ATTITUDINAL AND CONFLICT PERSPECTIVES

ON

ENVIRONMENTAL ISSUES

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A Research Paper

Submitted to the School of Graduate Studies

in Partial Fulfilment of the Requirements

for the Degree

Master of Arts

McMaster University

December 1976

MASTER OF ARTS (1976) McMASTER UNIVERSITY

(geography)

TITLE: Attitudinal and Conflict Perspectives on Environmental Issues

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NUMBER OF PAGES: vii, 108

ABSTRACT

Environmental quality has become an important political and social issue in recent years. This paper focuses on community attitudes toward the natural environment and their role in engendering conflict over such issues. It is argued that environmental conflict originates from variations in environmental attitudes and philosophies. A conceptual model of environmental conflict is developed. The model includes five fundamental elements. These are: (i) community evaluations of environmentally disruptive actions, (ii) individual and group strategies adopted in light of these evaluations, (iii) reactions of official agencies (public or private) to community involvement, (iv) resultant outcomes and (v) the effect of these outcomes on subsequent issues. As an empirical example of environmental conflict, the proposal to build an expressway through the Red Hill Creek Valley is used to assess the validity of the model. The findings indicate that attitudinal and conflict perspectives have much to offer concerning the analysis of environmental issues.

ACKNOWLEDGEMENTS

Several individuals have made significant contributions to this work.

I would especially like to thank my supervisor, Dr. S. M. Taylor, for his guidance and critical thought throughout the development and writing of this paper.

I would also like to thank my fellow students for their friendship and tolerance of my pipes and ravings about Dylan.

Finally, I wish to express my sincere appreciation to my parents for their encouragement and understanding throughout the years.

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INTRODUCTION

I.I The Nature and Scope of the Paper

This paper seeks to examine community attitudes and perceptions toward issues of environmental quality and the role of these psychological variables in determining the nature and outcomes of environmental conflict. Specifically, the primary objective of the paper is to develop a conceptual model which features the elements and processes considered to be of importance in environmental conflict situations. By recognizing the importance of these elements the researcher will hopefully gain a more complete understanding of the nature of the problems, their origins, complexities and inter-relatedness. Without this understanding effective solutions cannot be found.

The manner in which man interacts with his environment is largely a function of the attitudes he holds. Differences in the psychological orientations of individuals toward certain environments are capable of generating conflict among individuals and groups. These elements (i.e. environmental attitudes and conflict) are of particular importance when dealing with the host of issues which fall under the rubric of environmental quality.

By virtue of its existence, any particular organism will have an impact upon the environment in which it functions. The organism, in turn, is itself influenced by the resultant environment. In the case of man, the former aspect of this organism-environment relationship is much more profound than the latter. This is essentially due to the capacity of man to transcend the controls and influences of the environment through the application of increasingly sophisticated technology. With this increased ability to manipulate his surroundings, man has witnessed a corresponding decrease in the level of environmental quality on a global scale.

The severity and magnitude of the environmental crisis has been well documented over the past decade. This evidence has been accompanied by pleas from environmentally concerned individuals and groups for a drastic change in our outlook on the use of the natural environment and its resources. An understanding of environmental attitudes and the conflicts resulting from them is vital if environmental planning and management is to be successful at any scale.

Man's attitudes toward the natural environment have undergone drastic changes over time. Answers to questions of how we perceive, structure and evaluate various environments are important in two respects. First, these answers provide us with an insight into the ultimate source of environmental problems and the conflicts which result from them.

In other words, man's abuse of the earth's resources is a result of the prevailing psychological and cultural orientations by which he can be characterized. Second, not only are the causes of environmental problems rooted here, but the solutions to these problems are also dependent upon changes in man's basic attitudes toward the natural environment. The development of a new set of 'environmental ethics' or an 'ecological conscience' (which are necessary if environmental problems are to be overcome) can only be attained if the fundamental orientations toward the man-environment relationship are reassessed. Ittelson et. al. (1974) suggests that: "In effect this means reconciling the technological-scientific perception of the world with an ethical-human perception."

It has been suggested by Tuan (1974) that approaches to environmental problems have, until now, focused on the theoretical and scientific aspects of the issues, not being directly concerned with values and perceptions. Perhaps one reason for this neglect is the inherent complexity of subjective responses to particular issues and environments. It seems, however, that any attempts to achieve enduring solutions to environmental problems must be based on the perceptual and attitudinal aspects of such problems.

Conflict is a salient characteristic of virtually all forms of social organization. Variations in attitudes toward the natural environment and the perceived impacts of man's actions will necessarily result in conflict among various individuals and interest groups.

Geographers have recently drawn upon conflict theory in order to describe and explain the spatial and social order of urban systems and their components (Cox and Reynolds, 1974). It seems reasonable to suggest that conflict theory may well add to our understanding of planning and policy issues related to environmental quality and resource management.

Environmental conflict (i.e. struggles over issues relating to environmental quality) can be examined from various perspectives. Among these are the causes, manifestations and outcomes of such struggles. It was suggested above that drastic changes in man's attitudes toward the natural environment are necessary if environmental quality is to improve (or at least remain constant) in the future. It is in this sense that conflict plays an important role in environmental issues, for without it, existing attitudes and behaviour patterns are likely to persist. Thus, environmental conflict is important in two complementary respects. First, it is caused by variations in attitudes and perceptions toward the natural environment. Second, changes in these existing attitudes (and ultimately, behaviour) can only be expected to occur if conflict over particular issues is present. A new environmental ethic can only be developed through the increased environmental awareness generated by conflict situations.

1.2 The Structure of the Paper

The paper is structured as follows. Chapter Two discusses the general philosophical orientations toward the man-environment relationship prior to an examination of more specific attitudes toward the natural environment and its quality. The body of literature pertaining to locational conflict is also discussed with emphasis on the uniqueness of locations in space, the provision of public goods and the concept of externalities. The material discussed in this chapter provides a basis for the conceptual model.

In Chapter Three the conceptual model of environmental conflict is outlined with detailed considerations of the various elements and their importance to conflict situations. In very general terms attention is focused on the factors which affect community evaluation of environmentally disruptive actions or proposals, the resulting individual and group actions or strategies adopted in light of the evaluation, the outcomes of citizen and government actions and finally, the evaluation of these outcomes by the community and the effect on subsequent instances of environmental conflict.

In order to assess the validity of this model, a local empirical example is discussed in Chapter Four. The proposal to build an expressway through the Red Hill Creek Valley in the east end of Hamilton provides an excellent example of an environmentally disruptive action which has generated conflict among various citizen and political factions.

This example serves to illustrate the importance of varying environmental attitudes, their contributions to conflict situations and the resultant outcomes of such environmental conflict.

Chapter Five summarizes the major findings of the paper in light of the original objective as well as suggesting possible avenues for future research.

CHAPTER II

ENVIRONMENTAL PHILOSOPHIES, ATTITUDES AND CONFLICT

The purpose of this chapter is to review the existing literature pertaining to three important aspects of environmental issues. These are: (i) man-environment relations, (ii) environmental attitudes and the factors affecting them and (iii) locational approaches to conflict. This discussion will act as a basis for the conceptual model presented in the following chapter.

2.1 Man's Place in Nature

It is possible to identify certain broad philosophical themes which underlie man's interaction with his environment in addition to reflecting his views of his association with nature. The three themes of fundamental importance are: (i) man having dominion over the environment, (ii) man being subjected to the forces and controls of the environment (i.e. environmental determinism) and (iii) man functioning in harmony with the natural environment. Tuan (1971) notes that these very abstract approaches trace general themes of the man-environment relationship across history. The most extensive work in this area is Glacken's (1967) Traces on the Rhodian Shore, a study which outlines the history of man-environment philosophies from the fifth century B.C. to the eighteenth century.

With reference to this time period, Glacken points out that virtually all great thinkers living in this 2300 year period had something to say about these ideas, thereby emphasizing their importance. Vaughan (1974) has suggested that in order to understand man's treatment of the natural environment, one must understand the basic principles upon which the practices are founded. Thus, these basic environmental philosophies are viewed as the source of and ultimate solution to environmental problems.

The concept of man as a modifier or master of the environment is particularily dominant in Western society. Considerable debate has been generated over the origins and significance of this philosophy as a contributing factor to the present environmental crisis. Much of this debate has centred on the importance of Christianity as a reason for this being the prevailing philosophy in Western culture. Certain authors have suggested that man's desire and justification for treating the environment as he has are to be found in the teachings of the Christian religion. White (1966) in a seminal paper entitled "The Historic Roots of Our Ecologic Crisis" states that: "Christianity.. not only established the dualism of man and nature but also insisted that it is God's will that man exploit nature for his proper ends." Tuan (1968) suggests that since man was created in God's image, he is not, therefore, part of nature. Barbour (1972) adds that the "...biblical world view brought with it an openess to historical change and a sense of responsibility for the future."

These Christian views of nature represented a drastic change from those which had existed previously. Tuan (1968) points out that "In pagan antiquity...each facet of nature had its own guardian spirit (genius loci) which had to be placated before using it. Christianity made it possible to exploit nature in a mood of indifference to the feelings of natural objects." White (1967) has termed Christianity the most anthropocentric religion the world has seen, thereby further emphasizing a dualism of man and nature which was previously non-existent.

There are, however, various arguments against the thesis that environmental problems stem from the teachings of Christianity. Schaeffer (1972), in a critique of White's paper (mentioned above) suggests that Christianity places man in the role of steward of the earth (rather than exploiter) and that nature is to be valued because God created it. In addition, evidence presented by Glacken (1967) demonstrates that exploitation of the natural environment was present in ancient, pre-Christian times. Similarily, Barbour (1972) points out that man's superiority over nature was expressed not through exploitation, but by dismissing it as irrelevant to eternal salvation. He concludes that: "We cannot, then, expect to find any simple biblical theology of nature relevant for today."

Alternative explanations for man's dominion over the natural environment have been proposed. Moncrief (1970) suggests that this prevailing philosophy in Western

society is a product of two significant revolutions in the eighteenth and nineteenth centuries. According to Moncrief, the French revolution (which resulted in democratization, a redistribution of the means of production and a reallocation of natural and human resources) and the industrial revolution (which increased the productive capacity of workers and increased waste in the production and consumption processes) gave rise to certain characteristics of Western society such as the absence of an environmental ethic and an overriding faith in technology. He concludes that:

> "The forces of democracy, technology, urbanization, increasing individual wealth and an agressive attitude toward nature seem to be directly related to the environmental crisis now being confronted in the Western world. The Judeo-Christian tradition has probably influenced the character of these forces. However, to isolate religious tradition as a cultural component and to contend that it is the 'historical root of our ecological crisis' (White's phrase) is a bold affirmation for which there is little historical or scientific support." (Moncrief, 1970, p. 39).

Further reasons for man's dominance over the environment which are more germane to the North American context relate to what Merton (1968) has termed the 'frontier mythology.' Exploitation of the natural environment was "...not only necessary for physical survival, it was above all a moral and Christian imperative." Furthermore, Merton suggests that: "The pioneer, the frontier culture hero, is a product of the wilderness, but at the same time a destroyer of the wilderness. His success as pioneer depends on his ability to fight the wilderness and win." In essence, then, the success of the pioneer was predicated on the defeat of the primitive setting in which he found himself. Tuan (1971) notes that:

> "From early times attitudes toward wilderness has been ambivalent; wilderness was at once the haunt of demons and the realm of bliss and harmony with the creaturely world. The primary meaning of wilderness was negative; the positive sense was acquired when wilderness had lost some of its threat and could be viewed sentimentally from safe and civilized oases which time and experience had robbed of glamour." (Tuan, 1971, p. 34).

