat to health, some lower SES men found this threat to be secondary, as something that would "never kill you":

Larry - "Well, you could swim down there in the Bay. I used to swim down there as a kid, but they always said you weren't suppose to swim down there.

Never killed us. But now its clean and everything"

Simon - "I am probably the one oddball out there who thinks that the sun doesn't really give you any detrimental effects. I think people get skin cancer when they go down south in different areas, but as long as you take it moderately in your own...where you were born and raised. Like if I was to move to Arizona then I would probably get skin cancer"

Paul - "Stelco smog is over the lake. Probably has an indirect effect. But direct that I notice, not really"

7.10 Conclusions

Though there are clearly similarities amongst individual perceptions of risk to health from the environment, differences between social groups may also be noted. Similarities include a common perception of health and environment as interconnected phenomena, common perceptions of health problems related to the environment, and a shared importance for one's own health over the quality of the environment.

All groups in the sample perceived a high level of interconnection between health and the environment. Men of higher SES made the most frequent reference to this interconnection. This finding would seem to contradict the ecofeminist contention that women moreso than men see a world of inherent interconnections through a relational rather than instrumental morality (Gilligan, 1982; Merchant, 1982). Most in the sample attributed considerable risk to their health

from the environment from a variety of commonly perceived sources, mostly related to pollution in the urban environment. Women of lower SES made the most frequent references to environmentally-caused ill-health of all groups, but articulated this relationship between their health and the environment the most nebulously. Perhaps this finding of increased perception of risk to health in lower SES women is a function of less environmental knowledge in this social group as compared with others, which would be consistent with environmental knowledge literature (Arcury, Johnson, and Scollay, 1986; Arcury, Scollay, and Johnson, 1987; Schahn and Holzer, 1992). Perhaps this increased perception of threat is a result of their residence in riskier communities with respect to urban environmental threats.

Differences by gender are also evident in the concerns about specific environmental threats made by men and women. Women in the sample seemed to be more concerned than men with issues of safety and the urban environment, which could indicate a more family-oriented disposition. Men, and especially those of lower socio-economic status, seemed to be more concerned with threats posed by occupational environments, reflecting their individual experience in the workplace.

Socio-economic differences in perception of risk are evident in respondents' comments about the safety and quality

of urban environments. While higher SES respondents spoke of safety issues of concern in their communities as being related to burglary, lower SES respondents spoke of issues of violence, drugs, gangs and prostitution. It is clear that personal perceptions of issues of safety in the community are altered by social and economic status, as well as the situation of neighbourhood and the different life experiences of higher vs. lower SES individuals.

All groups did report that while they perceived the environment to be a general and very real threat to health, they found it to be more threatening to the health of others than it was to themselves. This finding supports the work on health perceptions by Cornwell (1984) and Stacey (1988) suggesting that individuals view their health as being different from the health of others. Individuals also have more concrete knowledge of their own situations and view the situation of others more abstractly, which would account for differences in perceptions between individuals vs. others.

CHAPTER EIGHT

Concern for Self, Others, Health and the Environment

8.1 Introduction

This chapter explores the nature of respondents' concerns about health and the environment as they relate to the individuals themselves as well as others, future generations, and the biosphere at large. Most respondents reported that self-concern for well-being and health was their top priority, with lesser concern for others and surroundings. Differences exist between social groups on reported concerns, indicating that gender and socio-economic status could be mediating variables.

8.2 Self-Concern

Respondents were asked if their health was more important to them than the health of others and the environment around them. The majority of respondents did in fact reply that their own health was of primary importance, responding with phrases such as "without my health I have nothing" and "my health means everything to me". Selfishness regarding one's own health seemed to be justified as a natural human instinct. In keeping with their ratings of life domains

and quality of life, women of higher SES spoke of their health as the most important life domain, and spoke jointly about the health of family members as being important as well:

> Kathleen - "Well, I don't think there is a human alive that isn't selfish where that is concerned. So I mean my health is everything to me"
>
> Mary - "Well, yes, I am selfish enough to think yes I am concerned for myself, and I am concerned for my immediate family. All I can be is concerned in my head for others if the environment was poor where they were"
>
> Elizabeth - "My only concern is...well, I am concerned about my children and my grandchildren, and just generally in maintaining what we have. But ultimately, your first concern is your own health"

Women of lower SES also spoke of self-concern as being of primary importance to them. Again, selfishness when it comes to one's own health is justified by the respondents:

> Marie - "If I don't have my health, I don't have anything. Doesn't matter what the environment is if I don't have my health"
>
> Marie - "Charity begins at home. Yeah, I worry about my own health"
>
> Jane - "If there was a choice to be made, I would have to take care of myself first"

Men of lower SES also viewed their own health as the most important thing to them, ranking it above concern for the environment. Self-concern for health is again justified as natural:

> Michael - "I guess I would look after my own health more than I would go out of my way to do something for the environment"

> Kevin - "I think anybody who didn't say that their own health wasn't more important to them was an idiot"

Men of higher SES expressed the highest amount of self-concern for health out of all groups. This could reflect a less altruistic stance on the part of this particular social group:

> Christopher - "You have to put yourself first. It may sound a little selfish, but I think most people would consider their own health more important than the environment"

One higher SES respondent, George, felt that self-concern is justifiable for fathers but not mothers, who he sees as being inherently altruistic. George justifies his own self-concern about health in this manner:

> George - "I think everybody is the same that number one comes first. Except for mothers. Mothers come first, their children come first, and then dad comes, and then mother. Dad's a little different"

When asked what his concerns were related to environmental health impacts, another higher SES man, Trevor, expresses his self-concern as being of primary importance:

> Trevor - "I am probably most concerned about me again because I see me every day and I have to go day in and day out with me. And just like wanting to be healthy to do my thing. I teach Phys. Ed., and that's why. And I mean ecosystems sure, I mean, once every week, once every two weeks you hear something and you settle down and think, "Man, I wish that wasn't that way". But you are constantly reminded of me. I guess it's sort of selfish, that's it. It's what you can control easily, and that's why"

8.3 Concern for Others

When asked whether or not they were concerned about

the health and well-being of others, most respondents replied
that they were concerned mostly about the health of close
others including family members. Concern for strangers was not
often reported. Females in the sample seemed to express a
wider range of concern for others, extending it beyond the
immediate family. Women of higher SES reported concerns for
the welfare of family members as well as concerns for those
not in the immediate family such as neighbours and friends,
perhaps reflecting a more altruistic stance:

> Beverly - "When I think of myself, then I think of
> others who would be in my immediate family. If you
> are doing something for yourself...if you are
> cooking or something, it's for everybody"

> Joy - "I was raised to be "my brothers' keeper".
> Like you pay attention to a sick neighbour, or a
> child who is lost. You don't go by a lost child or
> a lost animal. We are from a clerical, minister
> family, so you learn to care for other people"

> Mary - "I think I am even more concerned with my
> neighbours being on their feet. I like to see them
> about. Every so often you have to check if you
> don't see them. I hope they'll do the same for me.
> As for my little family, yes I am very much
> interested in their health as against where they
> are living"

Lower SES women also reported concern for the health and well-
being of others. When asked what was most important to her,
one female respondent, Eileen, spoke of concern for the health
of her family as well as for others around her:

> Eileen - "Well, the health of my children and my
> whole family. And other people first, other people
> too"

Another lower SES female respondent, Violet, reports more concern for the health of others than self-concern for health. When asked if her own health or the health of others concerned her more, Violet replied:

> Violet - "Not at the moment I don't worry about my own health because the doctor told me I am pretty healthy. For others, yes I would worry"

Although men in the sample did report concern for the health and welfare of others, these concerns seemed to be rooted in the immediate family and did not generally extend beyond close others. Both men of higher and lower socio-economic status seemed to express concern for the health of others as long as they were not responsible for causing their own ill-health. Blame seemed to be attributed to others who suffered ill-health. Perhaps this reflects a less altruistic stance on the part of males in the sample. Higher SES men did report concern for the health and welfare of others, such as Peter:

> Peter - "I mean one of the reasons why I wouldn't drive down the street with the windows down and the radio turned up all the way is that I am not just concerned about my own hearing, but the hearing of others"

Another higher SES man, Trevor, expressed concern for others, but revealed that this concern for him is conditional upon others not being "at fault" for their own illness. When asked if he was more concerned about the health of others or the health of the environment, Trevor replied:

> Trevor - "People close to me I would say, because I guess I know that if someone is trying to maintain their health I would be more concerned about them. People around me seem to be pretty concerned about their health, and I know that they are trying to maintain it, and in that sense I can relate to them completely and I would be more concerned with them and hope that they are happy with their health. For people that don't really give a hoot, or the general population, I guess I am speaking selfish, you know? If I know someone, I want them to be healthy. If I don't know someone, I don't give a hoot about them -I am more for the environment"

Men of lower SES also expressed concern about the well-being of others, namely that of family members. One lower SES respondent, Kevin, spoke of concerns related to the general welfare of his family as a primary concern:

> Kevin - "I would say the most important thing right now is that my kids have shoes on their feet, they have food in the fridge, and the rent is paid"

> Kevin - "As a father of three, I would give it all up to see that they get something better"

Like men of higher SES, this group also attributed blame to others for causing their own health problems. Kevin's statement about his concern for other people's health reflects this conditional concern:

> Kevin - "If I thought that the immediate environment was causing their health problems [other people's], and it wasn't a social thing that they did to themselves, then yeah, it would be important to me"

When asked about his concerns for the fate of others, the response of another lower SES man, Michael, reflects this conditional concern for others as well depending on whether or

not there is a personal attachment:

> Michael - "I mean if I don't see them, it's not
> going to bother me if I don't know what's happening
> to them. If there is a personal factor in it, you
> are going to want to try to protect them. If you
> don't know them...It's like people in other
> countries. You see them starving - do you feel
> obligated to send them any money? I don't. Cause I
> don't feel obligated to them. Why would we help
> them and then just have more?"

8.4 Concern for Future Generations

Most in the sample expressed concerns about the future

state of the environment and its potential effects on future

generations. Concerns related to this centred upon the future

impacts on family members including children and

grandchildren. Respondents were asked about their concerns for

the ecosystem and its future impacts, as well concerns for

future generations. Higher SES women spoke of concern for

their families in the years ahead. When asked if she was more

concerned about her personal health, the health of others, or

the health of the ecosystem, one higher SES woman, Catherine,

replied:

> Catherine - "I think probably the ecosystem because
> it influences so many people. It's not just one or
> two people. Hopefully it's my children's children
> that are going to be around to take advantage of
> it"

Another higher SES respondent, Kathleen, expressed both self-

concern and concern for future generations when asked about

environmental quality in the future:

> Kathleen - "I don't see what's happening as impacting me directly, even though I know it probably is, but I know it is. I see its effect on the ecosystems, for instance. There's another freighter accident, and you have these millions of gallons of crude oil. That doesn't affect me personally today, but it certainly affects the ecosystem which will affect myself and future generations"

Men of higher SES also expressed concern for the health and happiness of future generations:

> Christopher - "If the environment's not healthy, then sure in the short term we might be alright, but who knows what will happen when I am 50 or 55. And who knows what will happen to my kids"

> Rory - "If everybody were willing to do it, and keep a watchful eye on industry, we may have a chance. Not for me or my generation, but for the next generation. Now we are too late for us"

> Rory - "It would cost you a lot to clean up the environment. But if you don't do it now, in two generations down the road, your children and grandchildren won't have a chance to survive"

> Marvin - "You really have to wonder about the waste and what to do with it. It's scary. I really feel for the next few generations. It's a big mess"

Women of lower SES expressed the least amount of concern for future generations of all groups. Lower SES women, like Joan and Shirley, did report concern about the future state of the environment for future generations, namely for family:

> Joan - "I think it's because if you are at the age I am, you know, you know you have only got another 20 or 25 years to live. But if you look at the little babies today, and you know that they have got another 50 years, you wonder what their lives will be like"

> Shirley - "Hopefully for the kids that are coming out it will help them. I have a great nephew that is only four, and he's got a long way to go. So I would hope by the time he is grown up that it is better for him"

Men of lower SES also reported concerns about the future of the ecosystem for future generations. These concerns centred around family, but also extended to include the fate of human existence as well:

> Garry - "I think about the kids that are going to grow up 20 years from now. We are the ones who are responsible for what they are going to get"

> Nelson - "I don't know. I just feel sorry for all the younger people, like me and all the younger people, cause in the future it's going to be all gone. They are not going to...they are going to be different."

