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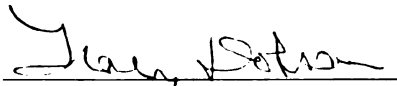
ENVIRONMENTAL CONCERN AND MOTIVATIONS
OF POLISH YOUTH FOR COMMUNITY ACTION:
VOICES OF A POST-COMMUNIST GENERATION

presented by

Annelise Carleton

has been accepted towards fulfillment
of the requirements for

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**ENVIRONMENTAL CONCERN AND MOTIVATIONS
OF POLISH YOUTH FOR COMMUNITY ACTION:
VOICES OF A POST-COMMUNIST GENERATION**

By

Annelise Carleton

A DISSERTATION

**Submitted to
Michigan State University
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ABSTRACT

ENVIRONMENTAL CONCERN AND MOTIVATIONS OF POLISH YOUTH FOR COMMUNITY ACTION: VOICES OF A POST-COMMUNIST GENERATION

By

Annelise Carleton

This research project addresses important issues in youth development, environmental education, and international perspectives on participation in civic projects. Since 1989, political and social transformations in Poland have created new possibilities for citizens to participate in environmental and community actions. This study explored Polish youth involvement and investigated the factors youth perceive as motivating or inhibiting their abilities to be active participants in the resolution of community and environmental issues. Research in youth development has shown that participation in community service can provide many positive developmental assets.

An integration of qualitative and quantitative methods provided multifaceted data to understand youth perspectives. In 15 focus groups across Poland, teens shared opinions on concerns for the future, environmental issues, and youth participation in community actions. Analysis of the focus group data informed the development of a proposed model of youth involvement, and the development of the Youth Environmental Concern and Action (YECA) survey. The model expands previous research by depicting the interaction of environmental concern and environmental action participation as cyclical, involving a suite of youth-specific motivation variables. Elements of the model were explored with the YECA survey of teenagers (N = 453) from a stratified random selection of schools.

Results indicate Polish youth are concerned about the environment. Girls had significantly higher environmental concern scores than boys. Six variables were identified as significantly correlated with environmental concern. This suite of variables explained 22.8% of the variance in Environmental Concern Index scores for boys and 14.7% of the variance for girls. Youth participation in environmental actions as measured by the Environmental Action Index (EAI) is low. Three variables were significantly correlated with the EAI scores, and these explain 12% of the variance for boys and 11% of the variance for girls.

Lack of opportunities, negative peer pressure and lack of adult support were commonly mentioned barriers to youth participation. Opportunities for involvement and affinity for nature were identified by the youth as enhancing their motivation to participate in environmental actions. The study includes analysis of transcripts and bivariate and multivariate analyses. Recommendations for environmental education programs and future research needs are included.

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2001

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CHAPTER 1.

INTRODUCTION

Young people represent agents, beneficiaries and victims of major societal changes and are generally confronted by a paradox: to seek to be integrated into an existing order or to serve as a force to transform that order. Young people in all parts of the world, living in countries at different stages of development and in different socio-economic settings, aspire to full participation in the life of society.

Paragraph 2 of the Preamble,
World Programme of Action for Youth to the Year 2000
and Beyond – adopted by the United Nations General
Assembly, 13 March 1996. A/RES/50/81.

On a remote stretch of road in northern Poland less than 2km from the Russian border, the community of Michałkowa is too small to categorize as a village. There are no businesses or shops, just a handful of houses and only forty or so residents who earn their living by farming the rolling countryside or finding other work in the town 30km away. The road which passes Michałkowa ends at a rough barricade on the border, and no vehicles are permitted to travel beyond the cluster of homes. The residents truly live at the “end of the road.”

Despite the remoteness, five high school girls from this community formed an organization for children in the surrounding communities. They were concerned that the children living in the nearby settlements had nothing to keep them occupied, so they decided to provide after-school activities. The local school children responded enthusiastically. Hundreds of kilometers away, in Łódź, the second largest city in Poland, teenagers formed an alliance to promote less reliance on automobiles and to encourage the development of bike lanes in the city. These young people and many

others were sufficiently motivated by conditions in their local environs to take action resulting in positive change. Polish youth are developing trails, collecting data on acid precipitation, and organizing clothing collections for the needy. They are seeking solutions to environmental and community problems, yet little is known about what motivates their participation.

The global environmental situation is critical, and problems around the world continue to increase in severity. The *Global Environmental Outlook* prepared by the United Nations Environment Programme stated “the environment has continued to degrade during the past decade,” yet the authors found that “a sense of urgency is lacking” (UNEP, 1997, p.3). The report concluded that chief among the many contributing reasons is the fact that “environmental problems remain deeply embedded in the socio-economic fabric of societies in all regions” (UNEP, 1997, p.3). As environmental problems worsen, future generations will be challenged to face issues which promise to become more complex and contentious. Encouraging the development of a sense of environmental stewardship and civic responsibility can be a critical component of solutions.