This fact emphasizes the complex, ever changing nature of philosophical orientations toward the natural environment.

In summary, a variety of factors have contributed to the prevalence of the 'man over nature' philosophy in Western society. It is very unrealistic to attempt to ascribe the origin of this philosophy to any single factor. It is reasonable to hypothesize, however, that this philosophy has had a significant effect on man's actions toward the natural environment. It is interesting to note that, despite the continuing dominance of this philosophy, the trend is reversing somewhat. Nature has come to symbolize (to some people, at least) purity and 'the good life' and is viewed as an alternative to the failings of urban society.

The second general philosophical orientation toward the environment suggests that man is, to a certain extent, subjected to the forces and controls of the natural environment. Contrary to the above mentioned philosophy which views man as a modifier of the environment, this approach is centred on the role of nature as a determinant of man's behaviour.

This particular view of the man-environment relationship suggests that people living under a set of environmental conditions could be expected to act as they do as a direct result of those conditions. As examples of this line of reasoning Glacken(1967) lists various environmental influences on culture as

well as behaviour patterns which can be explained in terms of climatic variation. In general, then, theories of environmental influence have connotations of man's adapting to the environment. Tuan (1971) also points out that: "Natural disasters...remind us of human impotence before the overwhelming forces of nature." Tuan further suggests that man has been dependent upon the natural environment as a source of symbolism and superstition. On a more esoteric level he notes that: "Man is more than a child of the earth, he is a child of the universe to the extent that his body responds to cosmic rhythms and his mind finds enchantment and assurance in the stars."

Glacken (1967) points to the influence of the natural environment on the national character of particular peoples. He notes that toward the end of the eighteenth century, however, the writings of philosophers such as Hume and Malthus (among others) moved away from the direct influence of climatic and physical features toward the limitations which the environment as a whole imposes on life. This, it would seem, is the most relevant aspect of this philosophy in the present era. One must still bear in mind, however, the fact that man's technological and intellectual advances have enabled him to transcend the majority of these environmentally imposed limitations.

(It is interesting to note that architects and community designers often make deliberate attempts to control the behaviour and perception of individuals through alterations in the physical elements of the urban environment).

In summary, one cannot argue against the fact that environmental influences are important, particularly with respect to the limitations which they impose on man's behaviour. Nevertheless, the importance of environmental determinism has continually diminished over time as man's ability to manipulate the environment and control his destiny has increased. One might even go so far as to conclude that, while environmental controls are indeed present, man no longer recognizes them as being important. This is largely a function of man's overriding faith in science and technology.

The third major environmental philosophy suggests that man can and should live in harmony with the natural environment. This philosophy essentially disregards the dichotomy between man and nature which is implicity recognized in the two philosophies discussed above. It represents an increasingly popular alternative to the prevailing philosophy of man having dominion over nature, especially in Western society.

In essence this philosophical orientation recognizes the importance of the recurrent theme of man's place in nature or, alternatively, the symbiotic relationship between man and nature. Vaughan (1974) notes that: "The basic attitude of respect for nature was begun under the aegis of the ecological movement to replace the attitude of conquest." In this sense the philosophy may be viewed as a "...reaction against the failings of urban life." (Tuan, 1971). In addition, this approach to man-environment relationships also has roots in the Christian tradition. Barbour (1972), for example, notes that: "Many biblical passages express appreciation and wonder in response to nature." Thus, this theme while present over a long period of time, did not become significant on a large scale until the magnitude of the environmental crisis was recognized.

In discussing this particular environmental philosophy, Tuan (1968) has described the Chinese garden as a metaphysical symbol of man-nature harmony which is largely a product of the overall attitude of Oriental tradition toward nature. Tuan (1971) has also suggested that this aesthetic view of nature is characteristic of

the upper classes of both Western and Oriental societies. McHarg (1964) states that "...the Oriental attitude of an aspiration to harmony of man in nature (represents) a sense of unitary and encompassing natural order within which man exists." In this respect man is looking at the natural environment not as something to be exploited, but rather as a source of metaphysical enrichment. This philosophy is predicated on the belief that a clean, healthy environment will enable man to attain a higher quality of life. Nash (1967) suggests that this philosophy views man as "...part of the larger community of life, dependent for his survival on the survival of the ecosystem and on the health of the total environment. Man, in a word, was rediscovered as being part of nature."

The importance of this philosophy in the North American context is of particular relevance to this paper. Ittelson et. al. (1974) suggests that the movement to preserve wilderness in its natural state began when advocates such as John Muir and Henry David Thoreau spoke of the spiritual values which could be found in nature. Furthermore : "Rooted in certain features of Transcendentalism, including the 'back to nature' philosophy of Thoreau and

his admirers, the movement also embraced rural utopias and communes...in which closeness to nature was seen as essential to a simple, self-sufficient, and moral way of life." (Ittelson et. al., 1974). Tuan (1971) suggests that: "The aristocratic rebound from the city led not to the farmstead but beyond it to nature. Thus nature is viewed essentially in two ways: aesthetically, as the setting for a country villa for quiet study and exalted philosophizing; and morally as the stage for the development of independence and manly virtues."

This approach to man-environment relationships, then, stresses the virtues to be gained from man's intimate association with nature. The thrust of arguments presented by environmentally concerned individuals and groups is based on the need to realize these virtues as well as the need to avert environmental catastrophe purely for survival purposes.

In summary, the three man-environment relationships outlined above are considered to be fundamental to an understanding of the nature of and solution to environmental problems. White (1966) notes that: "These orientations are seen as related, on the

one hand to other cultural behaviour, motives and perceptions of reality and on the other hand to the social structure and processes of groups." Variations on each of these themes have been present throughout the course of man's history. In summarizing changes in attitude toward the natural environment Tuan (1971) notes that:

> "Wilderness was increasingly evaluated either as a resource to be exploited or a resource to be protected. Those who urged the protection of wilderness viewed it as a place for outdoor recreation.., others saw it as a museum of natural curiosities, a tourist attraction, while the high minded revered it as nature's cathedral. But in all these evaluations, the idea of wilderness was shorn of its original meaning of chaos and threat." (Tuan, 1971, p. 38).

These philosophies, then, will have an important effect on the specific attitudes adopted by individuals and groups toward more specific environmental issues.

2.2 Factors Affecting Attitudes Toward Specific Environmental Issues

Having discussed some basic aspects of the three fundamental philosophies of man-environment relationships, attention is now directed toward the more personal and specific environmental attitudes possessed by the individual and the factors which affect them. (The term environmental attitude is used here to refer to an individual's feelings toward issues of environmental quality. For the sake of simplicity, two types of attitudes are assumed to exist: pro-environmental sentiments and anti-environmental sentiments). These specific attitudes are in one form or another a product of the previously discussed environmental philosophies. In other words the specific environmental attitudes possessed by an individual stem from the more general philosophical orientations which the society as a whole advocates.

This link between environmental philosophies and specific environmental attitudes has been accurately described by Glacken (1966) in the following terms:

> "When one discusses attitudes of man toward nature, it is not a matter of taking them out of slots or grooves of either the past or present... The question of attitudes is part of more fundamental bodies of thought: the history of attitudes toward life, concepts of its dignity, of the natural order and of the nature of man. From broader and deeper meditations on these themes we derive substance for more specific inquiries. The contemporary concerns...whether for wilderness preservation, for saving the redwoods, or

> for opposing certain freeways are illustrations, even if vaguely defined and held, of a broader philosophy toward life, whether it be human or plant and animal life and the surroundings in which they all flourish." (Glacken,1966, p. 356).

Thus the very abstract levels of thought dealing with man-environment relationships provide a basis for the formulation of an individual's more specific attitudes concerning environmental issues. Two sets of characteristics influence an individual's perception of specific issues. These are: (i) characteristics of the environment and (ii) characteristics of the individual.

Berry (1974) notes that open space (i.e. natural environments) values are related to landscape features including the functional, ecological, aesthetic, contemplative and recreational values of a particular environmental setting. With respect to the physical elements of a particular environment, Berry (1973) suggests that these settings are evaluated in terms of such elements

as hills, valleys, streams and vegetation among others. Calvin et. al. (1972) further emphasize the importance of environmental characteristics in a study which attempted to assess preferences for natural landscapes. Two factors, natural scenic beauty and natural force accounted for eighty-five per cent of the variation in natural landscape preferences. Thus the physical characteristics of a particular environmental setting will influence perceptions of that setting. The manner in which the individual perceives these physical attributes will be conditioned by his more basic environmental attitudes.

The second major factor affecting specific environmental attitudes relates to the use an individual has for the environmental setting in question. Coughlin (1975), in a study of the perception and evaluation of water quality, concluded that perceptions were largely a function of the use an individual has for a particular setting. In addition, he concluded that the valuation of natural environments in general cannot be reduced to a single dimension, but rather, that several types of values are involved.

These include recreational, contemplative, aesthetic, functional and ecological values. The importance an individual places on any one of these values will, to a certain extent, depend upon his philosophical orientations towards the natural environment. Thus, an individual who believes that man should function in harmony with nature is likely to favour the aesthetic and contemplative values of a particular setting more than the functional values.

Lucas (1970) in a study of visitors' perceptions of wilderness in Quetico Park found that there existed significant differences in wilderness views between canoeists and motorboaters. He notes that recreational use seemed particularily important in influencing the canoeists' wilderness image in that heavily used areas were not very often considered to be wilderness in spite of the fact that these areas were completely natural in character. Thus the type of use an individual has for a particular environmental setting will significantly affect his perceptions of that setting. A similar conclusion by Christensen and Yoestring (1973) tends to substantiate this assertion. In a study of high and low frequency users

of recreational facilities, they conclude that high users have particularly strong positive attitudes toward the environment in question. Thus, in general terms, the characteristics of the environmental setting in question and the use an individual has for that setting will affect his attitudes and emotional responses.

The second set of characteristics which determine an individual's attitude toward natural environments pertains to the individual himself. These include social, demographic and psychological traits.

Several inquiries into the effects of social and demographic variables on attitudes toward natural environments and environmental quality merit consideration. Constantini and Hanf (1972), for example, studied the factors affecting concern for environmental quality at Lake Tahoe. They concluded that there existed a positive correlation between education and environmental concern and a slight negative correlation between income and environmental concern. In addition, high levels of environmental concern were found to be associated with more liberal attitudes.

A general conclusion of this study was that: "An individual's degree of (environmental) concern...may be closely associated with more fundamental social and political attitudes as well as general social role and background." In another study of concern for environmental quality, Tognacci et.al. (1972) concluded that: "The environmentally concerned individual tends to be more liberal in socio-political orientation, younger and better educated than persons who remain less concerned about ecological issues."

In a study of participation in conservation organizations, Harry, Gale and Hendee (1969) found that members of such organizations tend to be older, better educated and characterized by higher status occupations. A prerequisite for such participation, however, appears to be an interest in outdoor or nature-oriented activities. Similarily, Lucas (1971) notes that higher education levels characterize individuals inclined to participate in activities which take place in wilderness settings. This, Lucas notes, is particularily true of the simple, more contemplative environment-oriented activities.