> Simon - "If you destroy the environment, then somewhere down the road the food chain is going to break down, and we will be an extinct race"

8.5 Concern for the Biosphere

The majority of the sample expressed concern as well for the future state of the biosphere if current environmental degradation was to continue. Fears related to this ranged from the killing off of plant and animal species to the eventual threat to human existence. Human impacts on the environment were perceived by most to have a cyclical impact on the future of the biosphere. Most respondents noted an interconnection between environmental degradation of today and future impacts resulting from this on the ecosystems of tomorrow. Like the

interconnection between health and the environment, most respondents felt that the future of the biosphere is very much dependent upon and interconnected with the nature of human impacts on the environment of today. Interestingly, there were no references made by lower SES women to concerns related directly to the future of the biosphere, reflecting perhaps a different set of needs according to different social circumstances. Women of higher SES expressed concerns related to the future of the biosphere, though not to the same extent as their concerns about future generations. One higher SES woman, Joy, expressed concern about human impacts on the environment of today and the results on ecosystems of tomorrow:

> Joy - "You just look at our lovely maple trees that are all going. I go to my maple sugar bush, and in the last couple of years, he has cut down 60 trees, trees that you know are one hundred years old that are dying. And this is from acid emissions, wherever it is coming from. And look at the fish. If somebody went fishing and caught a fish, I wouldn't want to eat it because I would be afraid what was in it"

> Joy - "People can go elsewhere. They don't have to keep on building and building here. You know, like the little stream. We have to watch that the little stream doesn't get junk throw in it by the builders further on. I would say the ecosystem is important because it is important that it function. If we are looking hundreds of years down the line, what will be left? You have to look ahead."

Men of higher SES most frequently reported concern about the future of the biosphere in comparison with other groups.

References were made to water quality especially as a major concern. Higher SES men found the relationship between environmental degradation of today very much interconnected with the future of our world:

> Peter - "People don't realize it, but what affects plankton in the sea or you know, trees, ultimately comes back to us. So I think if we could change the environment so that ecosystems were not impacted, people would ultimately benefit"

Two higher SES men, Keith and Marvin, spoke of the need to recognize the importance of ecosystem health to life, as well as the importance of maintaining the fragile balance necessary for its future existence. Both men spoke of this concern in terms of water quality:

> Keith - "Our lakes are dying and things like that, and species of fish and stuff like that. And since water is most of our planet, we gotta protect it. We drink it, it's our lifeblood, so we have to make sure it is clean"

> Marvin - "The Great Lakes is one of the largest areas of fresh water in the world. All of our Southern Ontario population and in the States is bulked around the Lakes. And when you have that many people, and that much sewage, and factories, its gotta be a concern. They are huge, right? I mean they are inland seas. But there's a point when they can only absorb and the bacteria can only digest so much of the chemicals and natural products. Eventually, something is going to stay in there"

Men of lower SES also expressed concern about the future state of the biosphere given current environmental degradation:

> Michael - "Well, how many generations can we go on polluting? If we keep on drastically affecting the environment, no one is going to be able to live

here. If we keep cutting down the rainforest, we are not getting any of the clean air through nature. Even here, we are cutting down all of the forest. If we can't generate new air or clean it up, what are we going to breathe? Are we going to walk around with a mask on or something? So I think if we don't start doing something, maybe in 20 years or so we won't be here. Who knows. I am not worried about it in my generation, but I think in the future it will"

Thomas - "Everybody will have to live for the future and down the road. Still be able to use the lakes. If you don't protect the environment, then there won't be a future really. So really, you don't have a choice. Whether or not we will get...yeah, I think people are changing enough to realize that down the road we just can't keep going the way we are"

Thomas - "Long term wise the environment is more important than your health, but everybody always looks at everything in such short term that they don't see the big picture"

8.6 Conclusions

Respondents in all social categories described concerns related to health and environment in similar ways. Most respondents cited self-concern for their own health as being "the most important thing". Selfishness for the state of one's health was viewed as being justifiable as a natural human instinct. Most respondents also expressed concerns about the health and well-being of others, concerns for the well-being of future generations, and the future of the biosphere alike.

Differences between social groups were also noted. Though most spoke of their own health as being the most important thing to them, men of higher SES conveyed their self-concerns regarding their health and well-being more frequently than other groups, indicating what might be interpreted as a less altruistic and more egoistic orientation. Women in the sample, and especially higher SES women, spoke of concern for others more frequently than their male counterparts. The nature of concern for others also differed between the sexes. While men expressed concern for the health of others, they did so usually only about family members and close others. As well, males tended to attribute blame to others for causing their own health problems, hence expressing concern conditionally upon the individual's role in contributing to their own ill-health. Females in the sample more frequently expressed concerns for others, and spoke often of concern for those outside of the immediate family to include neighbours and friends. This finding may suggest a more altruistic disposition in the female sample.

Although all groups also expressed concerns for future generations and the future state of the biosphere, women of lower SES spoke less frequently about concern for the two as compared to other groups. This finding would seem to contradict the notion of women as more ecologically benign and nurturing than men which is supported in the environmental

concern literature (see Merchant, 1982; Nelkin, 1981; Steger and Witt, 1989; Stern et al., 1993).

Like perceptions of the impacts of the environment on health, concerns related to environmental degredation on future generations and the biosphere itself were generally described in abstract terms. Fears and concerns were rarely substantiated with concrete knowledge of cause and effect relationships, but were nonetheless perceived by respondents to be undeniable threats to their own well-being, the well-being of others, and the future state of our world.

CHAPTER NINE

Other Concerns Related to the Environment

9.1 Introduction

This chapter attempts to assess individual concerns related to the environment outside of health. Respondents were asked about their concerns related to individual and societal costs and benefits of environmental protection, and their concerns about economic trade-offs in this attempt. Respondents were also asked whether they would be environmentally unfriendly for personal economic gain, and how they felt about such trade-offs between economics and the environment.

9.2 Economics Over the Environment

When asked whether or not they would sacrifice environmental quality in acting in an environmentally-unfriendly manner in order to make a profit, a proportion of respondents reported that they would if the action meant that they would be economically secure. Profiting from the environment in excess of need was associated with guilt. However, personal economic security was seen as important even when respondents recognized that environmental degradation was

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possible as a result. Women of higher SES responded that they would be environmentally unfriendly in order to preserve their standard of living or save their jobs. When asked whether they would sacrifice the environment for economic security, three women of higher SES replied:

> Elizabeth - "You mean to make money? In the past I probably have. I mean I have stock in Noranda. So if you are going to extend it down the line, I mean we all think we are innocent. Would I sell that stock if I thought they were destroying the environment? I'm not sure that I would. I might respond, and I might write to them or something along those lines, but whether I would...if it were making money, I'm not sure that I would"

> Heather - "If I was going broke, then maybe I would sacrifice environment, but not if I was going to make a whole bunch of money"

> June - "At my age, I others they are concerned, but I think others concern about sacrificing environment would be more "Am I going to lose my job over it?"

Women of lower SES made no references to engaging in environmentally-unfriendly behaviour in order to gain financially.

Though men of higher SES did not place personal economic gain over the environment, some did recognize that they would sacrifice it for economic security:

> Rory - "I think you have to look after yourself sometimes. A lot of people say no, I would sacrifice that, but if you are really in need of something, you would just go for that thing"

Another higher SES man, Robert, revealed his personal trade-offs between economics and environment:

> Robert - "I think we make those sorts of trade-offs all the time. I think I am doing that by going to Toronto every day. That's why I do it, for the economic gain. I'm already guilty"

Another higher SES man, Christopher, is a sales representative for industrial products sold to companies like Stelco. When asked whether or not he would engage in environmentally unfriendly activity for personal gain, Christopher replied:

> Christopher - "I am every day for economic reasons. So a qualified yes"

Men of lower socio-economic status most frequently made reference to sacrificing the environment for economic security:

> Michael - "If we cannot compete without contaminating, then what are we going to do? I mean I can't say "Look I am better than you are, I am friendly, and I am going to use the water-based finish" when they are twice as expensive to use than lacquer finishes. Fine I might not be polluting, but I will be sitting at home on welfare"

> Kevin - "If I was in the position to be wealthy enough to run a business like that [Philips], the cake would be walking in. I wouldn't have to worry about it because I would be able to dump where they told me to dump. As long as I wasn't breaking the law, fine"

9.3 Economic Cost to Society of Environmental Protection

Most in the sample expressed concern related to the economic cost to society of cleaning up the environment. Though all groups placed great importance on the necessity for environmental protection, most respondents felt that costs to

do so are high and no one is willing to pay. Although environmental protection was viewed as a priority, no one societal group in specific was seen as being responsible for its execution. Individuals generally felt that the importance of environmental protection should supersede its costs. Most respondents also made reference to the long-term health care costs associated with environmentally-related disease. Women of higher SES seemed to view environmental protection as necessary:

> Mary - "Well, if you are really serious about protecting the environment, costs should not be a problem. They shouldn't enter into it. However, obviously, we don't have any money, so it's a little difficult to say yes, go out and spend it when you haven't got it. I'm afraid I believe that you shouldn't spend it if you haven't got it"

> Elizabeth - "Well, I think initially the costs would be quite high, but eventually the costs would be offset by the benefits. I mean, we are just beginning to see the cost of health care and smoking, and pollution or whatever"

Higher SES men especially expressed concern for the economic costs to society of cleaning up the environment. Though deeming the environment a priority, they also described the effort and its cost in abstract terms:

> Robert - "Well, the costs are much higher than they used to be. The longer the trends go on the way they are, the more costly. I have no idea what it would cost to clean up this or that. I can't site them, but in the trillions or quadrillions"

> Frank - "Well, whatever the cost, the environment has to be recognized. One impacts on the other, and down the road, it's going to manifest itself in

medicare. If people are living in a clean environment, they get sick less obviously. It's got to manifest itself in end costs in the medical system"

Women of lower SES were also concerned about the costs of environmental protection to society, once again, referring to a general unwillingness to pay for the effort:

Melissa - "There are definitely financial costs especially to industries and large corporations and what not, and even on a personal scale there are things like tuning up your car. There are time costs. Doing things that are environmentally friendly take longer than tossing it wherever-the-heck, but I mean the benefits are clean nature and clean air. And the health benefits follow"

Jane - "The costs are going to be great because you know, you can't make up 200 years of abuse or something. But it just has to be done. Like my husband who is in the clean-up business, and everybody wants to clean up but nobody wants to pay for it. But it didn't get there by accident"

Men of lower SES expressed concern for the economic cost to society for cleaning up the environment and the problems associated with cost as an important consideration. Costs were estimated vaguely. The cost of related health care was also mentioned:

Paul - "Billions with a B. Just to clean up the Great Lakes. Just to clean up one little reef off of Stelco. I think they called it Josten's reef. Some reef, $15 million, and its only a ten-acre clean up. Five million federal, five million provincial, and probably five million of Stelco or the city of Hamilton. It's astronomical the cost to clean up"

Edward - "That's the catch, isn't it? That's the reason nothing happens. Too expensive. Nobody wants to put out the money"

Garry - "It's a cost to all of us when you have a sick population. Somebody's got to pay for it. So you can prevent it. It's better than trying to cure it"

9.4 Trade-Offs Between Economics and the Environment

Many made reference to the trade-offs involved in balancing economics with environment. One higher SES woman, Elizabeth, spoke of having to "balance" economic realities with environmental priorities:

Elizabeth - "I don't think it's a simple solution, and you have to balance the economic realities. If you are going to be very healthy, and you are going to starve to death...you know, I don't think it's an easy thing. But I am moderate. I think you can reach a sort of common sense balance"

Lower SES men also cited trade-offs associated with balancing economics with the environment:

Kevin - "Say we lived in British Columbia. And we are going after timber for pulpwood. Now, do we strip that whole mountain, or do we cheap-shot it so that there are 60 trees left for every 100 feet or 200 feet? Understand what I mean? Both sides get served that way, there is no run-off, but still the forest is gone"