The study described in this dissertation explored the factors and experiences identified by Polish teenagers as enhancing or inhibiting their levels of environmental concern and participation in environmental and community action projects. The proportion of Polish youth engaged in these activities remains fairly low, a reality faced by many countries. For the UNESCO-sponsored project “Growing Up in an Urbanizing World”, researchers interviewed youth in eight nations about the places where they live (Chawla, 2001). In all countries, including Poland, young people expressed doubts that

adults would take their ideas seriously. The authors found that this contributed to a sense of alienation among the young people, often accompanied by a lack of motivation for action. Yet one has only to witness the enthusiasm of young people who *are* involved in community projects to recognize the potential for youth participation.

One of the challenges for youth-serving organizations around the world is to attract and involve *more* youth. A challenge for research is to help clarify the factors which contribute to involvement, and to increase understanding of the various paths to environmental concern and involvement in environmental and community projects. Community service projects, such as those aimed at assisting a disadvantaged segment of society (e.g., orphans or elderly persons) or neighborhood beautification projects are included in the study because I consider community to be an integral part of one's total environment. The inspiration for this study began from my experiences living in Poland as a Peace Corps volunteer for two years. The inspiration took shape as I met with the young people who are the subjects and speakers in the following pages.

Primary Research Questions

This research was driven by the following questions:

- What role do youth see for themselves in addressing Poland's environmental and social problems?
- What motivates Polish youth to participate in environmental and community actions?
- What factors enhance or inhibit youth participation?

Organization of the Dissertation

The remainder of Chapter 1 is devoted to presenting the justification for the study in Poland, and explaining the reasons for focusing on youth. I present an overview of the environmental situation in Poland, and a summary of research on environmental attitudes.

In Chapter 2, I include the theoretical support for the development of the proposed model of youth involvement and describe the methods used in the present study. Both quantitative and qualitative methods were used. I developed the “Youth Environmental Concern and Action” (YECA) survey to collect uniformly-measured opinions about environmental concern and individual involvement in pro-environmental actions from a large and statistically valid sample which allowed application of sophisticated statistical analyses. Focus group interviews with teenagers provided the chance to qualitatively explore the same issues, and to discuss attitudes toward the environment in ways that could not be done with a standardized questionnaire. The focus groups also helped me identify and clarify perspectives that were not initially apparent to me as an American researcher. The chapter includes a reflection on my role as a researcher in Poland.

The construct of concern is the main focus of Chapter 3. Following a literature review, I present data which describe the environmental concern expressed by study participants. I used bivariate correlation and multiple regression analyses to identify the factors which significantly influence a person’s level of environmental concern.

Chapter 4 describes the kinds of environmental and community actions in which Polish youth are involved. Pertinent literature is reviewed, and I present data regarding the level of participation by Polish youth, as well as demographic factors of interest. Once again, multiple regressions are used to analyze the strengths of relationships

between various factors proposed to contribute to or inhibit participation.

In Chapter 5, I bring together the constructs of concern and participation to examine in more detail the bridges and barriers between environmental concern and participation in action. I present an interpretation of data based upon textual analysis of the responses to an open-ended question on the YECA, and based upon these findings I offer programmatic recommendations to address the needs identified by the youth.

Chapter 6 is a summary of research findings with recommendations for practical application of the information, as well as suggestions for further research.

Goals of Environmental Education

Addressing environmental problems through active civic participation has been a prominent goal of environmental education since the mid-1970's. The First Inter-governmental Conference on Environmental Education convened in Tbilisi, Georgia, USSR in 1977 and established the framework for environmental education in countries around the world. Representatives at that conference identified three goals of environmental education:

To foster clear awareness of, and concern about, economic, social, political and ecological inter-dependence in urban and rural areas.

To provide every person with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment.

To create new patterns of behavior of individuals, groups, and society as a whole, towards the environment.

(UNESCO, 1977)

To date, the great majority of environmental education materials and programs have been aimed not at developing “commitment and skills” nor “new patterns of behavior,” but at promoting awareness, concern and knowledge (Volk & McBeth, 1997).

There have been a number of studies on behavior, and examinations of the precursors to environmentally responsible behavior, but these have been directed largely at adult audiences. With very few exceptions, there has been little research on behavior and action participation by young people.

At its core, environmental education strives to engage the global citizenry in new ways of thinking and acting in, with, and for the environment. According to Palmer:

Environmental education, in its broadest sense, is about 'empowerment' and developing a sense of 'ownership', improving the capacity for people to address environment and development issues in their own communities. It is about touching people's beliefs and attitudes so that they want to live sustainably, providing sufficient information to support these beliefs, and to translate attitudes and values into action.