Social and demographic characteristics, then, affect an individual's ability and desire to express an interest in environmental issues and activities. By extension, these characteristics may, in turn, influence the individual's willingness and ability to participate in conflict over environmental issues.

The most important set of characteristics, however, appear to be related to the personality traits of individuals. These traits, termed environmental dispositions (McKechnie, 1970), have a direct bearing on the individual's orientations toward issues of environmental quality. This body of literature in environmental psychology represents an extension of the theory and methodology associated with personality theory to the study of man-environment relationships. The primary concern here is focused on personality traits and the manner in which they influence attitudes toward, interaction with and comprehension of the environment. As was mentioned at the beginning of this section, specific environmental attitudes or dispositions are largely a product of the prevailing philosophical orientations toward particular environments. (In other words, it is assumed that personality traits are learned,

not innate.)

McKechnie (1970) defines environmental disposition as "...configurations of attitudes, beliefs, values and sentiments toward the environment." Craik (1970) notes that environmental dispositions refer to the various mediating processes that are involved in both the comprehension of and action toward the physical environment. Implicit in this definition is the assumption that individuals relate to particular environments in a stable, characteristic manner. (McKechnie, 1970).

McKechnie (1972) suggests that the dispositional approach can provide answers to the following critical questions; (i) what are the important differences in the way people comprehend and relate to the physical environment?, (ii) how can these differences be measured?, and (iii) to what extent can these differences account for significant environmental behaviour and attitudes?. In order to determine some of the ways in which individuals relate to particular environments, McKechnie (1970) developed the Environmental Response Inventory (ERI) which represents an attempt to "...discover environmental

dispositions which are personalogically meaningful and which possess predictive utility in forecasting significant environment-related behaviour." Examples of some dimensions which comprise the ERI are: pastoralism (expressing an appreciation of and sensitivity to the primitive natural environment), urbanism (expressing an appreciation of city life) and environmental adaptation (expressing an impulse to modify the environment to suit human needs). These dispositions, then, characterize some of the ways in which individuals can relate to the physical environment.

In the context of environmental issues, it may be expected, for example, that the individual who is characterized by a strong pastoral disposition (i.e. one who appreciates and is sensitive to the aesthetic qualities of the natural environment) will be concerned about issues relating to environmental quality. It should be noted that such an individual is also likely to advocate the environmental philosophy which emphasizes man living in harmony with nature.

Thus the manner in which man comprehends the natural environment and his place in it is, in part,

determined by certain basic personality traits. As was the case with environmental philosophies, these personal traits will affect the way in which an individual relates to an environment, but at a much more individualistic level. This, in fact, represents the fundamental difference between the philosophical and dispositional approaches to the study of man-environment relationships. That is, the personal dispositions are a product of the much broader philosophical themes.

2.3 Locational Approaches to Conflict

It was noted in Chapter One that conflict is endemic to environmental issues. The purpose of this section of the paper is to briefly describe some of the important concepts associated with conflict theory with direct reference to environmental issues. The occurrence of conflict is linked to variations in environmental philosophies and attitudes. This is particularly important in that it represents the rationale behind the conceptual model discussed in Chapter Three.

Conflict theory represents one approach to the study of societal change as well as change within social organizations.

Coser (1956) defines conflict as "...a struggle over the values and claims to scarce status, power and resources in which the aims of the opponents are to neutralize, injure or eliminate their rivals." Boulding (1962) defines conflict as "...a situation of competition in which parties are aware of the incompatibility of potential future positions and in which each party wishes to occupy a position which is incompatible with the wishes of the other". A plethora of definitions could be listed here. The essence of conflict, however, is that individuals or groups are constantly struggling against each other in order to attain non-complementary goals.

Three fundamental approaches to conflict can be recognized. These are sociological, economic and locational. The sociological approaches to conflict (such as those proposed by Marx and Dahrendorf (1959)) consider conflict to be a constant struggle over time for power, authority and scarce resources. These theories are based on the dichotomous distribution of particular attributes. In Marxist theory this refers to control over the means of production while in Dahrendorf's case emphasis is placed on the possession of authority.

Two important concerns associated with the sociological approach to conflict are the functions of social conflict and relative deprivation. Coser (1956) notes that legitimate conflict serves the following purposes: (i) it establishes and maintains the identity of boundary lines between societies or groups, (ii) it permits the maintenance of relationships under conditions of stress, thereby preventing the dissolution of groups through the withdrawal of hostile participants, (iii) it may help to re-establish group unity by becoming an integrating component of a relationship, (iv) it makes group members more conscious of their group bonds and increases their participation and (v) it acts as a stimulus for new rules and norms.

In general, Coser (1956) suggests that conflict contributes to the maintenance, adjustment or adaptation of social relationships and social structures. These functions of (legitimate) social conflict have a positive effect on the society as a whole. It is in this sense that conflict must be viewed as a desireable and beneficial element of social organization.

The concept of relative deprivation is defined by Runciman (1966) as follows: "A is relatively deprived of X when (i) he does not have X, (ii) he sees others (maybe himself in the past) having X, (iii) he wants X and (iv) he sees it feasible that he should have X." The existence of relative deprivation, then, is capable generating conflict since the individual or group feels unjustly treated in that it does not have access to a particular attribute.

Another approach to conflict is provided by certain concepts central to economic theory. Among these concepts are externalities and public goods. Both externalities and the provision of public goods are capable of generating locational conflict.

Dear (1975) defines externalities as "...the unpriced effects of a certain activity upon groups or individuals who are not directly involved in that activity." An often cited example of an external effect is the uncompensated damage to health and property suffered by residents living near a factory emitting air contaminants. In general terms a great deal of environmental decay is a result of negative externalities.

Cox and Dear (1975) suggest that the uneven spatial distribution of externalities is the source of much locational conflict. In general terms, then, environmental decay is often a result of negative externalities which, in turn, are capable of generating conflict.

Margolis (1968) defines public goods as goods or services provided through political processes in the interest of the general public. Steiner (1970) suggests three reasons for the necessity of the government provision of such goods: (i) there exists no way of providing such goods through private markets, (ii) market imperfections may necessitate government intervention and (iii) the government provides such goods out of concern for environmental quality. In general Steiner points out that these activities transcend individual solution, thereby requiring collective solution or no solution at all. Issues of environmental quality clearly fall into this category. For example, the provision of clean air and water are goods which cannot be marketed privately, hence government action is necessary in order to ensure their availability (or at least to prevent further deterioration).

The fact that the contamination of air and water are unpriced effects (due to market imperfections) suggests that government action is necessary for their elimination. These points, then, substantiate the assertion that issues of environmental quality require collective or public solutions instead of private market solutions.

Another issue which merits consideration as far as the economic aspects of conflict theory are concerned is the matter of social cost. Coase (1960) suggests that:..."the problem is one of choosing the appropriate social arrangement for dealing with harmful effects." In other words, it is a question of who should pay for the external costs. It is readily apparent that this is an important consideration when dealing with externalities which result in the deterioration in existing levels of environmental quality. Conflict, then, may arise over issues such as: (i) who should pay for the elimination of external effects and the provision of public goods, (ii) who should receive the benefits from such policies and (iii) how to determine the need for these policies.

It is possible, then, to view conflict from both sociological and economic perspectives.

It is the locational aspect of conflict, however, which is of particular interest to geographers. This approach represents, to a large extent, the fusion of the economic and sociological perspectives. This recent interest in the spatial aspects of conflict is a result of the realization that "...most political conflict in industrial-urban society is at least in part, the result of geographical externalities..." Cox and Reynolds, (1974).

Dear (1975) defines locational conflict as "... overt public debate over some actual or proposed land use or property development." Cox and Dear (1975) suggest that the importance of locational conflict stems from the fact that residents of a particular area attempt to manipulate their environment through collective action. In other words, conflict may arise over: (i) attempts to attract desirable elements to the neighbourhood, or (ii) attempts to exclude those elements which will detract from the overall quality of the local environment. These two goals may be seen as efforts directed toward the provision of public goods and the elimination of negative externalities respectively.

In general, it can be stated that existing and anticipated externalities generate conflict, which, in turn, results in political intervention. The political system, therefore, is regarded as an important conflict resolving mechanism. Evans (1975) summarizes this notion by stating that "...in some way the political decision-making system seeks to mediate between individual utility and collective utility in terms of the allocation of scarce resources." Along similar lines Harvey (1973) argues that what goes on in the city (particularly in the political sphere) can be interpreted as an attempt to organize the distribution of externality effects to gain income advantages. In fact, the "...unilateral decision-making by institutions..." is seen as an important source of conflict in environmental issues (Wilkinson, 1974).

One very important aspect of locational conflict and many environmental issues is the uniqueness of points in space. Cox and Reynolds (1974) note that the costs and benefits which result from the provision of public goods and services are localized, hence any conflicts arising from them are locational in character. In more general terms it can be said that the impacts of political decisions are confined to geographically limited areas

(Dear and Long, 1976). The uniqueness of each point in space stems from the fact that each point (or location) is different with respect to its characteristics, its accessibility and its perceived usefulness. In fact it is this uniqueness aspect of location which generates a great deal of conflict over environmental issues, especially those cases in which there is a confrontation between those arguing for the preservation of an environmentally unique area and those supporting the development of that area for economic purposes. Of major importance here is the fact that once a development takes place, this uniqueness is lost due to the fact that man's actions are largely irreversible as far as the natural environment is concerned.

It is also important to recognize the effect of individual and group attitudes as initiating factors of conflict situations. It was noted previously that the presence of externalities can induce conflict. It should be noted, however, that it is actually the individual's or group's perceptions of these externalities which generates conflicts. If, for example, the residents of a particular area do not perceive the smoke emissions

from a nearby factory as being harmful, then conflict is not likely to occur. Cox and Dear (1975) note that locational conflict is accompanied by a sense of illegitimate transfer on the part of the impacted population. In other words, in order for conflict to occur the residents' satisfaction derived from an environment before a decision is implemented must be greater than the perceived satisfaction which exists subsequent to the implementation of the decision. That is, conflict will take place if there is a perceived loss of satisfaction or utility. The perceptions of individuals, therefore, play an important role in the generation of environmental conflict. In fact the existence of such conflict is predicated on differences in the perceptions of and attitudes toward the natural environment.

Locational conflict, then, has been the focus of many geographers with considerable emphasis being placed on the spatial externalities generated by locating public facilities (Wolpert, et. al. 1972). Such land use conflicts are important in that outcomes are likely to be a function of the power of the opposing factions.

In summary, this chapter has examined three

salient elements of environmental conflict situations. Certain broad philosophical orientations toward nature were shown to underlie the more specific and personal attitudes toward environmental issues. Both of these factors may serve to act as potential contributors to the existence of environmental conflict. In other words, variations in these environmental philosophies and attitudes lead to different behavioural responses to the natural environment. These varying responses, in turn, result in conflict over the use of the natural environment. (It should be noted that conflict may also result from the fact that land is viewed as an economic good. In other words, the ownership of land means that others can be excluded from using it. This point has not been explicitly recognized due to the fact that this paper is primarily concerned with the role of environmental attitudes in creating conflict.)