Simon - "They are sort of stuck between a rock and a hard place. They have to try to keep the city going, as well as not destroying the city any more from pollution. So they are really in a no-win situation. If they cut the pollution back, there is nobody working. They should think long-term wise"

9.5 Industry vs. the Environment

Though individuals in all groups perceived industry as

the main culprit contributing to environmental decay, many

felt that industry remains a necessary part of a productive

society. Women of higher SES recognized industry as necessary:

> Kathleen - "I suppose the more complex our society
> gets, the more difficult it becomes to deal with
> the environment. And we all want to drive cars, and
> we all want to have all the conveniences, so in
> order to accommodate people in industry and
> everything else, sure I think it's become more
> difficult and more complex than it probably used to
> be"

Another higher SES woman, Catherine, illustrates that not only

is industry necessary to society, in other societies it is a

much higher priority than environmental protection. Priorities

are relative depending upon need:

> Catherine - "I travelled to India about eight years
> ago, and to see a smoke stack there that was just
> belching horrible fumes and soot was such an
> exciting sign of progress that environmentally it
> wasn't a concern. It was jobs, and food, and full
> tummies, and it really depends on how you look at
> things"

Men of higher SES also recognized that industry is necessary

both for them personally and for a "modern" society:

> Christopher - "I am dependent upon industry
> completely. Like I would have no livelihood if it
> wasn't for Stelco and Dofasco because I sell stuff
> to them"

> Peter - "It is a fact of life for modern society
> that you have to have industry"

Another higher SES respondent, George, recognizes that

industrial employment is essential to economic well-being:

> George - "If you put controls for instance on
> different things, you are putting a lot of people

out of work. I have no idea what the costs would be
- it would be tremendous. Like for instance, if you
shut down Stelco and Dofasco, it would have a big
impact on the city"

Women of lower SES were least concerned of all groups about
the need for industry in society. One lower SES woman, Marion,
did speak of personal economic survival from industrial
employment as essential:

Marion - "What could you do? People have to work,
and I know that pollution comes from steel plants,
but what are you going to do? How are those people
going to survive if you take away their work?"

Men of lower SES especially viewed industry as a necessary
part of our society and for economic security, perhaps
reflecting a higher employment rate in industrial areas from
this group:

Paul - "Like some of the big industry in this city
alone - they are doing all kinds of things and I
guess there is a bottom line that counts. Money.
Whether you have the red ink or the black ink"

Garry - "I know that there are things that even the
politicians don't control because there is too much
money involved. Too many jobs. You are not going to
close Stelco down because there are too many
chemicals in the lake. What are you going to do?
The city does it too"

9.6 Conclusions

The majority of respondents expressed concerns related
to the economic costs both to them as individuals and to
society at large for environmental protection. Similarities
exist in the nature of these concerns. Most respondents viewed

personal economic security as more important than environmental quality. Selfishness for economic stability and employment was in many cases viewed as justifying environmentally-unfriendly action. In some cases however, guilt was associated with profiting in excess of need from environmental degradation. Many respondents also spoke of "trade-offs" involved in weighing the importance of economics vs. the environment. Though environmental protection was cited by almost all in the sample as a necessity, costs were perceived to be high and most respondents said that they would put their own economic security above environmental concerns.

Differences between social groups in support of economic interests over the environment may be seen. Though most groups reported that they would act in an environmentally-unfriendly manner for personal profit, women of lower SES made no reference to hypothetically conducting this type of behaviour. Men in the sample seemed to be slightly more concerned with the economic costs to society of environmental clean-up, making more reference to costs vs. benefits than the female respondents. As well, male respondents made more frequent reference to the need for industry in a modern and productive society despite the possible contribution to environmental degradation. Men also expressed more concern about employment related to industry for individuals and society than did their female counterparts.

CHAPTER TEN

Control Over Health and the Environment

10.1 Introduction

This chapter explores public perceptions regarding control over health and the environment. Respondents' opinions about their sense of personal control over their health and their surrounding environments are explored, as well as perceptions of the need for collective control over these issues. While most respondents perceived considerable personal control over their own health, they did not feel they held much personal control over the environment. Instead, collective control was deemed necessary for environmental protection.

10.2 Personal Control Over Health

All groups cited considerable personal control over the state of their own health. Lifestyle factors were mentioned by many respondents as influences under their control. Personal choice in health related decisions was also emphasized by women of higher socio-economic status:

> Sonya - "Well, I mean the things that influence your health are I guess like the things you eat, and even the way you live basically. So I think that would probably...the way you live probably has

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a greater influence on your health than the environment"

Kathleen - "A person has choices, and they have a certain amount of responsibility for themselves and their health"
Kathleen - "I think just in general health would depend upon an individual's strength and capability and their body's capability of warding off these things and of just dealing with it"

Men of higher SES also spoke of having considerable control over their own personal health, also in the form of lifestyle choices:

Rory - "I think you have to watch out what you eat, and exercising. And living in a better environment or area. I think its very important. That's why I choose living out here in Ancaster"

Peter - "I could imagine someone in a very polluted area, you know, near a steel mill or something, and still being in good health because of diet and exercise"

Another higher SES respondent, Christopher, speaks of his acceptance of personal responsibility for negative impacts upon his own health:

Christopher - "I am sitting here puffing on a cigarette and I am not going to say that I don't harm myself more than anybody"

Women of lower SES spoke of personal control over health as well in terms of lifestyle choices:

Joan - "I think if you take care of...and if you watch yourself you are okay, but I think people do not. You watch these people laying out on the beach and you think they are crazy, but you can't tell them anything...that's what they are going to do. I think it's up to the individual. I think as you get older you get smarter, that's what it is"

> Violet - "Now, I take my vitamins every day, and I eat the right foods, and lots of fibre in my diet"

One lower SES woman, Eileen, takes personal responsibility for her own health in describing the effects of her own lifestyle choice to smoke:

> Eileen - "Well, I'll tell you the truth, love. I am being honest with you. I think smoking gets me the worst. Well, the cough and sometimes you have no breath"

Another lower SES woman, Helen, describes how her personal choices in hygiene help her to control her own health:

> Helen - "Being clean, I mean, that is going to cut down on anything, right? And things like...I think soap and water can cut down on an awful lot"

Men of lower socio-economic status also viewed their health as under their own personal control, through lifestyle and attitude choices:

> Simon - "Protecting my own health is mainly what I believe in I guess. And meditation and things like that, and focusing and things like that"
>
> Paul - "I think we have it in ourselves to fight off a lot of things. We got to have decent water and decent air, of course, I said that. And I think your body with all its little white corpuscles or whatever is whipping around your veins, they do a lot of fighting for you. I think it's from within yourself"

One lower SES man, Michael, does admit that while he feels each individual can control their own health, healthiness itself is dependent upon factors outside of personal control as well:

Michael - "There is too many different aspects of health. You can control your health in certain aspects, but I don't think you can do it all"

10.3 Personal Control Over the Environment

While most respondents did view their own health as under their personal control, they did not generally see the environment in the same manner. Many said that they could control their immediate and household environments as far as lifestyle choices go, but that the state of the overall environment could not be influenced by any one individual. References were made by respondents about environmental actions such as recycling and the purchase of safe household products. Women of higher SES spoke of controlling their immediate environment by way of personal choices:

Joy - "We take our things that are non-garbage items to a special depot. We go down there once a year and collect up our neighbours, or they collect up ours, somebody makes the trip and we all hand in our cans of paint and our aerosol cans. But anything like that, it's essential that that be handled properly. See, that's one of the controls that we have, which is good. So doing that, and also just being aware of what's going on around you, not shutting your eyes and saying "I don't care". You have to care. We have no choice"

Beverly - "I can control my own yard, and what I put in it, and do to it. And my own house, my internal environment. I can basically control it"

Heather - "You can't change things like the pollution around here or the heat, but what you can do if its a hot day is stay indoors. If you have an air conditioner, or say if you work in an office which is totally dependent upon a climate control

kind of system, if it breaks down, then you can go to management and say there's a problem that needs to be dealt with. So you have some control if you are willing to take it"

Men of higher SES also emphasized choices related to personal environmental control and related health impacts as the responsibility of each individual:

Christopher - "Environment is how we make it. Everybody chooses their own"

Peter - "I mean little thing that would make the environment unsafe would be how you choose to live your life. Whether you choose to use a lot of chemicals, whether you choose to spray your lawn with herbicides, and choose to use a lot of aerosol cleaners in your house"

Peter - "Everybody has some control over environmental influences in terms of how many chemicals they stick in their broom closet, and how much they drive their cars instead of using the bus or walking. So I think people have a least a limited degree of control over the effect of the environment on their health"

Personal environmental control through individual choices was also mentioned by women of lower SES:

Melissa - "I think the environment is a factor that you can adjust more. Heredity is there, but you can always move or change jobs or quit something or pick something up to adjust that"

Jane - "There's lots of things we can't control or there is...you can make choices about anything really"

Another lower SES woman, Marie, spoke of personal environmental control vaguely as "paying attention" to what goes on around her:

> Marie - "Everybody should be careful what they do I
> would imagine. And pay attention. That notice when
> they asked you last week not to use aerosols and
> not to drive a car if you didn't have to. You
> should pay attention to the scientists when they
> are telling you that its a bad day. If everybody
> paid even a little bit of attention to what they
> were telling you that would help"

Men of lower SES made reference to personal environmental
control as that which is obtained through political action.
This group seemed to favour political control over personal
effort, indicating what might be construed as a lack of
personal responsibility through "passing the buck" to
government. Three respondents in this group made reference to
making their individual voices known to local politicians
about environmental issues:

> Garry - "Household garbage, less driving of cars
> maybe. When you see things that can be done, you go
> after the local politicians to do something about
> it"

> Simon - "I would say if I didn't believe what I
> believe in then I would say no, I have got no
> control over the environment other than voting for
> different people and aldermen and things like that.
> But since I believe what I believe, then I would
> say I have more control over it than probably most
> people"

When asked if he felt in control over environmental
influences, one lower SES respondent, Kevin, replied that his
personal control lies in political influence:

> "That's a hard question to ask me because I know
> where to go to put the "ram in". If I was part of
> the general populace, and you asked me that
> question, and I didn't know the people that I do
> know, I would have to say no I would get stiffed

and cornered and would have to go through about 50
phone calls to actually get something done"

10.4 Lack of Individual Control Over the Environment

While personal control over the immediate environment
was mentioned, respondents generally felt that control over
the wider state of the environment was not vested in
individuals. Most made reference to individual efforts at
salvaging environmental quality as being insignificant in the
"big picture". Individuals were generally viewed as powerless
in influencing environmental quality, and control seemed to be
vested in powerful others. Issues such as industrial pollution
and air and water quality especially were mentioned as
entities not under the control of individuals. Women of higher
SES made reference to this lack of individual control:

> Mary - "Actually, I don't think we have any control
> over that. I mean, how much control do we have over
> acid rain when we are not the ones that have
> anything to say?"