(Palmer, 1998 p.274)

Engagement can target current environmental problems, as well as proactively reduce future environmental problems by influencing environmentally responsible behaviors, from promoting recycling to discouraging illegal dumping. Involving the public is key to environmental risk prevention, assessment and reduction. A concerned public can assist in identifying and monitoring environmental problems, and in disseminating information to facilitate more informed decision-making. Involvement of citizens can influence and mobilize societal responses to environmental issues.

Active participation can offer opportunities for social learning, and a greater understanding of many scientific, social and cultural issues by direct participation in the experience. Paulo Freire, the renowned Brazilian philosopher, saw how active involvement in an issue could lead an individual to what he called "conscientization," the process by which individuals become critically conscious of their surroundings. Freire

was initially concerned with awakening people to an awareness of the conditions that oppressed them, specifically related to the lack of literacy in his native country.

However, there are clear parallels between his philosophy and environmental awareness.

He wrote: "You never really understand an issue or know how to help resolve it until you involve yourself in the issue. Then you begin to understand it, to identify the principal parties and actors involved, and begin to realize how to change it" (Freire, 1970/1993).

Involving young people in local environmental and social issues offers the chance for greater understanding of the issues, and of their potential of young people for initiating and causing change.

In addition to societal benefits, involvement in environmental and civic action has great potential for affecting the individual development of young people. Erikson (Erikson, 1968) emphasized that within the stages of human development, the adolescent identity process involves two critical and complementary tasks necessary to establish a sense of identity: a sense of personal identity in conjunction with a sense of social relatedness, or how one relates to other people.

Youniss and Yates (1997) describe three core concepts based on Erikson's theory of Identity development which can be achieved by participation in community service.

The first is *Agency & Industry*, which involves the development of the sense of self-efficacy (the ability to achieve desired outcomes through one's actions), the development of social responsibility, and the ability to fulfill adult roles. It involves personal directedness, self-understanding, personal competence, responsibility and self-esteem.

The second is *Social Relatedness*, which combines Erikson's features of ideological clarity and collective identity and occurs as an individual explores their place in relation

to other individual, social structures and institutions. The third related concept possible through participation in community service is the development of a *Political-Moral Identity*, by which young people further define their identity by being able to demonstrate values and establish a sense of connection to civic and social systems.

Additional research suggests that when youth are denied the opportunities to develop the constructs related to identity formation, there can be negative consequences. Eccles , Midgely, Wigfield, Buchanan and Reuman (1993) found that as adolescents grow through their teenage years, they desire more chances to participate in decision-making in classrooms and in family situations but often have decreasing opportunities to do so. The authors postulated that the failure of schools or families to accommodate adolescents' needs for greater autonomy and control can trigger "acting out" and result in behavioral problems.

Extensive research on youth developmental assets has shown that participation in volunteer service projects can provide positive developmental influences (Benson, 1997). Developmental assets are the "building blocks" considered necessary for the positive mental, social and emotional development of youth, including internalized individual competencies and externalized social features. Participation in environmental and community projects is one arena where these concepts can be put into practice, and life competencies developed. Individuals who participate in volunteer service early in life are more likely to exhibit a greater appreciation for active citizenship and a willingness to participate in volunteer activities later in life (Clark, Croddy, Hayes, & Phillips, 1997). According to Piotr Glinski, a sociologist who has been studying the environmental movement in Poland for over twenty years, among Polish adults who are active

professionally in the environmental movement today (e.g., directors of non-governmental organizations, environmental foundations, etc.) the majority of them first became involved in local actions in their youth (P. Glinski, personal communication 8/19/98).

As Poland is transitioning to a democratic society, one of the challenges is to engage more people in civic involvement. For fifty years citizens were denied the opportunities to take part in civic actions, and thus the people must now learn new ways of participation. Youniss, McLellan and Yates (1997) reviewed multiple studies which demonstrated how teenage participation in organized civic activities was identified as integral to the construction of a civic identity which included a sense of social responsibility for sustaining a community's well-being.

In summary, participation in the solution of present environmental problems and the prevention of future problems has long been a goal of environmental education. Participation in such activities has been shown to provide fertile ground for the development of personal and social life skills and traits. Additionally, participation in organized community activities has been demonstrated to develop a sense of social responsibility necessary for establishing a civic identity. Finally, as will be presented below, the environmental situation in Poland is dire and would benefit greatly from increased citizen participation. For these reasons, I focused on participation in community and environmental actions as the metric of interest in this study.

Justification for Research on Polish Youth

Environmental Situation in Poland

In any examination of attitudes and behaviors, it is important to consider social and cultural factors in order to better understand the contexts within which to frame the study. The centrally-planned government of the communist-controlled era (1944-1990) left a legacy of environmental problems on a massive scale throughout Poland. During the period of “real socialism”¹ priority was given to the development of energy- and material-intensive heavy industry. Since the State was both owner and operator of all economic-generating businesses, energy and resource costs were kept unrealistically low, a factor which contributed to highly inefficient use of resources and further environmental degradation (Andersson, 1999).