CHAPTER III

A CONCEPTUAL MODEL OF ENVIRONMENTAL ATTITUDES AND CONFLICT

3.1 The Model

The preceeding chapter outlined some of the important aspects of the literature pertaining to man-environment relationships, environmental attitudes, and locational conflict. The aim of this chapter is to combine these three areas of concern in a conceptual model of environmental attitudes and conflicts. (Figure One). In very general terms the model focuses on three important elements of environmental issues: (i) factors affecting community evaluation of environmentally disruptive actions, (ii) the individual and group strategies adopted as a consequence of this evaluation, and (iii) the resultant outcomes and their effects on other environmental issues.

Clearly this model is a simplification. It does, however, provide a starting point for attempting to understand the relationship between attitudes and conflict in environmental issues. Certain modifications to this model will be proposed in the succeeding chapter based on an empirical case study. The remainder of this chapter

deals with discussion of the basic structural elements of the model.

3.2 The Structural Elements of the Model

1. Environmentally Disruptive Actions

Prior to any individual or community involvement in environmental issues, there must exist an action(s) or proposed action(s) which have the effect of eliciting a negative response from the community. These actions create potential conflict among various interest groups. Such conflict is generated as a result of the actual or possible reduction in the level of environmental quality enjoyed by the community. Various characteristics of the environment (including its recreational, ecological and scenic features) may be viewed by the residents as being adversely affected by these existing or future events. Runciman's (1966) concept of relative deprivation is of particular relevance here, as the community experiences the loss of a particular attribute (relating to environmental quality) which it wants and also sees as feasible to have. The feeling of relative deprivation, then, may generate conflict in environmental issues.

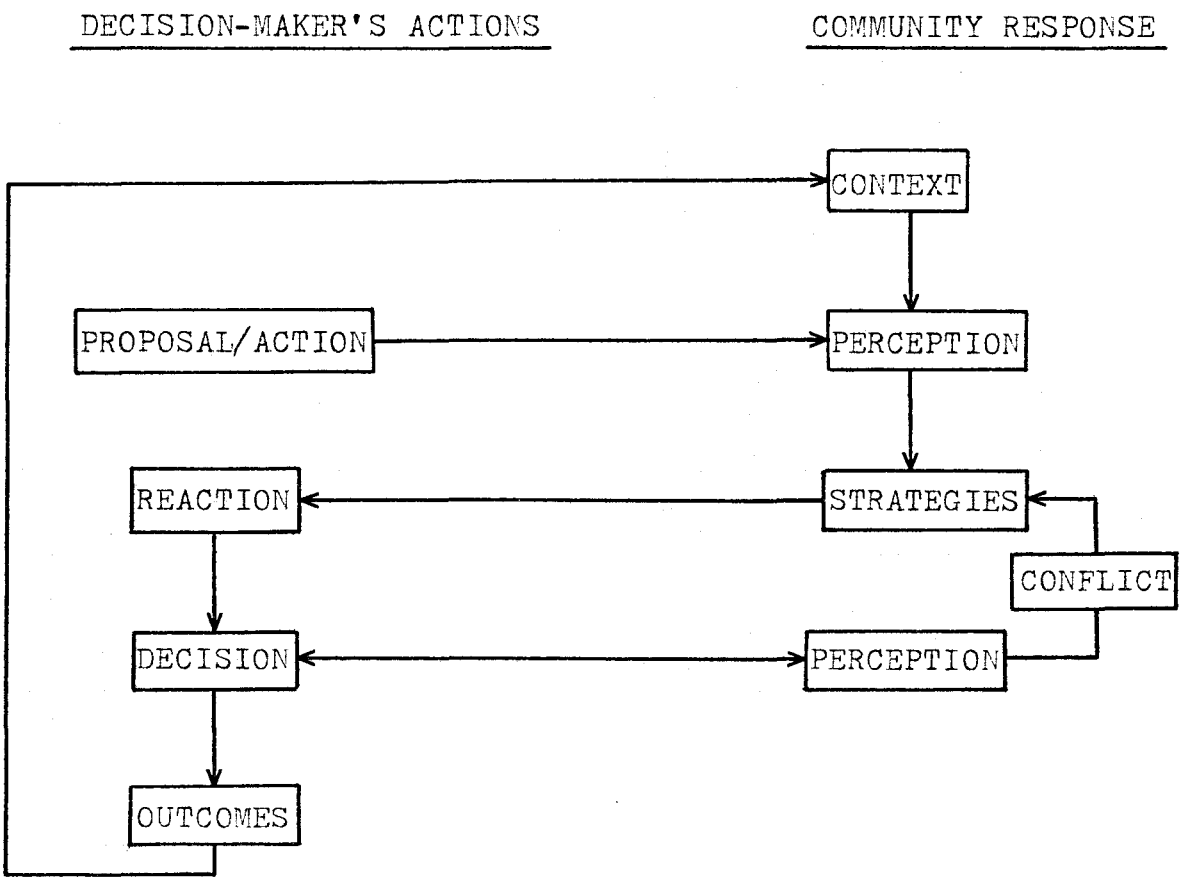

Figure One: A Conceptual Model of Environmental Attitudes and Conflict (Decision-Maker and Community Viewpoints)

Such a stimulus to conflict may originate from two main sources: The private or public sector. The first of these is a private enterprise which undertakes an action or presents a proposal which will have the effect of lowering the existing level of environmental quality. Such proposals and actions are seldom accompanied by genuine efforts to minimize the adverse environmental effects which may result. The second possible source of stimuli to environmental conflict is government or public sector actions which usually represent attempts to provide public goods in one form or another. Thus the construction of a highway, for example, may be a potentially disruptive action with respect to environmental quality. As such it could conceiveably engender conflict, depending on its evaluation by the community in question.

In both of these cases emphasis is placed on the need for a particular development or service (provided by a public or private agency) and not on the detrimental effects these actions have on environmental quality. This neglect of environmental concerns can lead to community opposition to a particular action or proposal.

Based on their evaluation of these actions or proposals the affected individuals and communities will react in various ways.

2. Community Evaluation of a Proposal or Action

This element of the model focuses on the manner in which an individual or community perceives the set of environmentally disruptive actions and the factors affecting these perceptions and evaluations. Essentially, evaluation of the actions can take two forms: (i) acceptable or (ii) not acceptable. Attention here is focused on the latter type of evaluation, since the former will not lead to a negative reaction by the community.

Five basic factors appear to have significant effects on the community evaluation of environmentally disruptive actions. These are: (i) an awareness of the action, (ii) the degree of community organization, (iii) the characteristics of the individuals, (iv) the perceived and actual impacts of the actions and (v) the uniqueness of the environment in question.

The first and most obvious factor affecting community evaluation of environmentally disruptive actions is the awareness of the problem itself.

Clearly, individuals or communities cannot react to an event they are not aware of. Awareness can be generated by the media, which may reveal the existence of environmentally disruptive actions before or after they come into effect, or it may come from first hand experience with similar events in the past. In addition, a certain amount of awareness will be generated by environmental organizations, although the number of persons affected in this manner is likely to be small.

Beyond the stage of the initial awareness of an existing or potential problem, there exist other factors which will affect community evaluation of a particular proposal or action. One of these is the degree of community organization. A community which is closely knit with one or more local interest groups or committees is more likely to take a strong stand on issues related to the level of environmental quality. Alternatively, a community which lacks this 'infrastructure' is less likely to be aware of the adverse effects which may result from an action or proposal. It is also likely that such a community would experience difficulty in organizing actions which are designed to counteract the effect of the existing

externalities. Finally, it should be noted that a highly organized community will be much more effective in communicating its attitudes to outside agencies than a community with little or no organization. This increases the likelihood of successful opposition.

A third factor of importance in the community evaluation of a particular proposal or action is the characteristics (psychological, social and demographic) of the community members. While it is difficult to generalize about the role of the psychological characteristics at the community level, evidence presented in the previous chapter suggests that these variables will have a pronounced effect on an individual's concern for environmental issues. In particular, the manner in which individuals relate to various environmental settings (i.e. their environmental dispositions) will undoubtedly influence their interest in issues related to environmental quality.

The effects of the social and demographic characteristics on community evaluation of such issues are perhaps more evident than those of the psychological characteristics.

It was noted in the previous chapter that environmentally concerned citizens tend to be older, better educated and of a higher occupational status. This suggests that actions which have adverse environmental consequences are more likely to be negatively evaluated by middle and upper class communities than by lower status communities. This may be due to the fact that higher class residents can afford the cost (in terms of time and money) of involvement in such issues. In addition, they also have potentially more to lose than lower status communities if the environmental quality of the area should decrease. Economic losses and reductions in the level of prestige associated with negative externalities in upper class areas are but two examples of such effects.

Another set of factors affecting the evaluation of environmentally disruptive actions or proposals are the actual and perceived impacts of these actions on the existing level of environmental quality. Specifically, concern is focused on whether or not the perceived loss (due to the action or proposal) is significant enough to warrant community action. The answer to this question depends on a host of factors including the existing attitudes

toward nature, personality characteristics and the concern for the local environment and living conditions. It does not seem unreasonable to suggest that there may be a tolerance level beyond which the perceived environmental impacts take on a level of significance which warrants community action. Several types of impacts may be considered here. These include the effects of environmentally disruptive actions on lifestyle, health, housing value and the quality of the natural environment itself. Community perceptions of these impacts will undoubtedly affect response.

Finally, community evaluation of environmentally disruptive actions is related to the uniqueness of the environment affected. Where unique ecological and geological features are threatened by a proposed action, the community (both local and non-local) is likely to be more aware of and concerned about the consequences. In fact, it is probably this uniqueness aspect of natural environments which generates interest in environmental issues on the part of those who are otherwise not inclined to be involved. As Gertler (1974) notes: "Decisions on the use of resources, like footprints in the Arctic,

have a tendancy to last for a very long time."

In summary, each of these five factors will affect individual and community evaluations of environmentally disruptive actions. The importance of each will vary with the situation, but all are likely to be present in one form or another. In general these factors fall into three categories: the nature of the disruptive actions, the characteristics of the individual and community and the characteristics of the environment itself.

3. Individual and Community Strategies

In response to the evaluation of the environmentally disruptive action(s) or proposal(s), the individual and community must adopt a strategy or set of strategies consistent with their perceptions of the resultant impacts. Three fundamental strategies are identified in the model. These are: (i) an apathy strategy, (ii) an exit strategy and (iii) a conflict strategy.

The apathy or 'do nothing' strategy is reserved for the individual who does not care about or feels alienated from the issue at hand.

In the past, the success of most environmental interest groups has been severly hindered by such apathy. A great deal of this 'environmental apathy' is related to the prevailing faith in science and technology as solutions to environmental problems as mentioned in the previous chapter. O'Riordan (1974) notes that: "The vast majority of the general public never participates (in environmental issues...but) though the majority may be silent, they are not necessarily indifferent to questions of environmental quality." Thus the term 'environmental apathy' connotes an unwillingness to actively participate in such issues as well as a lack of displayed concern. This apathy and associated faith in science is particularily important as far as environmental problems of global proportions are concerned. Gibson (1975) notes that "...in the area where the dynamics of modern industrial societies most clearly threaten existence through the exploitation and degradation of the natural environment, participative strategy will not be persuasive or effective." At the local level, apathy toward all but the most important and pressing issues may be a function of two factors.