> Beverly - "I am not out in Hamilton protesting at
> factories and stuff like that. I'm just doing my
> own little thing in my own little environment. I'm
> sure that's what most people are doing"

> Beverly - "I don't think I can control it myself. I
> could control the air today I suppose if I came out
> with a mask or something, but I can't control the
> pollution in the air each day"

One higher SES woman, June, spoke of her own lack of control
over wider environmental quality and instead referred to
divine control over the state of our biosphere:

> June - "I feel that there is a power much stronger than I am, and that's in control, not me. But I just feel that, that there is a power greater than I. If you want to call it God, that's fine, I do, but not everybody does. He's in control - I'm not. I'm just lucky to be here"

Men of higher SES for the most part felt that they had no individual control over the "big picture" as far as environment and health are concerned, and that power is invested in others such as industry and government:

> George - "No I am not in control. No matter what we as people do. If we could put pressure on the government I think we could have an influence, but of course there is not enough of us. We can't fight city hall"

George emphasizes his lack of personal control over the environment in stating that his scope of control is negligible. When asked what he could do to control the environment, George replied:

> George - "Do as my wife tells me! Eat my dinner, eat my crusts! I don't really know. Outside of building a cocoon, I don't know how you could do it"

Another higher SES respondent, Trevor, feels that individual control is insignificant in the overall environmental picture:

> Trevor - "Again, I guess the bigger corporations, the bigger factories and industries are in control. But actually, I was thinking its just...I don't feel in control one bit. Almost feel that I do my best to try to help out the environment, but sometimes I think that that little bit won't mean diddly, you know? Even though I continue to try"

Like Trevor, Peter spoke of personal choices for the environment, but felt that they were insufficient for the

wider environment as well:

> Peter - "I think that there are certain choices you
> can make, but most of the big choices are made by
> other people, so that you may have to live in a
> particular community because that's where you job
> is. So if there is a lot of air pollution in that
> community, poor water, then that's beyond your
> control"

Women of lower SES also expressed not having any individual

control when it comes to protecting the "big picture"

environment. Thus Melissa, one lower SES respondent, replied

that control is held be society, not by individuals:

> Melissa - "Only to the extent that like I said that
> you can move away from it. There is little an
> individual can do. Now society as a whole could
> take more control over things, better emission
> controls and things like that, and the garbage and
> everything else. As an individual your effects are
> minor, but every drop helps I guess"

Many lower SES women echoed these sentiments about lack of

personal control over the environment, thereby exempting

themselves as individuals from responsibility:

> Marie - "I have no control over what other people
> do. I can only do what I do myself. I can't control
> anybody else"

> Melissa - "There are more drastic measures that can
> be taken if we are willing to sit down and do them,
> then more power to you. Most people aren't, and I
> think that is something that has got to be
> understood. Not everybody has the money and the
> time and effort to spend to do all the things that
> we should be doing"

When asked who should be responsible for improving the state

of the environment, a lower SES respondent, Shirley, replied

that others should take the helm and accepted no individual

responsibility for the effort herself:

> Shirley - "Yes, if they are really concerned about it, and they want to do it, then go ahead. I will stand here and watch you!"

Men of lower SES also shared the belief that overall they hold no individual control over the environment in the "big picture" despite personal environmental actions. Individual actions were generally regarded as insignificant. But respondents did express the need to try and "do what you can" environmentally. One lower SES respondent, Kevin, felt the need to try to act in an environmentally friendly manner, but admitted that he felt that individual action was on the whole insignificant:

> Kevin - "Well, I don't throw my motor oil down a sewer drain, that type of stuff. I mean, I know where it is supposed to go. You report people who do things that are devastatingly bad, what else can you do? I'm the little guy on the block, so I am not in control of what goes on out there"

> Kevin - "I can only do the best that I can. I know what is right and I know what is wrong"

Another respondent, Edward, also felt that his personal environmental efforts make an inconsequential contribution:

> Edward - "One guy might say I am doing something good for the environment, but overall, its not going to matter"

When asked who could make a difference in preserving the environment, another lower SES respondent, Nelson, emphasizes his lack of personal responsibility and instead attributes it to group control:

Nelson - "A community group. Not government. Probably a community group - not government. There's probably not much I can do"

10.5 Collective Control Over the Environment

Since individual effort was viewed as inconsequential, most respondents felt that improvements in environmental quality were best conducted under collective effort and control. Women of higher SES emphasized group efforts at environmental protection as necessary. They saw this collective effort as beginning with local community action:

Kathleen - "Maybe getting involved with some sort of local group that would...that has a voice and you would just work yourself out from there. But I think initially if you wanted to do anything, it would be to get involved with some local environment group"

Mary - "I think if a community does get together and say "No! We are a small area. We are healthy because of it, and we choose not to bring that into our community and we realize it might cost us jobs". I think that is something you can do"

Men of higher SES also spoke of collective efforts towards ameliorating the state of the environment. One higher SES respondent, Marvin, envisions this effort as growing from grassroots environmental groups:

Marvin - "You have to work as a team. It has to be a movement, with hopefully a lot of dedicated people that get the ball rolling. They'll start environmental groups. These are the critical people you need to get things rolling, get membership lists. You have to have a voice. I think that's when you can do things at a political level"

Lower SES women also felt that collective control in aiding the environment was beneficial and necessary. Group action was seen as being rooted in political influence on the part of the local community:

> Jane - "Yes, we should take action. I suppose more lobbying, though they say that that doesn't work. Boycotting products, having neighbourhood clean-up committees, I don't know. Raising money for worthwhile projects. Community kind of stuff I guess"

> Heather - "Benefits to the environment I don't think you can weigh unless you can get everybody, or at least the majority of the population to go along with it"

Men of lower SES especially supported the notion of collective efforts at environmental action. Men of lower SES also spoke of collective control as being rooted in political influence from community members:

> Garry - "You can organize groups, talk to politicians. You can only go so far because people start looking at cost and they start saying "Well, we can't afford this". But you have to have groups. Large groups of people is the only way you can get anything done"

> Thomas - "If you have a problem, and you contact even your alderman on a city basis, you know. If they get enough phone calls...it only takes 5 minutes for the individual, but if everybody takes 5 minutes, something will be done"

> Kevin - "Well, you get involved with a grassroots organization in your own area, and from there on up to your MPP or your MP and you voice your views. If you don't, then why vote. And it works, it really does"

10.6 Environmental Degredation as Inevitable

Despite viewing efforts at improving the environment as necessary, many respondents also felt that environmental degradation was an inevitable consequence of modern society. In may cases, respondents felt that environmental damage was also irreversible and is something that just has to be accepted as occurring. Women of higher SES spoke of environmental degradation as a natural and inevitable phenomenon in our society:

> Elizabeth - "I mean the environment wasn't destroyed probably the last 20 years it has been devastated. And its a compound kind of problem. I always think of my husband. He had emphysema. Before it starts, you are fine. But once it starts, there is no reversal, the damage is so bad. And I think with the lakes and streams, will we be able to reverse that?"

> Catherine - "Can we live in a world that is pollutant free? I don't know"

Men of higher SES also viewed this eco-destruction as certain given the fact that pollution-producing industry is a necessary facet of modern society. Peter, a higher SES respondent, finds that pollution cannot always be controlled:

> Peter - "You do have to have industry, and there is a certain amount of pollution you won't be able to escape no matter how good the emission controls are"

> Peter - "I think certainly some companies voluntarily or through legislation are polluting less, but on the whole, I have the impression that the ozone is still being depleted and so on, and a lot of efforts at improving the environment are more image than substance"

Women of lower SES also saw environmental damage as an inevitable by-product of today's society. Some also viewed it as unstoppable:

> Marion - "Well, you could take action, but I don't thing there is much you can say because there is nothing that you can do about it. What could you do? People have to work, and I know that pollution comes from the steel plants, but what are you going to do? How are those people going to survive if you take away their work? There's bound to be a certain amount of pollution in the world"

> Marie - "I think litter is one of the biggest things in the environment, and that's caused by people. No government can stop that"

Lower SES men made reference to environmental degradation as destiny in our society. One lower SES man, Garry, finds that pollution and eco-destruction are irreversible and inevitable consequences:

> Garry - "I think some things now are irreversible now anyways. You can't stop it. They are finding garbage under the polar ice cap. How far has it gone? We don't even know what went on in Eastern Europe when they opened that up. Its unbelievable. Some things I don't think they can...They may contain it, but..."

10.7 Conclusions

Several similarities exist in perceptions of control over health and the environment amongst individuals in the sample. Most respondents cited considerable personal control over their own health related to personal lifestyle choices. While individuals largely felt that they could control their

health through lifestyle choices such as proper diet, exercise, and a positive attitude, most reported feeling that they held no individual control over the quality of the environment and possible impacts upon health.

The majority of respondents spoke of having personal control over their immediate or household environments through their ability to conduct pro-environmental behaviour within the home. Recycling and the purchase of safe household products were among the actions most frequently mentioned. While personal control over the immediate environment was reported, control over the overall state of the environment was not. Many respondents felt that they held no individual power to influence environmental quality, and that any personal efforts towards this end were largely insignificant. Instead, collective control over the environment through community groups and government lobbies was favoured. Control over the wider environment seemed to be vested in powerful others such as industry and government.

Differences between social groups in perceptions of control over health and the environment were subtle, but some may be noted. Though all groups cited personal control over health, men of higher SES seemed to most frequently report having control over their own health in comparison with others. Another difference may be seen in comparing perceptions of personal control over the environment. Although

many respondents felt they held little personal control over the environment, men of lower SES cited having control through political influence. In comparison with others, this group emphasized the ability to influence environmental action through the voicing of individual concerns to members of parliament as their own means of controlling the situation.

CHAPTER ELEVEN

Blame, Mistrust, and Responsibility

11.1 Introduction

Though many individuals in the sample felt that they held responsibility for the condition of their immediate environments, the majority viewed the current state of the wider environment as the responsibility and fault of important others. This chapter seeks to explore public perceptions of blame for environmental degradation and responsibility for environmental protection. Respondents were asked whom they felt was responsible for the current destruction of the environment as well as who is responsible for its protection. Mistrust was associated with those thought to be linked to environmental damage, those thought to be in control of its protection, and those distributing information related to environmental issues. Differences exist across social categories in attributing blame and responsibility for environmental degradation.

11.2 Industry to Blame

The majority of respondents attributed blame and responsibility for current ecological destruction to a number

of important and powerful groups, the most frequently
mentioned being industry, government, and others known only as
"they". External others were cited most often to blame for
environmental damage. Women of higher SES cited external
others such as industry as being to blame and being
responsible for the environmental situation:

> Heather - "And just things like Stelco, Dofasco,
> and PetroCanada in Oakville and all those kinds of
> major industries probably put a lot of pollutants
> into the air"
> Kathleen - "If we can get a lot of the industry on
> track with that we would be a lot better off than
> we are. And I think those things always help. I
> think I know they have some minimum standards that
> could probably be looked at"
>
> Elizabeth - "I think that the politicians are in
> control of environment, to the extent that I
> control them. I suppose that you must say that we
> are, but I don't feel that we are in control. I
> think the money and big business is in control
> still"

Women of lower SES also cited industry as the culprit behind
environmental pollution. Sources of industrial pollution were
described vaguely:

> Heather - "I think its more the pollution and the
> factories. You just walk outside and you can see it
> and smell it and its on your skin. That's probably
> more than anything, the pollution"
>
> Jane - "I don't know that your environment can
> cause problems unless it is unhealthy from a man-
> made cause probably"

Although the entire sample seemed to blame and attribute
responsibility to industry for environmental impacts, the
males in the sample seemed to emphasize this more frequently

than the females. Men of higher SES especially found industry

to blame for polluting the environment:

> George - "It's terrible. You look at Stelco and
> Dofasco. I know people that have worked there for
> years. I didn't work there, but they say that after
> eleven at night, they open everything and let it go
> out into the air. That's about 15 or 20 years ago
> now - I don't know what it is like now"

> Trevor - "I just really think that factories and
> companies and large corporations and pollution is
> what is the problem with the environment. I mean
> majorly, it's seems to affect everything almost
> directly"

> Rory - "To me I think that industry...I don't think
> they really care. They tell you "We spend so much
> money", but I doubt it. They are not interested all
> that much. All they really care about is the dollar
> - how much money they make. I don't think they
> really care about your health or my health that
> much"

> Keith - "If companies want to dump their stuff in
> the river and stuff like that, I really can't stop
> them. If I formed a group or something, or joined a
> group like that, that can make a difference, but
> really there is no control. They do it anyways, and
> there's not high enough fines and stuff to stop
> companies from polluting"

As well, men of lower SES seemed to attribute substantial

blame and responsibility to industrial production for

polluting the environment. "Big Business" was seen as being in

control:

> Larry - "We need to clean up the air and that like
> they have done with the steel companies and that.
> They are happier now themselves because people were
> complaining about them all the time, and they
> dropped their law suits. Like that Columbian
> Carbide. They are still getting in trouble because
> they didn't install pollution control equipment.
> And they got that black shit down in that area all

the time. I think in the long run they are spending a lot more time complaining than the time it would take to clean up in the first place. Somebody has to go after these companies. They can't get a foreman or one of those guys that work there. They need to get one of the guys on top, but they are almost untouchable these days"