Another factor relating to the State’s function as “owner-operator” was that the limited environmental protection policies were largely ignored (Szacki, Glowacka, Liro, & Szulczewska, 1993). The resulting air, water and soil pollution made areas of Poland among the most polluted on earth (Andersson, 1999). By the mid-1970s most of the waterways in Poland were already too polluted for classification, and the amount of industrial effluents continued to increase (NFEP, 1998). A study of the rivers in the industrial region of southwestern Poland in the late 1980s found that 65% of the river lengths in the region were so polluted that there was no biological life in them (Nawrocki & Szczepanski, 1995).

¹ Many Polish scholars prefer the term “real socialism” to describe the political and economic structure of the country from 1944-1990. The adjective “real” is included to distinguish what took place “on the ground” in Poland, as distinct from pure socialism in the writings of 20th century thinkers. Thus, I have chosen to use this term as well. However, because often in Polish publications and in conversations with Poles, there were references to the “communist leaders” and the “communist party”, I will use the word communist as an adjective, and not as a noun, as in “Communism.”

By the end of the 1980s, approximately 3/4 of Poland's forests were damaged, a factor largely attributable to industrial emissions (Hicks, 1996). High sulfur coal was the main fuel used, contributing to highly acidic precipitation, and high concentrations of airborne particulates (NFEP, 1998).

It was common throughout the Soviet-controlled era for many of the heavy industries, including armaments and chemical industries, to dispose of wastes directly into rivers or onto open fields, a practice which resulted in contamination of groundwater resources. In a 1980 study, two thirds of the 282,000 village wells tested were found to be "contaminated and unfit for human consumption" (Kozlowski, 1985). Less than 3% of the tested wells produced "high quality" water.

In 1983, a National Council of Ministers identified the most seriously devastated areas in the country and designated them as "areas of ecological threat." This designation was an attempt to limit further industrial development within the regions, however there was little done to resolve the causes of the devastation already present (Szacki et al., 1993). The 27 areas comprised more than 11% of the surface area of the country and were home to 12.9 million people (Hicks, 1996). Thus, by the early 1980's the government was aware that approximately 35% of the national population was living within areas determined to be seriously devastated.

For decades, over 10% of the country's population has lived in the Katowice voivode (county) in the Upper Silesian region in southwestern Poland. Recognized as one of the most polluted regions in the country, the area consists of only 2% of the land area of Poland, but it is the industrial heartland. Beginning in the Soviet era, the majority of heavy industry in Poland was centered here, including over 50% of the raw steel and

rolled products manufacturing, 97.6% of the hard coal mining, and 100% of the zinc and lead production (Nawrocki & Szczepanski, 1995). Residents of Upper Silesia experience three times the rate of tuberculosis and 50% greater incidence of diabetes and cancer than the rest of Poland (Hicks, 1996). Records from the late 1980s indicate that ten percent of infants were born prematurely, and 15% of all children had posture defects (Nawrocki & Szczepanski, 1995). The area also routinely records the highest infant mortality rate in the country. In 1989, the national figure was 19 infant deaths per 1000 live births, while there were up to 30 deaths per thousand in the Katowice voivode (Nawrocki & Szczepanski, 1995). In comparison, records from the same time period in the United States indicate just 10 infant deaths per thousand live births².

Health problems attributable to pollution are not limited to discrete areas. Upper Silesia in Poland is part of the region known as the “black triangle,” a large zone of heavy industry which includes parts of the former East Germany, and Bohemia in the Czech republic. The Swedish Ministry of Environment estimates that over 400,000 children in this region of Eastern Europe have developmental retardation due to lead poisoning (Andersson, 1999).

During the years of “real socialism,” information on the breadth and severity of environmental deterioration and health impacts was kept tightly under control of the central government in an effort to maintain the image of the infallibility of the communist system (Andersson, 1999). However, as the magnitude of the problems grew, they could not be ignored. In the 1980s many of the first environmental non-governmental organizations found purpose in opposing the government structure by battling censorship

² Source: U.S. Infant Mortality figures, National Center for Health Statistics [On-line database] Available
HTM: www.hrsa.dhhs.gov/data

laws and publishing reports – sometimes illegally - on the state of the environment (Kabala, 1993). The devastating effects of environmental conditions such as air and water pollution were seen as vivid examples of the failure of the communist leaders to provide adequate care for the citizens. As such, environmental issues were perceived as very real political issues.

In June 1989, Poland became the first country in the Soviet bloc to hold free elections. Lech Walesa and the Solidarity party were elected to office and many aspects of life in Poland changed dramatically. Since 1989, environmental conditions have improved significantly. Between 1989 and 1995, emissions of sulfur dioxide decreased by 24%, the amount of particulates decreased by 44%, and hazardous waste generation decreased by 15% (Andersson, 1999). According to a 1995 report by the European Organization for Economic Cooperation and Development (OECD) many of these very significant improvements can be attributed to three factors: the contraction of economic activity, the restructuring of industrial sectors (often including the closure of large-scale industries due to economic constraints), and also the adoption of new environmental policies adopted (Andersson, 1999).