The first of these is alienation carrying over from previous issues (Long, 1975). In such instances, the past experiences of the individual or community may have been characterized by a lack of success in terms of their ability to influence the outcomes of particular issues. This occurance in the past may give rise to an apathy strategy.

A second reason for adopting an apathy strategy may be the residents' perceived lack of influence in the decision-making process (Long, 1975). Bachrach and Baratz (1970) note that power can be viewed as "participation in decision-making." Some individuals, then, will exercise the 'do nothing' strategy because they are either unwilling or unable to participate in the political process. Interestingly, O'Riordan (1974) notes that:"Resource management is essentially a process of pluralistic group bargaining, and the 'public interest' is really the residue of this conflict rather than the positive expression of public will."

In adopting the apathy strategy, individuals or groups simply "...resign themselves to having to adapt

to new circumstances" (Long, 1975). Long (1975) also points out that the apathetic individual may rationalize the existing situation as follows: If the actions of others are successful, then he may as well not do anything since he will benefit whether he acts or not (thus saving his own efforts). Alternatively, the individual may believe that his efforts will not make any difference in terms of the final outcome. This is based on the concept of 'free-riding'. Olson (1965) has suggested that this strategy will be adopted by individuals before the group attains the optimal outcome (i.e. its goals). Apathy is important because as a non-opposition response, it is often interpreted by political bodies as silent approval of policies. It is also important in that it reduces the potential number of supporters for those who do take a definite stand on a particular issue.

The second possible strategy recognized in the model is that of 'exit'. Hirschman (1970) discusses this option in the context of the decline in the performance of economic organizations, where customers cease purchasing a particular good (i.e. they exit from the market) in order to express their dissatisfaction.

Long (1975) has shown this to be an important strategy in the context of urban issues by suggesting that residents may decide to leave their district for one which has more favourable conditions. With respect to environmental issues, individuals may relocate in order to avoid or escape existing externalities or perceived negative impacts which may result from new developments.

Several constraints restrict the feasibility of this option. Among these are financial status, geographical inertia and loyalty to the present area. These factors combine to create higher levels of tolerance toward environmental problems. The exit option, however, may be of particular importance to environmental issues where existing negative effects are largely irreversible. When externalities cannot be eliminated, the individual may simply leave the area, since this is the only way of avoiding such problems once the tolerance threshold is reached.

The exit strategy is one form of stating opposition to actions detrimental to environmental quality. Such actions, however, are not considered by political bodies to be an indication of dissatisfaction unless they

occur in large numbers (Long, 1975) and hence they tend to be ineffective in bringing about governmental response.

The third response strategy is that of conflict. Similar to the exit strategy, the conflict strategy represents an expression of dissatisfaction, but in a more overt, recognizeable manner. Two fundamental types of conflict are recognized in the model. These are: (i) voice or action and (ii) illegal activity. Both represent open confrontations between the opposing factions in a particular issue.

The voice or action strategy may be viewed as an overt legitimate attempt to alleviate certain conditions which might lead to a decrease in the existing level of environmental quality. Almack (1973) suggests that action via citizen participation in local issues may be viewed as an attempt to realize collective decision-making as opposed to unilateral decision-making.

The strategy of voice is, again, similar to that suggested by Hirschman (1970). In an economic context, Hirschman notes that individuals, when faced with the deteriorating quality of a product, may voice their feelings instead of exercising the exit option

discussed above. Translated into the environmental context, the individual will voice opposition toward actions or proposals which will adversely affect the environmental quality of a particular area. Actions such as demonstrations, workshops and the writing of letters to newspapers and politicians are examples of the ways in which the voice strategy may be carried out. The ultimate purpose of these actions is to improve, or at least maintain the existing level of environmental quality by creating an awareness of the issue on the part of community members, outsiders and decision-makers. The higher the level of interst which can be generated, the greater the likelihood of the community achieving its goals. Ultimately the success of the voice option will depend on the existing level of community organization and the existing attitudes of politicians toward the specific issue and the broader concept of citizen participation.

The willingness to exercise this strategy is dependent upon several factors. These include the probability of successfully achieving the desired community goals, the community concern for the environmental

quality of the neighbourhood or region, past experiences of the community members in similar issues, the psychological dispositions of the community members and the nature and importance of the issue itself. These factors will influence the willingness of both community members and organizations to actively participate in environmental issues which affect them.

The political constraints on citizen participation are of particular importance to conflict strategies. Wilkinson (1974) suggests that the voice or action strategies represent 'confrontation tactics' designed to create pressure until the group gains enough political influence to alter the outcome. Within the political arena it is possible to consider the right to vote as exercising the 'voice' strategy. This is true for a wide range of issues. In recent years environmental matters have become crucial political issues. These concerns, however, are often of secondary importance to the voting public which may be more concerned with economic and social issues. Despite the fact that environmental quality has become a political issue, Almack (1973) notes that voters can often vote against

a candidate as a result of the candidate's anti-environmental sentiments, but seldom can they vote for a candidate for reasons of his pro-environmental feelings. In addition, it must be recognized that many of the issues of relevance here are of concern for only a short duration of time, while voters can exercise their rights less frequently than would be desireable as far as these issues are concerned.

Also of interest (in relation to the likelihood of success) is the fact that the voice option requires substantial investments on the part of the participants. These investments include money, time and the opportunity cost of remaining in an unacceptable situation while pursuing this involvement in the issue. Long (1975) points out that the outcomes of the voice strategy often take long periods of time to come into effect. In other words, there is a period of uncertainty for the community while going through the appropriate political channels. For this reason the voice option may be exercised beforehand to prevent the future occurence of an environmentally disruptive action rather than changing conditions after the fact. This is inevitable in situations involving the preservation of unique natural environments given the fact

that these decisions are irreversible in most cases.

The final community strategy considered in the model is that of illegal activity. This strategy, in effect, could be considered as part of the voice or action strategy. It is recognized as being distinct, however, primarily on the basis of its illegitimacy. That is, illegal activity is not a socially acceptable way of effecting change. This strategy may take the form of sit-ins, violence to property or the refusal to comply with court orders. Such activities have the effect of bringing attention to the issue at hand (since they elicit immediate coverage by the media) yet at the same time, may well jeopardise the community's chances of increasing support and achieving success. This is particularly true for environmental groups which, in general, do not enjoy strong public support on many issues. Thus there is a great deal of reluctance to adopt this particular strategy. As was noted earlier, there is a strong tendency for the middle and upper classes to become involved in environmental matters. In view of the fact that these people often have more to lose in such issues, they may be more inclined to indulge in some form of

illegal activity than those of lower social and economic standing.

The major effect of this strategy as stated by Long (1975) is that while the community may not realize its goals, it does attain a particularily strong bargaining position by virtue of its threatening actions. Goodman (1971) notes that: "It (illegal activity) illustrates that the only way the environmental needs of the disenfranchized will be met in our present society is through the process of struggle. And it is a process not easily co-opted by the existing institutions."

4. Official Reactions of Public and Private Agencies to Community Strategies

Once a specified set of community strategies have been enacted it is expected that there will be reactions on the part of the public and/or private agencies responsible for the reduction in environmental quality. Some of these political aspects of environmental conflict were alluded to above. Reactionary strategies are designed by private agencies to counteract the community's pro-environment efforts.

The public (i.e. governmental) strategies are designed to reduce conflict between the opposing factions in the conflict situation. These public and private responses can be of a passive or active nature. Passive responses include various forms of non-decision-making (where, in effect, nothing is done and the initial uproar is allowed to pass over) and co-optation (where concerned groups appear to gain certain concessions, but in actuality, receive nothing more than token gestures). Ley (1973) notes that: "Sophisticated politicians and members of the urban civil service have often successfully co-opted community input to the support of an existing plan by conferring upon them distracting side payments." The same holds true for private agencies.

These political strategies are extremely pertinent to environmental issues in view of the fact that many municipalities are more concerned with attracting growth, for tax and prestige purposes. With this goal in mind, environmental matters often take on lesser importance in the eyes of the political body. This necessitates reducing the effectiveness and efficiency of the actions initiated by community groups concerned

with environmental issues. Thus, various token gestures (which are active strategies) may be designed to create the illusion of government concern for such issues. These gestures include allowing community members to participate in plan formulation, the subsidization of environmental impact studies and the issuing of policy statements which express a deep concern for environmental policy. Seldom are these gestures translated into positive actions directed at improving environmental quality. The previous statement may be viewed as an over-generalization by some, yet when one looks at the list of inconsistencies in environmental policies, the lack of environmental considerations in official plans as well as the lack of stringent environmental legislation, it is immediately apparent that political reactions to environmental issues are designed to create only an impression of concern. The effect of this 'political arrogance', then, is to create disillusion on the part of community groups concerned about environmental matters.

5. Outcomes

As a result of the intervention of public and private agencies in environmental conflict situations, there exists a set of outcomes of direct relevance to the particular issue. Three types of outcomes are recognized in the model. These are: (i) environmental outcomes, (ii) conflict outcomes and (iii) equity and efficiency outcomes.

Environmental outcomes are the actual effects of government policy on the quality of the environment. Three possible environmental outcomes are recognized here. First, the level of environmental quality may be improved. This may occur if, for example, an area is preserved in its natural state or if certain negative effects of man's influence are reduced or eliminated. The second possibility is that the level of environmental quality decreases. In this instance environmentally disruptive actions are allowed to continue. The third possibility is that the level of environmental quality remains constant, at least temporarily. This is a likely occurence if, for example, the matter is set aside until further information is available concerning the issue in question.

Each of these environmental outcomes will be accompanied by direct and external effects. Direct effects refer to the benefits or losses experienced by the local population, termed user-associated externalities (Cox and Dear, 1975). The external or indirect effects refer to the outcomes affecting non-users and are therefore termed neighbourhood-associated externalities (Cox and Dear, 1975). The importance of each of these effects will be dependent upon the magnitude of the issue in question. The external effects of purely local issues are likely to be of lesser importance than those associated with regional or national issues.

The second type of outcome identified in the model concerns the effect of government policies and strategies associated with conflict between the opposing factions. If the results of the political actions are viewed favourably by the community, conflict may be dissipated, at least as far as the issue at hand is concerned. However, it must be recognized that such an outcome is not likely to remain unchallenged by the opposing faction. With respect to this group, conflict may be intensified.

Thus, any government decision or policy which favours one side or the other may result in conflict dissipation (at least temporarily) for the victorious faction and conflict intensification (again, at least temporarily) for the group suffering the setback as far as its interests are concerned. Conflict intensification may also occur if a compromise position on the part of the government or private agency fails to placate either group. A third possibility as far as conflict outcomes are concerned is that of conflict regulation. This is a likely outcome if a compromise position acceptable to both sides is adopted in the final decision.

The third set of outcomes identified in the model relate to the equity and efficiency of the adopted policies. Here concern is directed toward whether or not one group benefits more than the other (equity) and whether or not the public in general receives the maximum benefit from its input. Levy et. al.(1974), in a study of the provision of schools, streets and libraries in Oakland found that the very rich and the very poor benefited more (as far as these services were concerned) than those in the middle range.