Larry - "Like some of these chemicals that industries make these days. I don't think that they should be able to market a chemical unless they have got a way to get rid of it safely. Before they are allowed to market it. And they can come up with all kinds of junk, and they can't get rid of it"

11.3 Government to Blame

In addition to industry being the culprit, government was widely seen as being responsible for the clean up of the environment as well as initiating and enforcing legislation against polluting industries. Most in the sample felt that government has not done enough to protect the environment or the public from potential threat. Women of higher SES found government to be responsible for environmental action, though this action was described in very vague terms:

Sonya - "They are probably more able to do something, or get something to be changed than a local citizen in some city or town. Yeah, I think they have a responsibility to keep our environment as clean as possible"

Mary - "I think it's very difficult for us to have input in the global sense because there are such massive problems and its gets into government agencies. Unless you are really keen in an area and into politics, which I wish we could convince our young people is an option as far as careers, you know. If we made it a good, decent position to be in, then maybe we would have more say as far as

what we feel would be best for the environment"

June - "I would like to see the government be a little smarter in that particular field"

Lower SES women cited government as responsible for the current state of the environment. Respondents felt that the government has generally been ineffectual in their current efforts to rectify the situation. Government was also seen as being responsible for the health conditions that result from poor environmental conditions:

Marie - "The government can't stop people from throwing their garbage around. They certainly try to do that, but they certainly don't have much luck in doing that. And they do have control over the industries now, as to when the industries cut back. So yeah, they do have control over it"

Joan - "I don't think it would do us any good. The government is going to do what they want to do"

One lower SES respondent, Helen, made reference to the government's lack of adequate provision of health care as well, deeming it ineffectual:

Helen - "Everybody passes the buck...all their wasted time. So after a while...they cut down on the medical help. They go to the moon, they do all these fantastic things, they make all these fantastic things. And when it comes to health, they cut down on the rooms, they cut down on the staff"

Males in the sample seemed to especially attribute blame and responsibility to government for environmental protection. Men of higher SES viewed the government as responsible for environmental clean-up and as a watch dog to industry. Higher SES men seemed to be more specific in their examples of

potential government action:

> Frank - "I don't think government is strict enough on pollution controls. On one trip to Europe, I watched a helicopter go over a factory chimney, and stop there taking samples, and the very next week, they fined them something like $20 000, and you know that hurts a small plant. It wouldn't be too much of an impact on the steel companies, but they are certainly more aggressive I feel in Europe than they are in North America"

> Robert - "People who are in a position to lead with respect to these questions ought to be a lot further ahead. Much of the environmental movement is grassroots, no leaders. And I don't see that happening at all. It's very rare that you get something sensible out of one"

> Christopher - "I would have no livelihood if it wasn't for Stelco and Dofasco because I sell stuff to them. I think they just have to be responsible. I think they are being responsible now, but I don't think the government does enough to keep an eye on them"

Men of lower socio-economic status also focused on the need for proper and more stringent government regulation in order to protect the environment from pollutants:

> Michael - "You have got to make choices and the government is going to have to bring in more regulations"
> Michael - "It's got to be a government thing with regulations that you can only emit so many toxins to the air a year, and that's it. And once you do that, you have to close it"

11.4 External Threat to Blame

On top of attributing blame and responsibility to industry and government, a considerable proportion of the sample made reference to the fault and responsibility of

powerful external others, referred to as "they", who were seemingly at fault. Because blame for common problems to a common good is seemingly hard to place, respondents vaguely refer to these external others as at fault. Women of higher SES cited specific examples of environmental disasters in which "others" were at fault. One higher SES respondent, Beverly, attributes blame for the health effects associated with asbestos in this way:

> Beverly - "And all the asbestos siding that we all had on our houses that they couldn't wait to put on. Our house in the States actually has John Mansfield asbestos shingles. Asbestos in the schools. We had the one closed in Ancaster for a long time a couple of times. All these things. I am sure that when asbestos came out they said it was the most wonderful thing around, and it had no health effects. What's fine for you this year won't be fine for you next year"

Another higher SES woman, Joy, speaks of the Hagersville tire fire as being the responsibility of one unnamed "other":

> Joy - "I would think that yes it can if we don't have the authority to control the people who harm the environment. Like the rubber tire fire in Hagersville for instance, that smoke was very dangerous. You see, that man, he shouldn't be allowed to do that"

Men of higher SES also cited external and unidentifiable sources as being responsible for problems related to health and the environment. Others were seen as being untrustworthy and worthy of suspicion:

> Rory - "You have to look at the food, the processing. We don't know what they put in there but we keep on consuming it, we keep on eating it.

Oh, and they say this is good, but is it really good? But we have no choice, we have to do it. We have to take their words"

Robert - "It seems that every time people get together and talk about risks, and every time it happens they say, "It's got to be now or we will never have another chance". And nothing ever happens"

Lower socio-economic groups most frequently cited external and

powerful others as being at fault for environmental

degradation as well as for related health effects:

Shirley - "If they clean up a lot of the stuff itself you know that would help. The parkways and their lakes. And you hear all this on the t.v. that they need to clean up. That would be better for everyone I hope"

Violet - "I am going to tell you one word...Man is getting too clever. And this is the whole thing. He is going to eventually destroy everything. Man is getting too clever, and this is what will eventually happen. It will destroy everything"

Marion - "Go after the people to see if they could use less of what they are using so that it wouldn't be so polluted. If they could, you know, try to make less pollution if it was possible"

Jane - "There's a lot of people who don't seem to give a shit anymore, or there's a lot of people who only seem to be concerned about themselves, and they won't even pick up a piece of garbage and throw it away"

Men of lower SES also placed substantial blame on external

others for the state of the environment:

Larry - "You see guys out in their backyards dumping oil down the sewers and the neighbours phoned the police on them. Nothing really happens in that case a lot of the times. All they have to do is take it to a place that takes such stuff"

Even when respondents did accept partial personal responsibility for being environmentally unfriendly, their actions were often viewed as being a result of the wider control of powerful others. The same lower SES man, Larry, attributes his personal contribution to environmental damage as being under the control of the company he works for:

> Larry - "Maybe I do hurt the environment because I drive a cab all day. I just look at it as a job, I never even think about that. I don't own the job, cause if I did, I would have it running on natural gas cause they run pretty clean. They have got it running on gasoline"

11.5 Mistrust of Media, Government, and Industry

Along with blame and responsibility, mistrust was also cited of those influencing the environment. Respondents made reference to the untrustworthiness of institutions such as government, industry, and media for misleading the public and denying responsibility for problems. Women of higher SES spoke of their mistrust of media in swaying public opinion and wrongly propagating environmental issues:

> Barbara - "Well, you know the newspaper never prints the exact truth. Well, I would assume that would be the same for the environment"

> Beverly - "I don't think any of it is trustworthy, no, because every day there is something else you can't eat, and different drugs that are safe now, ten years from now they will say "Oops! They weren't safe"

> June - "I don't feel that the media is trustworthy. I think they do the best they can, but they have

got to make the paper sell. And I listen quite often to the news and I watch the news, and they have to sell to the same extent. They have to get their ratings, and they have to do a little sensationalism if possible. So I don't feel that you can believe any of those things necessarily"

Men of higher SES also demonstrated a certain degree of mistrust of the media regarding environmental issues. Credibility depended upon the source of information:

Rory - "You have to use your own judgement. Whatever they said we have to say, "hey is it really true?" They never mention to you that Niagara Falls is so filthy, but my next door neighbour found out that because of pollution there"

Marvin - "I mean there has been a lot of focus on the Great Lakes. And you have to wonder if that's a media thing to get everyone hyped up. I mean, that can also work positive if the media gets on it and gets everyone hyped up, then research dollars will start going into that. I think it is a concern"

Keith - "Newspapers and things like that...they have a tendency to run up the problem and make it worse than it is. So its good in the fact that you are aware of what's going on, but sometimes they make it worse than it really is. So sometimes its trustworthy. It depends on the source"

Women of lower SES also expressed varying levels of mistrust for media's interpretation of issues of environment and health as an inconsistent source:

Melissa - "The newspapers I don't trust at all that often. They have always got their biases. You have got to take the bias into consideration no matter what you read or see or hear"

Marion - "I trust my daughter, but I don't trust the newspapers because it varies from one source to another"

One lower SES respondent, Helen, expressed a degree of trust in media sources of information, but finds that it is often inconsistent:

> Helen - "You have to give the benefit of the doubt. You don't believe everything you hear, but you can...at least it makes you think about it"

Lower SES men also spoke of their mistrust of media in reporting accurate and consistent environmental information to the public. Disrespect for media as a result is implicit in their words:

> Paul - "The Hamilton Spectator is probably the worst rag in North America. The only one that's worse is the Toronto Sun. They rely on Southam News Service. They don't go out in the street in a van and pick things up. They sit around like a stock broker watching ticker-tape go by, and they go "There's a good story"

> Edward - "Newspapers I would say...I am sure some of it is jaded. Every article is jaded"

One lower SES man, Garry, feels that his mistrust for media stems from the one-sidedness of their interpretations:

> Garry - "I believe it more if I heard the environmental groups talking about it than I would the other side of the coin"

As with media, many respondents from all groups expressed a mistrust of government in misleading or not fully informing the public on environmental issues and risks. One higher SES woman, Heather, speaks of her mistrust of a government that holds back information from the public:

> Heather - "Things like water I really wonder about. How safe is that water that we drink? They say it

is safe to drink, but lots of people drink bottled
water, and some people say that's not really any
better than the water that comes out of the tap.
All you are going on is what you hear on the news
or what the region is willing to tell you"

When asked about sources of information on environment and
health, a higher SES male respondent, Christopher, made
reference to his mistrust of government:

Christopher - "I don't trust politicians, so I
would have to say that they fudge the statements a
little bit probably"

A lower SES woman, Helen, describes her trust in government in
relaying accurate environmental information to the public as
non-existent. In fact, Helen was mistrustful of government on
numerous levels:

Helen - "I don't even know what is in that water. I
don't believe the government. I don't believe the
government has given us the full story of all these
things. I believe they are camouflaging and they
plainly don't know. They are just ignorant on a
lot, and are not telling us, and they don't want to
scare people. And if they really brought this out
earlier and really stressed it...but then again,
look at what smoking does to you, and the
government doesn't want to do anything about that
cause of the taxes. Same thing with alcohol. To me
it's just like a circle"

Of all groups, men of lower SES expressed the strongest
mistrust of government as a source of quality information and
in providing public protection surrounding environmental
issues. The political institution as a whole was viewed as
corrupt. One lower SES man, Paul, describes his general yet
very strong mistrust of government and politicians:

> Paul - "Those politicians are so crooked. They are
> such God-forsaken liars. Here is the newspaper.
> Caricature or cartoon or whatever you want to call
> them on the editorial page. There it shows blabber-
> guts. "Mike Harris Press Conference" - "Due to the
> financial mess we have inherited, many of our
> initial campaign promises will have to be
> reconsidered". And a lady in the crowd is saying
> "Wow, this guy is different - he only took one
> month to cave in". I voted for the jerk"

When asked to weigh his trust for media vs. government as a
source of public information, another lower SES respondent,
Kevin, chose the lesser of "two evils":

> Kevin - "I would believe the media a lot more than
> I would believe any politician who had his only
> agenda"

All groups expressed a general mistrust for industry
with regards to environmental damage and its clean up. One
higher SES respondent, Marvin, expresses the sentiments of all
groups in the sample who spoke of industry as being all-
powerful and untrustworthy:

> Marvin - "When I hear though of a big company
> that's got interest in continuing to pollute cause
> it costs too much money not to, then you have to
> wonder. If they come up with their own personal
> studies, you know, or if they say that "No, smoking
> doesn't do anything to your health". So you have to
> wonder where it is coming from"

All groups seemed to express considerable doubt about
who they should believe. Mistrust was expressed for
information stemming from all major institutions involved
either directly or indirectly in environmental destruction.
One lower SES female respondent, Melissa, spoke of her

confusion about which institutions could be trusted:

> Melissa -- "Greenpeace puts out some very good
> information, but then again, they are very biased
> the other way. Then industry says this stuff is
> okay, its safe, its no problem. Somewhere in the
> middle lies the truth"

Another respondent, this time a lower SES man, Larry, also

expresses his mistrust and confusion about all institutions in

the environmental game:

> Larry - "That's a good question. I have never
> thought about it much, cause it doesn't matter.
> Industry exaggerates one way, and the government
> exaggerates another way"

11.6 Conclusions

Blame and responsibility for environmental degradation

as well as future environmental protection were attributed in

similar ways across social groups. Most respondents felt that

industry and government were to blame for current eco-

destruction and as powerful institutions were responsible for

future environmental protection. In addition to blame and

responsibility attributed to these powerful groups,

respondents often cited powerful others, "they", as being at

fault. These nebulous, external, and threatening "others" were

often blamed for environmental destruction, reflecting the

need of individuals to make accountable the unknown "others"

who have destroyed the environment.