However, the scale of environmental problems in Poland is so large that solutions cannot be achieved overnight. High sulfur coal currently provides over 75% of the country's electrical energy and plans to shift to cleaner fuels in the future are hampered by the lack of available alternatives. Of the nine northern European countries with rivers and run-off flowing into the Baltic, Poland contributes the greatest proportion of pollutants to the sea (NFEP, 1998). During the years of real socialism, there was minimal government investment in infrastructure to protect the environment (e.g. sewage

treatment plants, scrubbers on smoke stacks), a fact which only became clear after the government transition and the opening of freer access to public information (Szacki et al., 1993). In 1988, only one third of Polish cities had sewage plants with biological treatment (GUS, 1990). By 1999, sufficient new sewage treatment plants had been built to service 52% of the country's population (GUS, 2000a). However, most of the new plants have been built in urban areas, and only 9% of rural populations were served by adequate sewage systems (GUS, 2000a). Although the lack of sewage treatment in rural areas is a problem found in many industrialized nations, in Poland where national budgets are being stretched to the limit in an attempt to meet infrastructure demands in urban areas, it is unlikely that rural areas will experience much real investment for some time. Rural areas also typically do not have organized waste management or trash collection programs, and as a result there are many illegal dumpsites in the open areas near villages and towns.

In 1992, 86% of the total river miles in the country were so heavily polluted as to be categorized "unclassable" (unfit for even industrial use). By 1998, this figure had improved slightly to 78% of river miles considered unclassable (GUS, 2000a). Considering other issues, biologists report that 90% of the vertebrate species populations in Poland are declining, and noise pollution has been increasing for several years (NFEP, 1998). Obviously, environmental problems in Poland remain serious.

The state of the environment in Poland is but one remnant of the centrally-planned government. Less visible, but perhaps equally as debilitating, are the lingering effects of the communist regime on the psyche of the Polish people. During the era of real socialism, virtually all aspects of daily life were orchestrated by the central

government which controlled everything from the initiation of centrally-provided residential heating each autumn, to the flow of information. As such, there developed a widespread sense of resignation over the inability of an individual to cause real change, and an associated mistrust of government institutions and authority figures.

Meaningful public involvement was not encouraged. In fact, to many Poles, volunteerism actually has a negative connotation. Under communist-leadership, persons were “volunteered” to spend their weekends in social works projects such as cleaning up the company parking lot or building roads made of stone blocks. Consequently, there was deep resentment attached to the notion of volunteerism as mandated by the centrally-planned government. A national survey taken soon after the governmental transition found that over 76% of Polish adults surveyed felt that people who are involved in social causes are capable of achieving “very little” or “nothing at all” (Glinski & Wyka, 1992).

The present state of the environment in Poland should not be considered without also taking into account the rapidly changing socio-economic conditions the country is experiencing. When the communist-led regime was voted out, a sizable majority of the population expected rapid economic growth and dramatic improvement in living conditions. However, the economic reform measures introduced by the post-communist government, including market transformations and privatization, brought about massive economic downturns. Between 1989 and 1991, people’s spending power fell by 30% as inflation skyrocketed (Roberts & Jung, 1995). The resulting decrease in living standards was likened to the effects of a major war: “Since 1945 no Western country has experienced a comparable collapse in its people’s standards of living” (Roberts & Jung, 1995 p. 9).

Many factors in the transition to a market economy resulted in widespread unemployment, a condition that is seen as a societal problem affecting virtually everyone, since by the early 1990s most families had personal experience with unemployment (Roberts & Jung, 1995). It is important to note that under the previous government, full employment was guaranteed, thus the recent phenomenon of unemployment is a new challenge. At the end of 2000, the national unemployment rate stood at 14% (GUS, 2000a). However, rates are much higher in rural areas, with some rural counties experiencing 24% unemployment, while in discrete regions of former communist farm cooperatives, the unemployment rate has been as high as 75% (GUS, 2000d). In another and undoubtedly related social characteristic, in recent years there has been an increase in crime rates, including a growth in organized crime (GUS, 2000a).

Many products which had been unavailable during the Soviet era are readily available for the first time, and much of Polish society is participating enthusiastically in a marked trend towards greater consumerism. With this consumerism come attendant and largely unanticipated environmental problems. As more and more foreign-produced products become available, there is an increased production of municipal waste, most notably plastics and packaging. In times past, locally produced products were carried home in paper packaging or returnable bottles. Currently, plastic bags and non-returnable Coca-Cola bottles litter forests and fields as common testimony to the increasing “globalization” of trade.