In the environmental context it is evident that any decision favouring the economic interests will benefit those in the upper classes. In addition, it is entirely possible that certain pro-environmental decisions benefit the middle and upper classes as well. If, for example, an area of land is preserved as a wilderness park, in all likelihood the poor would be unable to enjoy its benefits simply because they could not afford such a luxury. That is, the park would be physically and economically inaccessible to this segment of the population.

In addition, equity can also be viewed in terms of which segments of the community were consulted and allowed to participate in the formulation of official strategies. Inequitable outcomes may exist if, for example, only a select group of individuals was consulted.

6. Evaluation of the Outcomes by the Community

This element of the model is closely related to the outcomes discussed above and the element discussed below, that of the effects of the outcomes on future issues. It is recognized as distinct from these elements to emphasize that there exists an important perceptual

process after the final decisions are made. To a very large extent community evaluation of outcomes depends on the extent to which the community's goals were realized. Thus the evaluation is important in two respects. First, it will determine whether or not the present issue remains a concern to the community. If the goals were not realized, then there is potential for the continuation of conflict as mentioned above. Alternatively, if the goals were not achieved, community members may exercise the previously discussed exit option when the reduction in the level of environmental quality is no longer tolerable. Second, the evaluation is important in that it will influence the likelihood of community participation in subsequent issues as noted previously.

7. The Effect of the Outcomes on Future Environmental Issues

The final element of the conceptual model focuses on the effect of the outcomes of the original issue on future environmental issues. Thus, this element incorporates the temporal aspects of conflict and attitudes into the model.

The time element is regarded as important in view of the fact that the level of community involvement in environmental issues is subject to change over time. In addition, the actions of public and private agencies require lengthy periods of time to come into effect. Finally, it must be recognized that individual and community attitudes toward environmental issues are subject to change over time. Each of these factors will influence community involvement in future issues. In addition, participation in one issue will affect the degree of community organization and the strategies employed in future issues. Community involvement may also affect the political attitudes toward the general issues of environmental quality and citizen participation.

In general, community involvement in a given situation raises five broad issues identified by O'Riordan (1974). These are: (i) to what extent should public opinion shape environmental policy?, (ii) how knowledgeable is public opinion?, (iii) to what extent are the opinions of participating groups representative of the general public will?, (iv) how to resolve conflict between 'experts' and the public? and (v) how is public

opinion identified and incorporated into the decision-making process? These issues will be considered in the following chapter.

In summary, the conceptual model outlined above focuses on specific aspects of environmental conflict which result from variations in several factors. Underlying the variations in these factors are differences in attitudes toward nature and man's treatment of it. These differences in attitudes are reflected in the community evaluation of actions and proposals, the individual and community strategies adopted, the reactions of public and private agencies to conflict situations and the community assessment of the resultant outcomes. The elements of this model are discussed in reference to a specific empirical example in the following chapter.

CHAPTER IV

THE RED HILL CREEK EXPRESSWAY: A CASE STUDY OF ENVIRONMENTAL CONFLICT

The purpose of this chapter is to discuss the applicability of the conceptual model discussed in Chapter Three to a local example of environmental conflict. Specifically, the elements of the model are discussed in reference to the proposal to construct an expressway through the Red Hill Creek Valley in the east end of Hamilton. The chapter consists of two sections. First, the background to the conflict is described. Second, the elements of the model are applied to this specific issue.

4.1 The Red Hill Creek Expressway: Background Information

The Red Hill Creek flows through a large preglacial notch in the Niagara Escarpment near the eastern limit of the City of Hamilton. The creek subsequently passes through a series of valleys and ravines (known as King's Forest) before terminating at Hamilton Harbour (see Figure Two). The valley consists of approximately 1,200 acres of land, half of which is wooded while the remainder is composed of unused pasture,

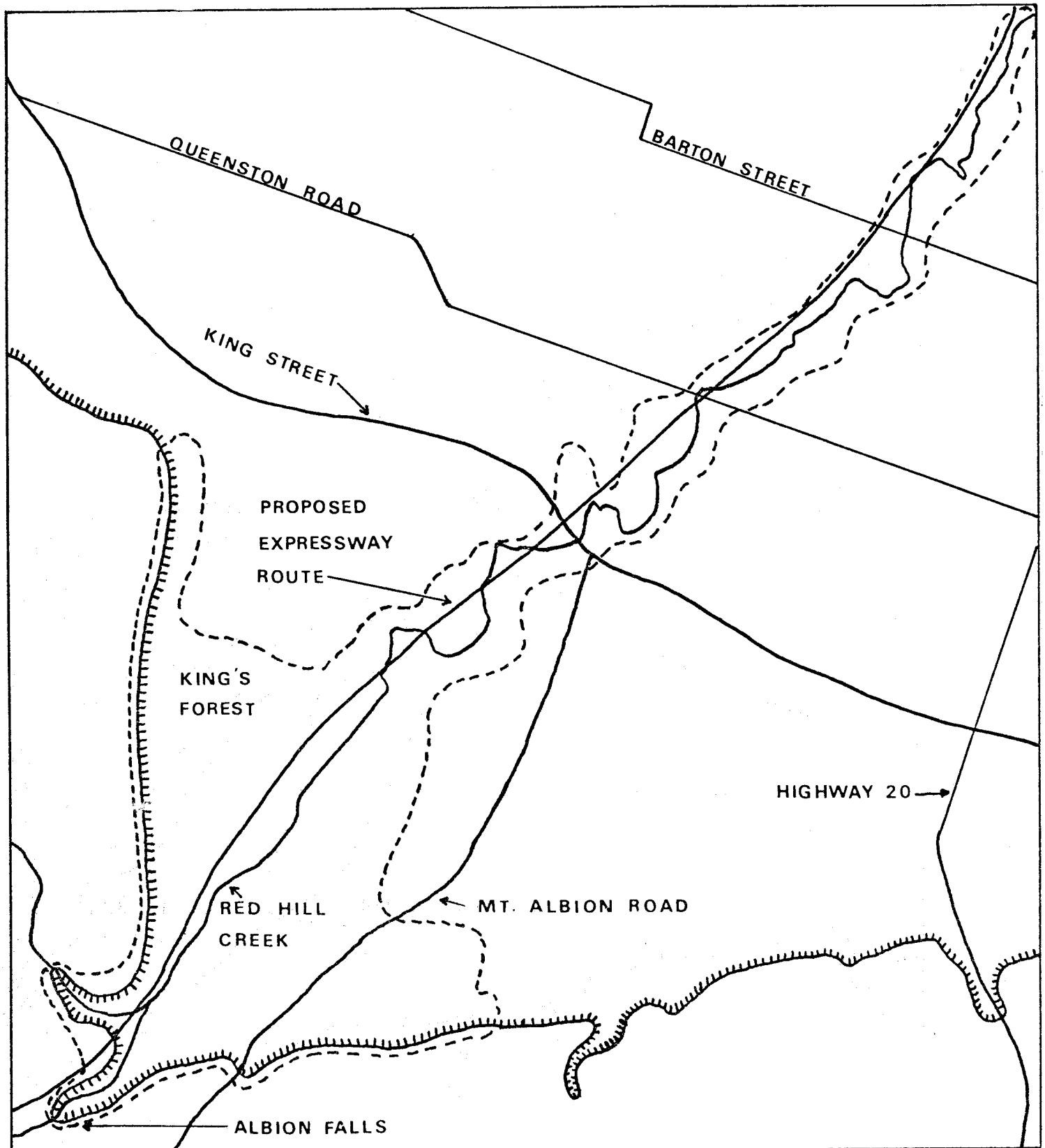

FIGURE TWO: THE RED HILL CREEK VALLEY

NIAGARA ESCARPMENT

VALLEY PERIMETER

0 1 MI.

SCALE 1 : 25,000

N

SOURCE: HAMILTON–WENTWORTH REGION ENVIRONMENTALLY SENSITIVE AREAS STUDY, (1976)

WP

fields and orchards (Hamilton Region Conservation Authority, 1976). As such, the Red Hill Creek Valley is part of a much larger ecosystem defined by the Niagara Escarpment as well as being a link between the escarpment and Hamilton Harbour. This is important in view of the fact that isolated natural areas (such as those surrounded by urban land uses) are unable to support as many plant and animal species as areas of a similar size which are linked to other natural environments (Diamond, 1975).

The stream valley is unique with respect to its geological and biological characteristics. These include various landforms associated with the escarpment as well as numerous species of birds, plants and mammals which are considered rare in this area. With respect to the creek itself, the water quality is very poor (especially in its lower reaches) due to the fact that it passes through the Hamilton city dump near its source and also receives overflow from the city's sewer system at various points. The area defined by the stream valley does, however, have high aesthetic value providing a setting for various outdoor recreation activities. In addition, the Bruce Trail passes through the southernmost part of the valley. A study by the Hamilton Federation of

Environmental Groups (1972) recommended that this area be preserved in its natural state for aesthetic and educational purposes. In a recent study by the Hamilton Region Conservation Authority (1976) the Red Hill Creek Valley was identified as one of the fifteen most environmentally sensitive areas in the Hamilton-Wentworth Region.

Recent urban expansion to the south and east of Hamilton has encroached upon the Red Hill Creek Valley, particularily in the last five years. The results of this are twofold. First, the area of land in a natural state has been reduced, which, by implication, leads to a reduction in the capacity of the remaining natural area to support complex biological systems. Second, this urban expansion has brought about the need for improvements in the level of accessibility to these areas. As a consequence of this, some argue a need for a north-south expressway linking the lower city to these recent developments. The Red Hill Creek Valley has been suggested as the most obvious route for this expressway since it is a natural corridor providing the shortest, most direct route from Hamilton Mountain to the Queen Elizabeth Way and the industrial sector of the city.

In addition, expropriation costs would be minimal in view of the fact that the creek follows ninety per cent of the route proposed for the expressway, most of which is owned by the City of Hamilton. The remainder of this chapter will focus on the series of events relating to conflict over this issue in terms of the elements of the conceptual model.

4.2 Application of the Conceptual Model to the Red Hill Creek Expressway Issue

The need for a north-south transportation route was originally identified in a 1956 report on the future transportation problems of the city. The Red Hill Creek Valley was at that time proposed as a possible expressway route in Hamilton's east end. This land was subsequently placed under an expropriation order. This order was rescinded in 1958 when the widening of Highway 20 made the Red Hill Creek Expressway unnecessary. The issue remained dormant until the release of the Hamilton Area Transportation Study in 1963. This study recommended that the Red Hill Creek Valley be a prime consideration for a possible north-south route in Hamilton's east end.

The recommendations of a subsequent study, the Hamilton Transportation Strategy Study, 1973, acted as a catalyst as far as conflict over this issue was concerned. The trends identified in this latter study suggested that since the majority of employment was found below the escarpment, while most residences were located above the escarpment, there would be a need for transportation facilities crossing the escarpment in a north-south direction. For the reasons noted above, the Red Hill Creek Valley was viewed as the ideal choice among the various alternatives.

With respect to the model, then, this proposal by a public agency (i.e. the city's traffic department) represents an action which potentially could disrupt the natural environment of the Red Hill Creek Valley. As such it may be viewed as a possible stimulus to conflict since it may evoke a negative reaction from community residents. No details were given by this agency of how the expressway would not disrupt the natural character of the valley. Instead, emphasis was placed on the need for such an expressway and the efficiency of the Red Hill Creek route.