As well as blame and responsibility, mistrust was reported for industry, government, and media in their interpretations and communication of environmental knowledge. Respondents largely viewed these institutions as being untrustworthy and misleading with regards to public accountability on environmental issues owing to their personal agendas.

Differences among perceptions of blame, responsibility, and mistrust may be noted across social groups. For instance, males from both higher and lower socio-economic groups more frequently attributed blame and responsibility for the environment on industry and government than did their female counterparts. Lower SES groups attributed substantially more blame on external "others" as the major environmental culprit.

Perceptions of mistrust also revealed differences across social groups. Women in the sample expressed a higher level of mistrust for media than their male counterparts. Lower SES men most frequently reported mistrust in government as compared to other groups.

CHAPTER TWELVE

Personal Morality and the Environment

12.1 Introduction

This chapter explores public perception related to personal environmental ethics and morality. Respondents were asked about personal feelings of environmental responsibility, the need for personal environmental action, and their individual role in protecting their health and the environment in general. Most respondents felt that they indeed had a role in protecting their health from the environment, but that their role in protecting the environment in general was very small as individuals. Respondents expressed a sense of individual moral responsibility about environmental issues as well as guilt associated with not doing more to help the environment. All saw the need for personal environmental actions such as recycling and the purchase of safe household products. Environmental education and awareness among the public was also widely supported among subjects. Differences exist among social groups in reported individual environmental concern, action, and responsibility.

12.2 Personal Responsibility for the Environment

A sense of personal moral responsibility for the environment and guilt for the lack of environmental action was seen in all groups in the sample. Most either regretted having done something environmentally unfriendly, or wished that they could become more involved in environmental action groups. Women of higher SES expressed this sense of personal responsibility and guilt about their environmental contribution. Kathleen, a higher SES respondent, speaks about her desire to become more environmentally-involved:

> Kathleen -- "I would love to be in a position where I could choose to do that and I wasn't up half the night doing a project for work or studying for a course. You know, I would love to be getting involved with that. One of our neighbours is very involved, and he is just recently retired and I think its absolutely wonderful. And I think other people should be, and myself included. And its a matter of making choices"

Another higher SES woman, Elizabeth, expresses her guilt about being environmentally unfriendly:

> Elizabeth - "I have had my lawn done for probably 30 years, and for probably 20 of that, I have a lot of guilt about that. We didn't appreciate those sorts of problems"

Men of higher SES also conveyed a sense of personal responsibility for protecting the environment as a moral stance. They did so however the least frequently of all groups in the sample. One higher SES respondent, George, when asked about whether or not he would act in an environmentally

unfriendly manner in order to make a profit, replied:

> George - "I am a real honest and upstanding individual. I believe in the law. I would never do anything like that. I could never sleep at night if I did"

Women of lower SES expressed sentiments of moral responsibility for both the environment and their own health as something they should be aware of and act upon:

> Jane - "Well, we are all doing it all the time, but I am trying to get better at things. There is a lot of things that we do and I know that they are not right. The house is full of stuff that we don't need and everything, but we are slowly improving on that"

> Shirley - "If I felt like I wanted to be unfriendly I could be. But I try most of the time not to be unfriendly. No, I try to be decent with everybody"

Men of lower SES also expressed personal responsibility and guilt associated with environmental actions:

> Michael - "Like I said, in this business I use lacquer finishes, and I know that its wrong"

> Simon - "I would say I am not a big, big recycler but I know it should be done, so I guess yeah, I would agree to that one"

Another lower SES man, Edward, speaks remorsefully and about being "less than proud" regarding his role in harming the environment as one which is out of his direct control:

> Edward - "I have already said once that everybody has done stuff that they are less than proud of, and I have too. When your boss tells you to do it, and its his place you kind of have to do what you are told. So I guess yeah I have harmed the environment"

12.3 Acceptance of Environmental Responsibility

Most respondents also eluded to holding personal acceptance for the quality of the environment. Acceptance of this responsibility frequently came in the form of acknowledging that "we as a society" have contributed to environmental destruction. Though acceptance and admission was not necessarily on a personal level, citing oneself as part of a societal group that contributes to it, indicated a level of personal acceptance. Higher SES women expressed this acceptance most frequently, referring to the nature of modern society as the precedent for environmental damage:

> Kathleen -- "I suppose the more complex our society gets, the more difficult it becomes to deal with the environment. And uhm, we all want to drive cars, and we all want to have all the conveniences"

> Elizabeth - "I'm not such a purist that I don't...I mean, I drive a car, and I live in a house with lots of wood. But I think that we have been reckless in a way that we have abused the environment. I think that we can maintain a lifestyle that is comfortable without abusing. We are a throw-away society. I know that what I put out in the garbage, I don't believe that my mother and father put out a twentieth of what we put out"

> Kathleen -- "Now I really try to be conscious and aware of that. To be honest, I think that there is one thing that we do that's probably not environmentally friendly and that's having chemicals put on the lawn trying to get rid of the grass"

Men of higher SES also referred to accepting environmental responsibility as a society as necessary. One higher SES man, Marvin, speaks of our need to recognize and act upon the

problem through awareness:

> Marvin - "We have to teach our children, you know. And there is a nice movement now with recycling, and you see kids already who know how to separate cardboard from the regular paper and aluminum cans. So it is working. But I think it has to increase. We need to increase it even more. Cause a lot of people still don't recycle. And you also have to make recycling profitable for the companies that do it. It's important that we try to recycle. We just can't keep throwing it into dumps. We are running out of landfill sites"

Another higher SES man, Rory, feels that we must act as a society and participate in environmental efforts, using his native country's environmental example as a reference point:

> Rory - "I guess you have to participate with the community to get people involved. You have to say "Hey, you have to clean up and don't waste" - that kind of thing. I know, I come from the East. It's a filthy environment, and I don't want to see anything like this in this country"

Women of lower socio-economic status did speak of responsibility for environmental degradation, but less frequently than higher SES groups. Their relative lack of acceptance is viewed as a result of their lack of awareness and control. One lower SES respondent, Melissa, emphasizes that her role in environmental action is dependent upon her knowledge of impacts:

> Melissa - "My awareness of the effects on the environment would also affect the decision or not to respond. If I don't know whether or not it is going to be harmful, then it's not likely going to be a consideration. If I am aware that it is not good for the environment, then I wouldn't"

Another lower SES woman, Heather, speaks of environmental responsibility as being up to the individual, as something that "cannot be forced" out of people:

> Heather - "I think its up to each individual to take it upon themselves to do it. Its each person's responsibility. You can't force people to do it. Like you can't force someone to recycle"

Lower SES men also made reference to accepting responsibility for environmental damage mostly as a society. Simon speaks of environmental protection as necessary and as something we all must be concerned about:

> Simon - "If you don't protect the environment, then there won't be a future really. So you really don't have a choice. Whether or not we will get...yeah, I think people are changing enough to realize that down the road, we just can't keep going the way we are"

When asked about who should conduct this environmental action, however, Simon places responsibility on those who wish to help:

> Simon - "I think if people believe in it they should get involved in it, but I am not one to go out and join groups to try to get things done. I know I should. If you believe in something passionately, then you should try to get involved in it"

Another lower SES respondent, Paul, acknowledges that "we" as a society have contributed to environmental degradation:

> Paul - "We are doing one dreadful job in the last 30 or 40 years on this planet. One terrible job. I don't mean wars, I just mean what we are doing to the land"

12.4 Personal Environmental Action

Respondents spoke of personal environmental actions that they partake in regularly. Most made reference to household actions such as recycling, the purchase of safe household products, the use of safe fertilizers, and engaging in regular automobile maintenance. Though all actions were viewed as minor, respondents viewed their contributions as "doing their part". Women of higher SES spoke of their personal environmental action:

> Catherine - "Well, I try to be really...little things like recycling, buying products that are environmentally friendly or safe. I know its just a small thing, but its really important to me to do that"

> Beverly - "If there is a choice between an environmentally friendly product and an unfriendly one, we always use the environmentally friendly one. Like non-toxic stuff on the plants, and non-aerosols"

Men of higher SES also referred to their conducting some form of personal environmental action:

> Christopher - "I think recycling is one small thing, but not only your newspapers. For instance, I don't use any chemicals on my lawn. I don't let the people come and spray my lawn with chemicals. I use a bit of fertilizer, but I try to use natural fertilizer"

> Rory - "You start in your own house with all this recycle stuff. And you don't waste anything. I think waste is the killer in Western Society. It's the waste"

Lower socio-economic groups made less frequent reference to personal environmental actions. Lower SES women did refer to

actions such as recycling and automobile maintenance as minor

actions that help:

> Heather - "I think everybody can help by recycling
> and not getting aerosol cans. Everything is
> publicized as to what's good and what's bad, so I
> just try to do it that way. Just by recycling and
> not using aerosol cans or anything like that can
> help save the ozone"

> Melissa - "Minor actions like recycling and getting
> your car tuned up so that the emissions are the
> best that they can be. Things that are not major
> lifestyle changes, yeah, I think everyone should"

Lower SES men spoke of their role in protecting the

environment in the form of community group membership to

promote awareness rather than individual action alone:

> Kevin - "The fact that I am involved in a lot of
> community groups who have particular issues that
> they are dealing with the city right now has
> enlightened me quite a bit with what is going on
> with environmental assessments"

> Paul - "Forty years ago, with two other people, I
> formed a tree planting club. And we would plant a
> thousand trees every weekend. And I even asked Tree
> Canada ,'Have you got this type of program going?'
> Oh, no, no. We planted 41 million trees. Most were
> done by the boy scouts. And government workers I
> guess. I wouldn't mind working for a volunteer
> place to go and plant if I could make it 50 trees
> every Saturday. We did it forty three years ago"

One lower SES respondent, Thomas, did emphasize personal

actions that contribute to environmental protection as "small

things" that add up:

> Thomas - "Going through recycling, cutting down on
> the things that you know are bad for the
> environment. When you stop out in front of a store
> or something, turning the car off instead of
> letting it idle. It's just a lot of really small

things. When you add them all together, it's doing your part"

12.5 Environmental Education and Awareness

All groups emphasized the need for awareness and education about environmental issues in society. Most made reference to the need for education in schools, as well as a general change in people's attitudes related to the environment. Higher SES women

spoke in these terms:

> Catherine - "I really believe that if you don't know, then you will keep acting in ignorance. But if you do know, at least if you have the information accessible, then you can affect change and change through your friends and through your children"

> Elizabeth - "I see a tremendous change in the public's response in terms of my friends. Ten years ago they were totally unaware. And now they do little things, and are very aware. And I think that's a very positive thing"

> Catherine - "Education is an important part of it. People don't know unless they are told and encouraged to do it. That's important. I think change is affected best by education rather than coercion, so that would be important to do"

Men of higher SES also stressed the need for heightened public awareness and education around environmental issues. One higher SES respondent, Marvin, emphasizes the need to educate:

> Marvin - "What you have to do is educate and I think that's the biggest thing. I mean, its also important to get politically involved, march on Parliament Hill and such, but I think on our end its just sort of education. We have to know what is

there before we can say this environment is sick"

Marvin also spoke of a change in attitudes as necessary and the recognition of more global environmental orientations:

> Marvin - "I think attitudes have to change, right? I think people have to think more globally. I think people get into the mindset that we are safe here in Hamilton, or here in Ontario, that they pollute in the States but we don't pollute here. People think there are invisible borders"