Consumerism is also dramatically reflected in the purchase of private automobiles. During the communist era, persons wishing to purchase a car had to sign onto a waiting list for up to ten years. Between 1990 and 1999, the number of registered

passenger cars in Poland practically doubled from 5.26 million to 9.28 million (GUS, 2000a). Larger cities in Poland were designed with a heavy reliance on public transport, so the increase in car travel is resulting in traffic congestion, as well as increasing noise and exhaust pollution. Additionally, most urban neighborhoods were built without parking areas, forcing the new class of car owners to park on sidewalks, in former green spaces and on play grounds, taking away children's play spaces.

It is worth mentioning that many of these issues are considered in a report commissioned by the Ministry of the Environment in regards to progress towards reaching the goals set forth in Agenda 21, the landmark document promoting sustainable planning which was adopted by many of the representatives of the 172 nations attending the 1992 Earth Summit in Rio de Janeiro (NFEP, 1998). Among other topics, the report outlines clear objectives for reducing air and water pollution, protecting biodiversity, and achieving other objectives of sustainable development. Ministry personnel are certainly well aware of the severity and scope of the many environmental problems in the country.

The scale and complexity of problems in Poland – and in other countries in the region – demand not only policy creation and large infrastructure investments, but expanded public participation and widespread behavior changes. Early in the modern environmental movement, Maloney, Ward and Braucht described the environmental crisis on a global scale not as a technical problem but as a crisis of maladaptive behavior (Maloney, Ward, & Braucht, 1975). In keeping with that perspective, in this study I have chosen to focus on the factors which motivate or inhibit participation in environmental and community projects in order to better understand what is needed to encourage public participation as one response to the environmental crisis. I turn now to a brief review of

some of the research in the levels of environmental awareness and concern in Poland.

These topics will be revisited in Chapter 3.

Environmental Attitudes in Poland

The visibility of environmental problems and the increasing awareness of the associated health consequences have made environmental issues salient in Poland. A 1992 opinion survey involved face-to-face interviews with citizens of 24 nations, including 989 Polish adults (Dunlap, Gallup & Gallup, 1993). Over 71% of the Poles responded that the quality of the environment where they lived was “very bad” or “fairly bad.” Almost 9 out of 10 Poles surveyed (88%) felt similarly dissatisfied with the nation’s environment. These were among the highest negative responses of all surveyed nations, in a study which included Russia, Nigeria, Mexico and others. The majority of Polish respondents (and indeed the majority of respondents for all 24 nations surveyed) indicated that they believe the environmental conditions will affect the health of their children or grandchildren “a great deal” or “a fair amount.” (Dunlap et al. 1993).

Environmental concerns have also been the focus of a series of studies conducted by the Public Opinion Research Center (CBOS) in Warsaw. Face-to-face interviews conducted with over 1000 adults randomly selected to be representative of the population in 1992, 1993, 1997 and 2000 permit analysis of trends in society. In the first three survey years, respondents consistently ranked “poisoning of the environment” as the first or **second most dangerous threat** facing Polish society (Baturo, Burger, & Kassenberg, 1997). However, in 2000, environmental concerns fell behind crime, drugs, alcoholism,

and terminal diseases as the greatest threats facing Polish society³.

The CBOS surveys included an index which identified a “pro-ecological” segment of the population on the basis of responses to four questions related to environmental concern and perception of economy-environment trade-offs. In 1992, 1993 and 1997, one third of respondents were classified as “pro-ecological,” with greater representation of more affluent, better-educated, urban dwellers. In the 2000 survey, the proportion of the population who could be classified as “pro-ecological” fell from 32% (1997) to 22% (Burger, 2000).

Although these studies were limited to adults (persons over the age of 18), several noteworthy findings relate to the youngest age class surveyed, 18-24 year olds. As early as 1993, the researchers expressed alarm over the finding that the responses of the youngest respondents indicated that they were less concerned about environmental issues than in the previous year (Burger & Sadowski, 1994). In the year 2000 survey, only 19% of respondents aged 18-24 were designated “pro-ecological.” This figure is notably less than the 25% of 25-64 year old respondents who were designated as “pro-ecological,” and is closer to the findings for the age group 65+ of which only 16% respondents could be considered “pro-ecological” (Burger, 2000). This finding is contradictory to other studies of American adults which have repeatedly found younger persons to be *more* environmentally concerned than older persons (Dunlap, van Liere, Mertig, Catton, & Howell, 1992; Jones & Dunlap, 1992).