Reaction from the various factions and interest groups became significant after the release of the Hamilton Transportation Strategy Study of 1973. Two distinct reactions were observed; certain individuals and groups advocated the proposed expressway while others opposed it. Those falling into the former category included the provincial government, the city traffic commissioner, the two aldermen representing the area which includes the valley, the Hamilton Automobile Club and the Hamilton and District Chamber of Commerce. Those falling into the latter category included the board of control, the Hamilton Region Conservation Authority, residents of the east end, the Hamilton executive of community councils and an organization known as Clear Hamilton of Pollution. The conflict discussed here involves these two opposing factions.

Five factors were identified in the model as having significant effects on the community evaluation of such issues. In this instance, four of these factors (community organization, characteristics of the individuals, environmental impacts and uniqueness of the environment) have had an important influence on the evaluation of this proposal. The remaining factor, awareness of the problem,

does not appear to be significant in this case.

The degree of community organization present in this issue had a significant effect on the resultant interaction between the public and political factions involved. It was noted in the previous chapter that a community which is closely knit with one or more local interest groups is likely to take a strong stand on a particular issue. This has been the case in the Red Hill Creek Expressway issue. Several local and non-local organizations (both ad hoc and standing) have put forth strong opposition to the expressway proposal. In other words, opposition has stemmed from two elements of the local and city-wide community. The ad hoc groups have been formed for the express purpose of voicing opposition to the use of the Red Hill Creek Valley as a transportation corridor. The standing groups are those such as the Hamilton Region Conservation Authority whose opposition to the proposal is part of a wider range of activities. As will be shown below, this strong community organization has resulted in the effective communication of the community's feelings to outside interests.

The strength of community organization in this particular issue is evidenced by the number of persons as well as the type of organizations which became involved. An example of the latter is the participation of groups such as the Conservation Authority which added credibility, expertise and political influence to the local interest groups.

The importance of attitudes toward nature as a determinant of conflict has been stressed throughout this paper. It is difficult to assess the exact nature of the prevailing attitudes in this case without some form of survey of the residents. Inferences based on the community actions (described below) can, however, provide a preliminary assessment of these attitudes. In very general terms it can be said that certain residents of this community do attach considerable importance to issues related to environmental quality. These attitudes have affected the manner in which the expressway proposal has been evaluated by those who have opposed it. Conversely it could be said that the opposite types of attitudes are displayed by those in favour of this expressway route. In other words, such individuals have little regard for environmental concerns.

With respect to the social and demographic characteristics of the community, much of the opposition has been voiced by those living in what may be described as a middle class area. It was noted in the previous chapter that those who voice concern about environmental issues tend to be of middle and upper class status, since these groups often have more to lose if the environmental quality of the area should decrease. This, in fact, was one of the concerns expressed by the residents of the area.

A third factor which affected the community's evaluation of the proposal was the nature of the actual and perceived impacts accruing from the expressway being located in the Red Hill Creek Valley. Those who supported the proposal have suggested that accessibility between the area above the escarpment to that below will be significantly improved. In addition, this faction has suggested that without this north-south route, the existing traffic problems of the city will be intensified. The individuals and groups who opposed this route have argued that the expressway would ruin, or at least significantly alter the natural character of the valley as well as reducing the area available for recreational pursuits.

In addition, some residents expressed concern about the impacts resulting from the increased amount of traffic in the area on the health and safety of the community members.

In general these perceived impacts have affected the manner in which the proposal was evaluated. It should be noted that these perceptions (of the impacts) are likely to be a function of environmental attitudes particularily on the part of environmental organizations. Residents not affiliated with environmental groups may base their evaluations on the impacts more than their environmental attitudes. The individual who has little or no concern for environmental quality in general is not likely to view the loss of the natural character of the Red Hill Creek Valley as significant. Thus, community evaluations are affected by the perception of potential impacts which, in turn, is likely to be a product of more general attitudes toward the natural environment.

The final factor affecting community evaluation of environmentally disruptive actions relates to the uniqueness of the environment affected.

It was noted in the first part of this chapter that the Red Hill Creek Valley is a unique environmental setting, both ecologically and geologically. The Niagara Escarpment section of the valley is particularily important in this respect. Those individuals and groups opposed to the use of the valley as an expressway route have based much of their opposition on the fact that natural environments of this sort are not found elsewhere in the vicinity. The valley is also unique in that it is a relatively large area accessible to a large part of the population. These aspects of the environment, then, have contributed to a negative reaction to the proposal by many community members and organizations.

In summary, different evaluations of the proposal by community members and organizations are based on four main factors. Underlying the evaluations of these factors are significant differences in the attitudes toward the natural environment in general. In other words, individuals with pro-environmental sentiments are likely to belong to the faction opposing the use of the Red Hill Creek Valley as an expressway route and vice-versa. The evidence presented here tends to substantiate this

belief.

Several important strategies have been employed by individuals and community groups in order to make their feelings known. The three fundamental strategies identified in the model are apathy, exit and conflict. The extent to which the second is present in the Red Hill Creek case is difficult to assess, although it would be expected that since the expressway was only in the proposal stage, few residents would leave the area. In this issue, as in virtually all others, the majority of the population remains silent, thereby exercising the apathy strategy. It is difficult to assess the relative importance of apathy without a detailed survey of the local residents.

The conflict strategy, however, has played an important role in this issue. Two types of conflict strategies were recognized in the model. These are: (i) voice or action and (ii) illegal activity. The discussion which follows focuses on the former type since the latter has not occured. (This absence of illegal activity is a result of the fact that there has not been an opportunity or need for it to take place. In other words, the voice or action strategy has proven effective to this point).

The residents of the areas bordering the Red Hill Creek Valley have effectively utilized various legal strategies in order to communicate their opposition to the general public as well as decision makers. The initial reactions occured in the form of letters to the editor of the Spectator expressing the need to preserve the natural character of the valley for recreational and aesthetic purposes. One such letter from a local resident expressed strong concern about the possible loss of the valley. The letter concluded with the following statements: "Increased car registration in Ontario does not mean the driving public wants Red Hill Creek destroyed. When cars take 'a back seat' in urban transportation one day, where will the 'Red Hill Creeks' needed in the future come from? There are things above economics in this world. Preserving the Red Hill Creek is one of them." (The Spectator, July 3, 1973). Such actions came from individuals. Group actions took place in 1973 after the valley was suggested as an expressway route by the Hamilton Transportation Strategy Study. This included a presentation of a brief by the Hamilton Region Conservation Authority to Hamilton city council, which,

among other things, emphasized the incompatibility of the expressway with the natural character of the valley as well as the adverse environmental impacts which would result from its construction.

In December, 1973, an east end citizen's group presented a 700 name petition to city council objecting to the expressway. These objections were based on the potential loss of natural open space as well as the negative effects resulting from the increased volume of traffic which would result. The Hamilton executive of community councils and a group known as Clear Hamilton of Pollution (CHOP) also presented briefs stating opposition to the route at this time.

In reaction to this community opposition, the Hamilton Automobile Club presented a brief at a meeting at city hall in February, 1974, which supported the proposed route. This argument, in part, suggested that a final decision on the proposed expressway should be based on its good to the overall community rather than the "...Utopian ideals held by a small number of people." A spokesman for the club stated that: "No use of land provides greater benefit to a greater number of people

than its use for transportation." (The Spectator, February 7, 1974).

This particular meeting was attended by five delegations of concerned citizens from the community as well as the Clear Hamilton of Pollution organization. These groups once again voiced opposition to the proposal. One CHOP member suggested that: "The Red Hill Creek valley is a natural resource too valuable to throw away for short term gain." (The Spectator, February 7, 1974). In April, 1974, the Rosedale Community Council (an official organization of one of the neighbourhoods bordering the valley) presented a brief to the city's traffic and engineering committee expressing concern over the problems resulting from the increase in traffic volume which would occur if the expressway were built. The final noteworthy response came from the Hamilton and District Chamber of Commerce in July, 1975. In a presentation to city council, this group suggested that: "A roadway can be constructed to enhance the area for the public rather than destroy it." (The Spectator, July 9, 1975).

These strategies represent attempts by the opposing factions to voice their approval or opposition to the proposed expressway. Arguments in favour of the expressway focused on the dire need for transportation improvements while those in opposition to the proposal contended that the loss of this natural environment would be disasterous. Once again, the variations may be interpreted as being a result of differences in attitudes toward the natural environment as expressed by community members and organizations. Involvement on the part of the community and its members is a function of existing attitudes toward nature, the characteristics of the local residents (largely long-term and middle class) and the importance of the issue in terms of its impacts. The net result of this has been to make the Red Hill Creek Expressway an important political issue in Hamilton.

The response of Hamilton city council to community involvement in this issue has had several important ramifications for the outcomes. The political faction first expressed concern for the preservation of the valley in March, 1972, when Board of Control

established a committee to re-examine the feasibility of the route in light of the potential environmental damage. One controller, referring to the negative results suffered from building an expressway through the Don Valley in Toronto stated that: "With all the emphasis on conservation now, I don't think we should allow this to happen to a beautiful area like Red Hill Creek." (The Spectator, March 28, 1972). These sentiments were echoed by the controllers at a meeting of city council in January, 1973. Following the community reactions described above, city council voted unanimously to preserve the natural character of the valley in March, 1974. In June, 1975, the Hamilton-Wentworth Regional Council voted to support the city council in its efforts to preserve the creek valley. These actions represented active responses (as identified in the model) to the community strategies. It appeared at this time that the Red Hill Expressway controversy had ended. This was not the case.

In August, 1974, the city's traffic commissioner (who favoured the Red Hill Creek route) predicted that the provincial government would not subsidize seventy-five per cent of the expressway costs if the Red Hill Valley

route was not selected. A subsequent provincial government report issued in January, 1975, concluded that: "From a traffic standpoint only the Kenilworth route or the Red Hill Creek route serves the major traffic demand. Without one or the other of those routes the value of the (east-west) Mountain freeway is very questionable. From an environmental standpoint, only the Highway 20 or 'Do Nothing' alternatives are considered acceptable. From an engineering standpoint, only the Red Hill Creek route provides an effective route at reasonable cost." (The Spectator, January 3, 1975). This report favoured the Red Hill Creek route despite the unanimous opposition of city council.

The result of this intervention on the part of the provincial government was to create a polarization of attitudes expressed by members of city council. Council members who adamantly opposed this route from the outset remained firm in their views. Others, however, began to suggest that the route should at least receive serious consideration as a viable alternative. This shift in the attitudes of certain council members can be attributed to the fact that the provincial government threatened to

withhold subsidies for both the north-south and east-west Mountain freeways. Without these subsidies neither expressway could be constructed, thereby further complicating the city's traffic problems.

At this time the two aldermen representing the area bordering the valley came out strongly in favour of the Red Hill route due to the severe traffic problems being experienced in the east end of the city. As a result of the pressure from the provincial government and the local aldermen, city council voted once again on whether or not the route should be considered in an in-depth study of the alternatives for a north-south access route. Once again the council voted to preserve the natural character of the valley, but only by a ten to eight margin. One council member stated at this time that: "The Red Hill Creek Expressway will be built over our dead bodies." (The Spectator, January 3, 1975). These events emphasize the importance of changes in attitudes over time as a result of various factors.