Another higher SES respondent, Christopher, feels that environmental attitudes are already changing as is evident in local environmental action that has already taken place:

> Christopher - "I would say that things are getting better because attitudes are changing. I do a lot in the Cootes and that. And back about five years when I started going there, it was just disgusting. I mean it's a whole lot cleaner there. We were down the other day and we dumped the canoe in the Cootes - it was pretty gross. It's a whole lot cleaner. You don't see tires, and you don't see the garbage floating around like you used to. Maybe that's a localized opinion, but I think people are more conscious of it"

Lower SES women also pointed to the need for environmental awareness, though slightly more vaguely than higher SES groups:

> Jane - "Its got to be an attitude. You just have to go out and do things"

> Marie - "Everybody should be careful what they do, I would imagine. And pay attention. That notice when they asked us last week not to use aerosols and not to drive a car if you didn't have to. You should pay attention to the scientists when they are telling you that its a bad day. If everybody paid even a little bit of attention to what they were telling you that would help"

Men of lower SES stressed the need for knowledge and education surrounding environmental issues as the key for attitude change. When asked what we need to help the environment in the future, one lower SES respondent, Kevin, replied:

>   Kevin - "Knowledge. I just mean plain knowledge. Knowing what you are dealing with or having someone who knows what you are dealing with"

>   Simon - "I don't know if they are doing it now, but they have got to start teaching life things in school instead of history, cause nobody learns anything from history. They have to teach kids more about real life earlier"

>   Garry - "Educating the people about it I guess would make it safer. I think when kids start school, they should be taught...reasonably, anyhow"

12.6 Conclusions

Respondents shared a sense of personal moral responsibility for the environment. Most felt that either they as individuals had contributed in some way to environmental degradation, or that "we as a society" had through common actions caused environmental damage. Examples of malevolent activity were cited by many respondents. Guilt and remorse for environmental degradation were also implicit in many respondents' comments regarding environmental responsibility. Though recognizing and accepting either a personal or group contribution to environmental destruction, many respondents also reported conducting pro-environmental behaviour. Several individuals referred to the ability to act in an

environmentally-friendly manner in their households or communities as a way to contribute to overall environmental protection in "doing their part". In many cases, awareness of environmental issues was deemed important, and several respondents supported increased environmental education for the public towards this end.

Differences may be noted across social groups with reference to personal responsibility, environmental awareness, and pro- environmental actions. In general, higher socio-economic groups and especially higher SES women, more frequently reported personal acceptance of environmental responsibility than lower SES groups. This finding might reflect higher socio-economic status as having an effect on perceived ability to change and improve environmental conditions as a result of economic security and social influence. As well, higher SES groups reported conducting more pro-environmental behaviour than their lower SES counterparts. Although increased environmental awareness was mentioned as necessary by all groups, those in higher socio-economic groups seemed to further emphasize the need for increased environmental education for the public (notably in the school system) than did lower SES respondents. This finding might reflect different priorities, needs, and experiences of those with more preferable social and economic circumstances.

CHAPTER THIRTEEN

Conclusions of Findings

13.1 Summary

Perceptions of the connection between health and the environment seem to differ amongst both individuals and social groups. Despite the small sample interviewed in this exploratory study, differences may be noted between and within groups depending upon gender and socio-economic circumstances. And despite variations, similarities do exist in the manner in which all respondents connected their health with the environment.

Health was clearly articulated by most of those interviewed. It was viewed as one of the most central components of quality of life and as such was attributed great personal value. What is meant by the term health was well articulated by most with reference to conventional biomedical ideals as well as experiential knowledge. Most in the sample had little difficulty in defining and describing health as well as clearly emphasizing its importance relative to other life domains such as economic well-being and environmental quality. Selfishness in protecting or valuing one's own health was justified through its significance. Shared meanings of

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health were evident in the findings, and these clearly follow personal and social beliefs. Because health is subjectively experienced, respondents also reported considerable control over the state of their health and personal responsibility for its maintenance, notably in the form of lifestyle choices. The relative health of others was perceived differently from one's own health, indicating that our understanding of health reflects personal moral worthiness and self-control.

In contrast to this, the environment was less clearly articulated and understood. Environment was described nebulously in most cases as "everything" in the surroundings. Unlike health which is intrinsic to the self, most respondents spoke of the environment as an abstract external entity. Though it was viewed as having a large impact on many domains of life, perceptions of the environment and its influence on humans were not necessarily reliant upon personal experience or concrete knowledge. Little personal control was therefore identified relating to the environment as it remains a force outside of the individual.

The interconnectivity of health and the environment was emphasized. Risks to health from the environment were ubiquitously referred to by many. Though health was largely viewed as under the control of individuals, risks posed to health from the environment were seen to be the fault and responsibility of powerful "others". Control over the

environment and its impacts therefore reside outside of the self. Again, moral worthiness is maintained through an external identification with the environment as well as the attribution of blame upon external forces. Threats to health were identified in many cases without the use of specific instances of environmental influence and despite supporting toxicological evidence, indicating that perceptions of the connection are based primarily upon belief systems.

Health is therefore clearly identified with the self, and the environment outside of the self or external. These perceptions of health and the environment are mediated by social values and normative frameworks. A dichotomy of control and responsibility for health and the environment results from such values, and our perceptions of the two are based upon the identification of each with the self. While there are variations in these perceptions across individuals and social groups, the question of what processes may account for the perceived connection begs an answer. Social cognition literature on perception formation may be merged with a general account of environment and health connections in order to answer the final research question of the meaning and relevance of these perceptions.

CHAPTER FOURTEEN

The Role of Representations and Cultural Models in Perceptions of Health and the Environment

14.1 Introduction

Perceptions of health and the environment arise from the combination of stimuli from the external environment with internal cognitive information processing. Perceptions are the personal interpretation of our outside worlds as the ways in which individuals receive and process information. In the previous chapters, variations in these perceptions have been illustrated amongst individuals and social groups. In an attempt to account for such variations as well as existing similarities, we turn to social cognition literature to explain the processes involved in perception formation. Cognition research may provide insight into how our social world is organized and coded into meaningful categories from which we make sense of our surroundings (Alcock et. al, 1988). This chapter will examine perceptions of health and the environment through a cognitive framework, including the role of representations, schema, and heuristics in individual and social information processing. The formulation of cultural models and cognitive maps from these structures will also be discussed in an attempt to achieve an understanding of the

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connections between health and environment perceptions, values, and cognition.

14.2 Social Cognition and Representations

Human cognition is fed by information. Information may be defined as the data individuals or social units use to adapt to the environment, reduce uncertainty, and achieve gratification (Heath and Bryant, 1992). Knowledge and understanding of information depends in part upon verification via perceptions which are translated into meaning. The manner in which individuals interpret and process this information depends upon cognitive processes which are often experiential, value-based, and socially-reinforced. According to Heath and Bryant (1992), "cognition is a computational process that handles quantities of information that stem from past experiences as well as fictional accounts, projections, and values" (p.97). While outside information contributing to perceptions may be objective itself, the meaning derived from information stems from value judgements. Biases often result from the way people receive and process information messages (Fischhoff et. al, 1993; Heath and Bryant, 1992; Kahnemann et. al, 1982).

Social cognition, or interpersonal communication, refers to the processes and motives behind individual efforts to receive and interpret information (Heath and Bryant, 1992).

Because social cognition deals with how people mentally construct their worlds, it may provide insight into how people link information related to environment and health through values and mental processes. Values are pivotal to the formation of social categories because of their ability to act as a filter for information influencing our perceptions (Tajfel and Forgas, 1981). The heart of information processing within social cognition lies in representations, which are a set of concepts, statements, and explanations originating within inter-individual communications and resulting in a filter for social information (Moscovici, 1981). It is thought that social representations are formed for use as filters for incoming environmental information that may shape behaviour and act as manipulators of our thought processes (Moscovici, 1981). The key cognitive structures within representations that affect information processing are categorizations, schemata, and heuristics.

14.3 The Cognitive Components of Representations

Social categorizations refer to the process of ordering the environment in terms of categories which affect our perception of information (Tajfel and Forgas, 1981). Used to simplify and classify information, categories closely mirror dominant societal norms and values as they are formed with a strong evaluation component (D'Andrade, 1990; Tajfel

and Forgas, 1981). Social identities are molded in comparing categorical knowledge across groups as these dominant values and representations are reinforced. Within social categories and integral to their formation lie social schemata, or the set of interconnected beliefs, information, and examples about social objects (Alcock et. al, 1988). They are the cognitive structures that represent organized and consensual knowledge about a given concept or stimulus (Fiske and Taylor, 1984). Social schemata result from the need to interpret and construct meaning and make efficient the processing of information about persons, roles, and events in the external environment through the use of abstract conceptions.

According to Fiske and Kinder (1981), "schemata constitute serviceable although imperfect devices for coping with complexity [which] direct attention to relevant information, guide its interpretation and evaluation, provide references when information is missing or ambiguous, and facilitate its retention" (p.173). Like social categories, schemata too are rooted in social belief systems which are a conceptually rather than data-driven means of information organization. They rely upon inference and experience rather than reality for classification and organization. Each schemata share a label and a set of prescribed values which correspond with these inferences. Information interpretation is influenced by schemata as they often produce selective

attention to certain types of information and collapse inconsistent data. Though they resonate dominant social values, schemata use and availability differ by individual and social group depending upon knowledge and experience.

Social categorizations and schemata are used to simplify and compartmentalize information for ease of interpretation. Other cognitive structures are used in conjunction with these in order to make decisions related to information. Heuristics, or the functional component of representations, are the rules and strategies used for making judgements under uncertainty, or the causal attributions resulting in individual inferences about situations or events (Alcock et. al, 1988; Kahnemann et. al, 1982). Heuristics form the "rules of thumb" that subconsciously help to guide inferential decision-making related to uncertain information using memory recall. As inferential tools, these "rules of thumb" also reflect dominant values. In using heuristics, people may ignore concrete information, and tend to overgeneralize and refer to extreme examples in making judgements (Alcock et. al, 1988).

Though these structures serve to simplify and organize social information into consensual categories which are shared, variations occur in their use for individual information processing. Variations in interpretations and constructions of health and environment amongst individuals

and social groups may occur as a result of individual socio-
demographic characteristics (ie-SES, gender, age, education)
and psychological dispositions (locus of control, trait
anxiety) (Axelrod and Lehman, 1993; Navarro et. al, 1987) as
well as through individual differences in attention to
information (Fiske and Kinder, 1981). Evans and Campbell
(1983) also assert that the perception of environmental risk
may be influenced by psychological factors such as perceived
control and personality traits. The variations in perceptions
of health and the environment in the present study by gender
and socio-economic status might be attributable to such
individual differences in information processing, schemata
use, and availability.

14.4 Representations of Health and the Environment

The three major components of social representations
may be used to explain the ways in which individuals and
groups cognitively derive meaning from and bring connection to
information related to health and the environment. From the
data on health and environment perceptions from the previous
chapters, reference is made to several dominant
categorizations that are used to shape schemata. Perceptions
are shaped by such categorizations as "health", "ecosystem",
"balance", and "threat" which are based upon consensual
schemata shared by most in the sample. Beliefs about personal

responsibility for healthy and wise choices over lifestyle options as well as our ambivalence towards a nebulous environment outside of our control shape views of environment and health.

Schemata related to health and the environment take the form of "health is me", "environment is outside or external", and "they are responsible/to blame for the environment". Perceptions, attitudes, and possibly behaviour related to the connection between health and environment are guided by such schemata. Structures of control and responsibility are perceived according to this dichotomy of "health is me" and "environment is outside me", and are guided by our individual and social moral stances. According to such schemata, the individual is responsible for their own person and their own health, but yet are extricated from responsibility for the nebulous environment. These types of cognitive structures dictate that we cannot be held responsible for what we do not control. So others, "they", are held responsible for what goes wrong in the environment.

Though schemata related to health and lifestyle choices allow for perceived personal control over oneself, there is little schematic help for control over the environment from which a sense of personal control may be extracted. Akin to the manner in which individuals view the health of others as worse than their own and a direct result

of others' personal actions, people tend to view the environment as "otherness" or external to themselves and not within their control. Hence individuals may uphold moral worthiness by discounting personal blame.