The decrease in a “pro-ecological” orientation reported in the above survey is undoubtedly influenced by several factors. Designation as “pro-ecological” meant that

³ It is worth noting that survey respondents were asked to select from a list of “threats to civilization,” and “unemployment” was not included.

the individual answered all four questions in the index in a decidedly ecological orientation. Disagreement with any one statement would exclude that individual from classification as “pro-ecological.” Due to a combination of reasons, fewer 18-24 year olds met this criterion in the year 2000 survey. One factor that undoubtedly contributed to this is the fact that in the past decade since the government transformation, there have been rapid and visible environmental improvements due to increased infrastructure investments, improved regulatory control and closure of polluting industries. In cities throughout Poland, many of the most polluting industries, the worst “offenders,” have been closed. Often this is due more to the fact that no new owners have stepped forward to take over formerly state-run industries which are frequently inefficient or economically unviable, but as a result there is less visible pollution in many Polish locales. According to the Polish sociologist who conducted all four of the CBOS surveys, many Polish people assume that the environmental problems have already been “taken care of” (T. Burger, personal communication, 9/18/00). In the year 2000 survey, only 58% of respondents aged 18-24 selected “poisoning of the environment” as a great threat to society, compared to 67% of respondents aged 25 and older (Burger, 2000). These figures suggest that younger respondents consider issues other than environmental destruction to be the priority issues facing Polish society, and this could contribute to the reduction in pro-ecological designation.

Another factor possibly contributing to the decrease in pro-ecological orientation is the prospect of unemployment, which has only existed in Poland since 1990. One of the four questions in the pro-ecological index asked respondents to indicate their support for decisions to prohibit production of products harmful to the environment or even

closing down entire factories in order to protect the environment, even if this resulted in increased unemployment. According to census bureau statistics, young adults (18-24) in Poland today are the age group most likely to experience unemployment (GUS, 2000c), and presumably this concern could influence or otherwise alter environmental concerns. However, from the year 2000 survey, 55% of respondents aged 18-24 agreed that increased unemployment as a result of prohibiting production of products harmful to the environment was a worthwhile trade-off (Burger, 2000). This was notably higher than the 46% of respondents aged 25 and older who answered similarly. It appears that although threatened by unemployment, the youngest respondents continue to prioritize environmental values over industry that creates environmental pollution.

Thus, the significance of the reduction in the pro-environmental orientation among young adults in the most recent CBOS survey is unclear, and future surveys will help determine if this a trend or an aberration. Other questions from the survey suggest a distinct increase in personal responsibility for this age group. When asked who should be involved in actions to improve the local environment, only 26% of 18-24 year olds surveyed in 1993 identified "local citizens" as being responsible for environmental improvement, a value which was not significantly different from the other age groups (CBOS, 1993). In the 2000 survey, the proportion of young adults (age 18-24) who responded that local citizens should be involved had doubled to 52% (Burger, 2000). This is notably higher than the 32% of respondents over age 24 who answered similarly. One possible explanation is the fact that older respondents spent the majority of their lives under the dictates of a centrally-planned government and are not yet accustomed to adopting a sense of personal responsibility for actions and decisions which were beyond

their control for so many years. This is illustrated in the responses of the oldest survey participants, with only 28% of persons over the age of 65 indicating that local citizens should be responsible for environmental improvement.

These feelings appear to extend toward a sense of personal efficacy and the belief in the ability of an individual to bring about change. In the 2000 survey, 65% of 18 – 24 year olds surveyed agreed that by their own actions they could improve the condition of the local environment (Burger, 2000). This compares with only 50% of persons over age 24 who felt similarly. Again, the oldest respondents revealed a strong perception of an inability to cause change, with only 34% of persons over the age 65 indicating agreement that they could personally improve the condition of the local environment.

The environmental movement in Poland has undoubtedly had much to do with influencing this change in individuals' sense of personal efficacy and responsibility. The movement emerged as a political opposition movement in 1980, when much effort was focused on making citizens and the government aware of the links between the inefficiencies of the centrally-planned government and environmental destruction which in turn was associated with negative health consequences (Glinski, 1998). The effectiveness of the early environmental organizations at increasing public awareness is credited with being one of the factors which proactively set the stage for the collapse of the communist power structure in Poland (Inglehart, 1990), (Kabala, 1993). The modern Polish environmental movement is evolving into a broad-based cultural movement whose leaders and organizations strive to promote grass-roots involvement and activate citizen participation that will aid in the transformation to a democratic and sustainable society. By 1995, there were over 700 registered non-governmental environmental organizations

in Poland (Glinski, 1998). The number actually totals several thousands of organized groups when all of the individual branches and local clubs of the more popular groups such as the Polish Ecological Club, and the League for Protection of Nature are tallied. Many of these groups are involved in innovative pilot studies and education programs.

Organizations for and by youth have also grown in popularity. The Polish Children and Youth Foundation (PCYF), established in 1992, has provided over 200 grants to youth-serving organizations (PCYF, 2000). One annual grant program disperses funds directly to youth-run organizations to finance projects such as the creation of after-school activity programs, publishing environmental newsletters, and organizing educational workshops for young people. The Foundation has witnessed a steady increase in the number and professionalism of the youth-run organizations applying for grants (PCYF, 2000).