A third vote on the possibility of including the Red Hill route in a feasibility study was held in January, 1976. Once again the motion was rejected, this

time by a margin of ten to nine. As a direct result of this the provincial government announced it was withdrawing its seventy-five per cent subsidization of the expressway costs. The city had, in fact, breached an agreement with the province which called for the study of the Red Hill Valley as a feasible route. This is the present status of the issue.

In summary, the community response and the feelings of individual council members in the Red Hill Expressway issue evoked a city government stance which opposed this route largely for environmental reasons. The sequence of events described above outline the importance of attitudes toward nature, their change over time and the importance of certain environmental matters as political issues. The inconsistencies in environmental policies mentioned in the previous chapter are also apparent in this issue. Specifically, the provincial government is presently concerned with the preservation of the Niagara Escarpment, yet its desire to use the Red Hill Creek Valley as an expressway route would result in the destruction of an important section of the escarpment Hamilton's east end.

The effect of this may be to create disillusion on the part of environmentalists as far as the province's environmental policies are concerned.

Three types of outcomes were identified in the model. These are: environmental outcomes, conflict outcomes and equity and efficiency outcomes. With reference to the Red Hill Creek case the environmental outcome of major significance is the fact that the valley has been preserved (at least temporarily) in its natural state. The local residents have benefitted directly as a result of this decision in terms of environmental quality. Alternatively, a direct negative effect felt by local and non-local residents alike is the further complication of existing traffic problems in the east end of the city. This latter cost may have more significant impacts on the population of the entire region than the former benefit.

As far as the conflict outcomes are concerned, the decision not to consider the Red Hill Creek route must be viewed as a victory for the local residents. For these individuals and groups the conflict has been resolved, at least temporarily. On the other hand, those individuals and groups which supported this expressway route may renew

conflict over this issue in the future. The decision of city council may also serve to affect future relations with the provincial government in view of the latter's support for the Red Hill route.

With respect to the equity and efficiency outcomes, it is likely that the residents living near the valley will enjoy the benefits of this natural area more than those living further away. This seemingly inequitable outcome may be less severe due to the fact that the valley is a natural area of regional significance. As far as the total population is concerned the decision may be viewed as being both inequitable and inefficient. There are two reasons for this. First, most of the benefits accruing from the decision are enjoyed by the local residents and persons in the wider population with environmental interests. Secondly, the decision will certainly complicate traffic problems in Hamilton's east end as well as forcing the north-south expressway to be located in a costly, inefficient location yet to be determined. These outcomes focus directly upon a critical issue in all environmental matters.

This issue deals with the trade-off made between environmental quality and the economic and physical growth of urban areas. In the Red Hill Expressway issue the former attribute has been deemed more important.

The evaluations of these outcomes by the various factions were noted above. These perceptions are important in that they will affect future developments in this issue which may occur. As far as the local residents are concerned, their success in this issue is likely to encourage their participation in subsequent community issues. This emphasizes the importance of time in the model as it recognizes the changing nature of attitudes as well as the effect of various issues on subsequent ones. The importance of the time element is further illustrated by the long period over which the expressway remained a critical issue. One final effect of this series of events may be to make citizens and political groups in Hamilton more aware of the critical nature of environmental issues.

In summary, the events outlined above illustrate the significance of existing attitudes toward the natural environment on

conflict between various interest groups. The importance of changes in perceptions and behaviour over time are clearly illustrated in this example. It appears that public opinion has played an important role in the decision-making process in this case, affecting both opposition to and support for the expressway on the part of the local politicians. As was noted earlier, the participation of certain environmental organizations (i.e. the Hamilton Region Conservation Authority and the Clear Hamilton of Pollution group) strengthened the position of the anti-expressway residents. This suggests that outcomes are influenced by the participation of official groups as well as the other factors suggested in the model. In general, then, the sequence of events in the Red Hill Creek Expressway issue appear to conform to the relationships posited in the conceptual model.

CHAPTER V

SUMMARY AND CONCLUSIONS

5.1 Perceptual and Conflict Perspectives of Environmental Issues

The primary purpose of this paper has been to examine community attitudes and perceptions toward issues of environmental quality and the role played by these variables in engendering environmental conflict. To this end, a conceptual model of environmental conflict was described and assessed using a local case study. In approaching environmental issues from the perceptual and conflict perspectives two important points are noted. First, this approach strongly suggests that environmental conflict is caused, in part, by variations in perceptions of the natural environment. In a more abstract sense these attitudes (and hence, conflict as well) are linked to the underlying philosophical orientations toward man's place in nature. Second, environmental conflict can lead to changes over time in the attitudes toward natural environments.

In other words, conflict situations may potentially alter one of the primary factors which produced conflict at the outset.

Chapter Two dealt with three areas of concern related to environmental matters: (i) man's place in nature; (ii) specific environmental attitudes and the factors affecting them; and (iii) locational aspects of conflict. These three areas of concern are vital to an understanding of environmental issues, the first two for the reasons noted above and the latter as a result of the fact that conflict is a strategic means of achieving environmental goals.

Chapter Three described a conceptual model of environmental conflict which attempted to link attitudes and conflict in environmental issues. The model focuses on five basic elements thought to be present in most environmental conflict issues. These are: (i) community evaluations of environmentally disruptive actions, (ii) individual and group strategies adopted in light of these evaluations, (iii) reactions of official agencies (public or private) to community involvement, (iv) resultant outcomes and (v) the effect of these outcomes on subsequent issues.

Throughout this discussion emphasis was placed on the manner in which variations in perceptions act as a contributing factor to conflict between opposing factions. While the model is a simplification of these very complex issues, it does provide a point of departure for attempting to understand the relationship between attitudes and conflict in environmental issues.

5.2 Evaluation of the Model

The validity of the model was assessed by reference to a specific environmental conflict issue in Chapter Four. The issue, centred around the proposal to build an expressway through the Red Hill Creek Valley, illustrates the manner in which variations in environmental attitudes can lead to conflict as postulated in the model. In more general terms it can be said that community responses to particular environmental issues are dependent upon a variety of factors. Underlying these factors are the variations in attitudes toward the natural environment. Given the absence of quantitative analysis in this discussion, it is difficult to accurately determine the true nature of these hypothesized relationships between

attitudes and conflict. The evidence presented does, however, suggest that such relationships exist. The attitudes and subsequent behaviour on the part of the community groups, civic politicians and the Conservation Authority in the Red Hill Expressway issue are indicative of the nature and importance of these relationships. This tends to emphasize the importance of a model which focuses, in part, on the subjective variables in environmental issues.

Another noteworthy feature of the model is the fact that it is sufficiently general to be applied to a wide range of environmental issues, particularly those which centre around opposition to development proposals and existing adverse external effects. It should also be noted that the model is such that it can be applied to issues ranging from a local to a national scale. This may prove to be of considerable significance if environmental concern and awareness continues to spread throughout the population. (Recent opposition expressed by various factions of the Canadian population to the MacKenzie Valley Pipeline is evidence of this increasing scale of environmental interest).

Furthermore, the model can be applied to environmental issues generated by public or private agencies.

The final element described in the model (i.e. the effect of the outcomes on future environmental issues) is critical in that it stresses the temporal dimensions of environmental issues. In other words, both attitudes and conflict are viewed in a dynamic sense, being subject to change over time depending on the circumstances. This was particularly true in the Red Hill Creek case where the attitudes of city politicians were influenced by community attitudes as well as threats from the provincial government. The fact that the status of the proposed expressway changed several times suggests that this is an important consideration. The importance of time is further illustrated by the lengthy period over which the proposal remained a critical issue.

The discussion in Chapter Four also suggests that certain modifications to the model are necessary in order to add to its completeness. The evidence indicates that an additional factor affects the community's participation and the likelihood of achieving its goals. This factor is the involvement of official environmental

interest groups. The Red Hill Creek case clearly illustrates this point. The involvement of the Conservation Authority in particular was crucial in that it provided the community with a certain degree of credibility, expertise and political influence necessary to effectively communicate its opposition to the proposal. The involvement of such environmental interest groups is often the driving force behind effective community opposition to environmentally disruptive proposals or actions. The recently formed Canadian Environmental Law Association, for example, provides legal assistance to citizen groups solely in environmental issues. Clearly the participation of such groups will alter the progress and outcomes of such issues.

In a similar manner the model may be modified to include the intervention of higher level political bodies as a factor affecting the actions of both community groups and the local political organizations. The actions of the provincial government in the Red Hill Creek case were obviously important as far as the polarization of the attitudes expressed by city council members was concerned.

This may be of critical importance if, as in the example discussed here, the higher level political body can withhold subsidies or sanctions needed by the lower level body. This intervention on the part of a higher body may support or be contrary to the views expressed by the community residents. In any event such interventions are likely to have a significant effect on the outcomes of an issue.

Another factor worthy of consideration in environmental issues is the uncertainty experienced by community residents prior to a final decision on the matter. If the community members are unsure of future outcomes, the strategies available to them may be limited in number and effectiveness. If this creation of uncertainty is a deliberate strategy on the part of the agency initiating the proposal, then the likelihood of successful community opposition may be reduced. In the Red Hill Expressway case the number of community participants and the strategies used may have been limited by the constantly changing status of the proposal. It is conceivable that many more residents would have opposed the expressway if a decision had been made to construct it.

Hence community participation and the strategies adopted are partly limited by existing uncertainty.

Finally, questions concerning the validity of this approach to environmental issues must be considered. In viewing environmental issues from perceptual and conflict perspectives the researcher is able to identify the perceptions and attitudes (as well as strategies) of those who participate. Questions arise, however, concerning the attitudes of those who choose not to become involved, since they are effectively ignored in this approach. The lack of consideration of this group may be crucial, since it usually constitutes the majority of the population. In other words, how representative are the opinions of this vocal minority? Do these views accurately reflect those of the silent majority? The answers to these questions have important implications for policy and decision-makers.

In summary, while the model is a simplification of environmental conflict issues, the evidence tends to suggest that it does accurately portray certain aspects of these issues. The modifications recommended above may serve to make this model more complete. In any event, perceptual and conflict perspectives of environmental

issues should serve to further our understanding of these very complex matters.

5.3 Suggestions for Future Research

The development and testing of the conceptual model has raised important issues which may form the basis of subsequent inquiry. One such issue revolves around the link between environmental philosophies and specific environmental attitudes. Intuitively, one would expect that there exists a strong link between an individual's view of man's place in nature and the attitudes which he possesses toward specific environmental issues. Further research is needed to clarify the nature and importance of this somewhat tenuous link.

A second important question focuses on the effect of an individual's participation in a specific local issue on his or her subsequent involvement in more general environmental issues. In other words, does the individual who opposes a proposal or action in his community for environmental reasons become an active participant in environmental issues which do not have a direct effect on him?

The answer to this question may add to our understanding of the nature of the conservation movement and environmental concern.

A third issue arising from the discussion centres on the need for determining the extent to which the vocal minority is representative of the silent majority. Policy and decision-makers require such information if effective environmental policies are to be developed.

Finally, concern may be directed toward understanding the manner in which individual action becomes transformed into group action in environmental issues. In other words, what factors induce the individual who is environmentally concerned to actively participate in such issues? Knowledge of this may enable public or private agencies to anticipate community actions and lessen the negative effects of conflict.

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