In the present study, health and environment are cognitively connected, though only in abstract terms. Where knowledge of their connection is limited, predominant social schemata take over and information is slotted into categories that are known and trusted. Risk to health is attributed to the environment through schemata, and heuristics related to known environmental disasters are often utilized in decision-making related to uncertainty. Discrepancies exist between risk perception of experts vs. laypersons owing to schema use and availability, barriers to communication in the form of use of terms (Fischhoff et. al, 1993) as well as access to different knowledge and different "languages" of risk (Eyles, 1996). Experts generally agree that "lay people do not realize how small/large risks are" as a result of inferential assessments, and opinions are therefore subject to bias (Fischhoff et. al, 1993: 186). Heightened public perception of risk results because attributions of risk are value-ladened judgements which reflect social norms. Fischhoff et. al (1993) confirm this in finding that "people's intuitive theories of risk are revealed in the variables that they note and the values that they supply" (P.192), concluding that "health risk

decisions are not just about cognitive processes and coolly-weighed information. Emotions play a role, as do social processes" (p202).

Although the linkage between health and the environment is speculative, personal and health "risks" are identified by the sample (ie-those related to cancer, dirt, violence, cars, overpopulation as threats to the biosphere and future generations). Abstract yet strong links reverberate in terms such as "everything causes cancer" and "there is nothing we can do to stop environmental pollution". Schemata related to personal responsibility, significance of the individual, independent choice, and personal control may be identified in the data from the present study. Power is seen as residing with the self with concerns for and control over the individual being paramount, while power over a nebulous environment remains external. In keeping with the anthropological literature (Douglas, 1966), these schema represent the values inherent in the social categories of dread, defilement, overcrowding, and survival over which we have no control are worryingly dependent upon others (James and Eyles, 1996). The central themes which emerge from this metaphorical connection of health and the environment also encapsulate notions of cooperation, competition, and purity (Eyles, 1996). Schemata facilitate a "retreat" into what is known and controllable, within the self and outside of it. In

the present study, this takes the form of selfishness and self-care for one's own health and well-being, and intolerance of those who are seen as controlling the environment such as industry and government. These latter forces are then blamed for the presence of risks which provides support for the arguments concerning our insecurity in a risk society by Beck (1986) and Giddens (1990, 1991) among others (James and Eyles, 1996).

14.5 Cultural Models of Health and the Environment

Information on health and environment is filtered and organized according to risk-associated schemata as a means of simplifying reality, often producing selective attention to certain types of information and increasing the individual sensation of control over information through ease of interpretation (Fiske and Taylor, 1984). Representations of health and the environment are guided by social schemata. Conceptually-driven belief systems about environmental influence on health based upon experiential or inferential knowledge are socially-formed and communicated around issues such as pollution, nuclear power, and other prominent environmental issues, deeming them threatening to our health and our values of safety, purity, and control (James and Eyles, 1996). Information is cognitively reordered along common societal lines and according to common social values

that serve to connect the environment with health. As Fiske and Kinder (1981) argue, we are cognitive misers, filtering new experiences and perceptions into simplified and pre-existing representation models of the world.

Cultural models are formed from this filtering process which include such connections between health and the environment, based upon metatheories of "how the world works" according to representations which are inter-subjectively shared and communicated amongst social groups (D'Andrade, 1990). These cognitive models are the broad conceptual structures or frameworks through which representations, schemata, and heuristics are combined as the cognitive tools needed to assess and interpret the outside world. Mental models and maps are pivotal to the formation of shared cultural models. Fischhoff et. al (1993) define mental models as a term used to apply intuitive theories that are elaborated well enough to generate predictions in diverse circumstances. Such intuitive theories rely upon cognitive maps of worldly connections. Cognitive maps may be thought of as the mental devices and stores which help to simplify, code, and order the endlessly complex world of human interaction with the environment (Kitchin, 1994). Representing the fusion of geography with psychology into environmental cognition, mental maps have been referred to as the process and not product involved in interpreting external and socio-spatial phenomena

in "the-world-in-our-heads" (Downs, 1981; Lee, 1976; Kitchin, 1994). Though traditionally used with reference to spatial phenomena alone, mental maps have increasingly made a presence in socio-spatial analysis. According to Lee (1976), "if such cognitive, schematic spatial structures exist for the real world, they must also exist for social objects which are similarly disposed in space" (p.183).

Mental models and maps aligned with dominant representations, schemata, and heuristics combine to form cultural models of the world, and information may be interpreted using these conceptual frameworks. A conceptual structure may be attempted of the perceived connection between health and the environment using the findings from the present study (James and Eyles, 1996) (see Figure 1). This conceptual model related to health and the environment combines these cognitive structures with dominant value systems to illustrate how perceptual connections between the two are made. Emphasized in the model is the role of values related to individualism in which "we" (self, health, family) are primary based upon a sense of personal control. Others, or "they" including such forces as the environment, government, and industry are differentiated from this as not within our control. Information is thus filtered and interpreted according to such values. Individuals define primarily through such a cultural model to protect their values, and then view

the world with reference to this, usually in partial ways. Lippmann's (1922) phrase "we do not first see, and then define, we define first and then see" (p.87) therefore holds true in assessing the role of cultural models in information processes related to health and the environment. Our world is interpreted through the lens of ourselves, and is coloured by values and social norms. This is the filter through which our interpretations of health and the environment are perceived and joined.

14.6 Conclusions

Perception formation relies upon cognitive structures such as representations, schemata, and heuristics through which information from the outside world is filtered and interpreted. Information related to health and the environment used to form perceptions in the present study may be analyzed according to such cognitive structures. Schemata and representations rest upon the dichotomy of "health is me" from which a sense of personal control may be extracted, and "environment is external" from which little personal control and responsibility is perceived. The allocation of information into such health and environment schemata is largely consensual, value-dependent, and is structured by the moral. In applying theories of social cognition to the study of health and environment perceptions, we may attempt to

understand how it is that individuals and groups come to conceptually connect the two through schemata, representations, and heuristics to form cognitive models of their outside worlds through which information may be interpreted. Such models may provide insight into what may account for variations in perceptions according to cognitive structures across individuals and social groups.

CHAPTER FIFTEEN

Conclusions

15.1 Conclusions

As an exploratory qualitative analysis, the present study seeks to unveil the nature of public perceptions of health and the environment, the variations of these perceptions across individuals and social groups, and to suggest a conceptual or cognitive framework through which an understanding of the nature of these perceptions may be fostered. Differences in perceptions have been shown in the previous chapters to occur between individuals and social groups depending upon a range of socio-demographic factors as well as through societal norms, value orientations, and information processing networks.

Perceptions of health and the environment are critical to public opinion, and by extension, to environmental health policy (Arcury, 1990). The conceptual connections between health and the environment take the form of public perceptions of threat to health from environmental agents which reflect dominant values related to the self and quality of life. The link between perceptions and values and cognition becomes critical to an understanding of the mechanisms lying behind

pro-environmental attitudes and possibly behaviour. Evans and Campbell (1983) suggest that most human responses to potential environmental stressors are determined by individual perceptions of threat. Others have also noted that pro-environmental behaviour may be arbitrarily linked with individual perceptions of risk to health (Baldassare and Katz, 1992; Zeidner and Shechter, 1988). It is thought that personal environmental action results more so from increased perception of risk than actual knowledge of risk (Steger and Witt, 1989). Clearly perceptions are pivotal in leading to the decision to act in an environmentally-friendly manner. Attitudes and values related to the environment that connect with those related to our health and the self play a central role in individual environmental decision-making.

Poor risk communication can lead to a greater public perception of environmental risk (Fischhoff et. al, 1993). Because the value placed upon the environment is internalized through its connections with health and the self (Eyles and Cole, 1995), it becomes critical to both environmental and environmental health policy that the conceptual links leading to public perceptions of risk be understood so that information may be properly communicated to the public. Heightened public awareness of environmental health issues and

increased pro-environmental behaviour would therefore seem to be dependent upon a clearer understanding of the interplay between factors that account for public perceptions.

Though research on health and environment perceptions has been conducted, little of the work examines the combined influence of socio-demographic variables, value systems, and social information processing to this end. The present work seeks to add to the literature on health and environment perceptions in incorporating the role of social cognition and value orientations in perception formation. Despite the small sample size, the findings of this study highlight a gap in the literature related to these issues. Further and more extensive work on the connections between perceptions, social characteristics, values, and cognition should be undertaken to assess the role of each in contributing to public perceptions of the connection between health and the environment.

APPENDIX 1

CHECKLIST OF TOPICS

THEME: PERCEPTIONS OF HEALTH:

1. Would you describe yourself as a healthy person?
2. Healthy compared to what, or how do you define "healthy"?
3. How do you view the health of others around you?
4. Are you often ill, with what, and what causes it?

THEME: PERCEPTIONS OF THE ENVIRONMENT:

1. Does the environment influence your health? If so, how?
2. Can the environment cause ill-health? What types?
3. How would you define "environment"?
4. How does the environment compare with other influences on your health?

THEME: RISKS TO HEALTH FROM THE ENVIRONMENT:

1. How risky is the environment to your health and the health of others? Do you see it as a risk?
2. Do you feel that protecting the environment is related to protecting your health?
3. Is the environment more risky to health today than it was in past? In what ways?
4. What makes the environment safe or unsafe for health?
5. Other than the environment, what else in your community is safe or unsafe?

THEME: CONTROL OVER THE ENVIRONMENT:

1. Do you feel in control of environmental influences? In what ways?
2. Where do you get your information on the consequences of the environment on health? Is it trustworthy and believable?
3. What do you feel is your role in protecting your health from environmental influences?
4. Do you feel that you and others should take action to minimize the impacts of the environment on health? By whom, and in what form?

THEME: ENVIRONMENTAL ETHICS AND VALUES:

1. Is your health more important to you than the environment around you? How do you think other people see it?
2. Is other people's health more important to you than the environment around you?
3. If you needed to be environmentally-unfriendly for your health, would you do it?

4. If you needed to be environmentally-unfriendly for personal economic prosperity, would you do it?
5. Do you worry about the impacts of the environment on your own health, the health of others, or the health of the ecosystem? Which concerns you most and why?
6. What do you feel are the costs and benefits of protecting the environment? How important are these to your health?
7. How important is the environment in comparison with other things you might value?

APPENDIX 2

DESCRIPTION OF INFORMANTS

HIGHER SOCIO-ECONOMIC STATUS:

NAME	SEX	AGE	OCCUPATION
Sonya	female	29	lab technologist
Barbara	female	56	nurse
Elizabeth	female	67	retired homemaker
Mary	female	79	housewife
June	female	51	medical/dental sales
Heather	female	30	RN in training
Kathleen	female	46	education admin.
Joy	female	69	retired
Catherine	female	45	hospital chaplain
Beverly	female	45	interior decorator
Marvin	male	35	insect taxonomist
Frank	male	65	cabinet maker
Keith	male	18	student
Robert	male	52	technology planner
Trevor	male	26	teacher
Peter	male	34	financial planner
Rory	male	61	CAD circuit designer
George	male	70	rtr. machine operator
Dean	male	18	student
Christopher	male	29	indust.prod.sales

LOWER SOCIO-ECONOMIC STATUS:

NAME	SEX	AGE	OCCUPATION
Eileen	female	79	housewife
Marie	female	59	retired
Jane	female	41	postal worker
Helen	female	56	rtr. health care aid
Marion	female	80	housewife
Heather	female	30	accountant
Violet	female	75	retired nurse
Shirley	female	52	housewife
Joan	female	65	retired
Melissa	female	22	student
Paul	male	64	retired
Larry	male	43	taxi driver
Thomas	male	29	cleaner
Gregory	male	35	chronically disabled
Kevin	male	41	truck driver
Simon	male	41	PCB sales rep
Edward	male	26	steel saw operator
Michael	male	29	cabinet maker
Nelson	male	18	student
Garry	male	46	clothing manufacturer

FIGURE 1

CONCEPTUAL STRUCTURE OF
ENVIRONMENT-HEALTH CONNECTIONS

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Figure 1
Conceptual Structure of Environment-Health Connections 197

Figure 1
Conceptual Structure of Environment-Health Connections

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