Encouraging involvement by young people has the potential to initiate long-term positive environmental and social change. Inglehart (1990) compiled data from the European Community “Euro-Barometer” surveys (1970 - 1988), and the “World Values Surveys” (1981/82) from 25 nations to assess trends in cultural, economic, political and social values. From this substantial data set, Inglehart demonstrated that when the basic cultural norms of a society undergo serious change the experience “is likely to be disorienting and deeply disturbing to those raised under the previous value system” (Inglehart, 1990, p.13). Although the data represent conditions prior to the great political transformations which occurred in central and eastern Europe in the late 1980s and early 1990s, Inglehart drew upon examples of change in other countries and concluded that “in the face of major and enduring shifts in societal conditions, even central parts of a culture

may be transformed, but they are much more apt to change through *intergenerational population replacement than by the conversion of already-socialized adults*” (emphasis mine)(Inglehart, 1990, p.19). Therefore, youth in post-communist societies would be expected to be more open to adopting new behaviors and alternative cultural characteristics while adults might find the changes unsettling.

Youth Situation in Poland

The aim of the present study was to assess the opinions of Polish teens and pre-teens. This age group (11 – 19) was selected because adolescents are between childhood and adulthood, at a critical juncture in individual development and the establishment of lifelong behaviors and perceptions of responsibility. According to 1999 census figures, 11 – 19 year olds make up 15% of the Polish population (GUS, 2000a). An additional 13% of the population is under the age of 11, thus collectively children and youth comprise 28% of the Polish population. These young people are experiencing the effects of the continuing social and economic changes that began in 1989 in almost every aspect of their lives.

Young people in Poland today are coming of age in a rapidly changing society, with new opportunities and prospects, yet shadowed by the lingering memories and experiences of previous generations. Although young people may have little or no memory themselves of the conditions of life under communist rule, all adults (most notably their parents and teachers) have strong and varied opinions and memories related to the era of “real socialism.” It is difficult to assess how this could affect the opinions of young people, but it is important to keep in mind that although they are no longer

living under a centrally-planned government, they are undoubtedly affected by their parents' perceptions of that era.

Mandatory public schooling in Poland begins at age seven, although most pupils are enrolled in one to three years of pre-school before entering elementary school. Under communist rule, education was predominantly focused on future employment in state-run enterprises and offices. The school structure was such that young people had to elect their career choice at age 15 when they entered high school. Specialized vocational high schools prepared young people for direct employment in the labor market following graduation, such as schools of mining and technology which led to jobs in the coal industry, and sewing and clothing design schools which led to jobs in the garment industry. Other profile-specific schools prepared students for entrance to specialized schools of university education, such as medical preparatory high schools and economics high schools. The final option for secondary education was to attend a general college-preparatory high school from which students could select a variety of liberal arts and science courses. Recruitment to the various types of high schools was strongly class related, with privileged families (those with historical ancestry to the "intelligentsia" class or Party affiliation) trending towards the general college-preparatory high schools, and the labor class of families trending towards vocational or technical education (Roberts & Jung, 1995).

Since the transformation there has been a steady increase in enrollment in the profile-specific and general college preparatory high schools as more students opt to continue on for a university degree, and a decline in enrollment in technical or vocational schools. In the 1998-99 academic year, 35% of students opted to continue their education

beyond mandatory elementary school by attending a general college preparatory high school, compared with just 27% of students in 1990-91 (GUS, 2000b). In the same time period, enrollment in vocational schools dropped from 42% of the student population in 1990-91 to 29% in 1998-99. The young people who elect not to continue in secondary education complete their education in technical training schools or enter the workforce directly (e.g., students who work in agriculture).

Most schools in Poland, from elementary through secondary level, are poorly equipped by Western standards (Roberts & Jung, 1995). Since 1989 government funding has been reduced, and teachers' salaries have deteriorated. According to 1999 census figures, the monthly salary for teachers was *below* the national average for all wage earners, and fully *half* the salary of persons employed in the mining industry (GUS, 2000d). The principal of a middle school in central Poland informed me that the average take-home pay for a teacher was between \$200 - \$250/month. He explained that it was impossible to live on this salary, thus many teachers have to work second or sometimes third jobs. In his case, he teaches part time at a local private school, earning a wage four times greater than his hourly public school position, and his wife also teaches (T. Rutkowski, personal communication, Sept. 6, 2000). Another school principal in a rural town explained that his school was not able to offer English language classes, since he could find no qualified teachers willing to work for the low salaries provided in the public schools (A. Barcinski, personal communication, May 17, 2000). These salary conditions, and the reduction of state finances, explain why many schools are not able to offer sports, music, drama, foreign language training or extracurricular activities.

During the communist era, many of these types of activities were provided by the

state-financed systems of culture and sports. Even small villages had their own “Culture Home” where art and music lessons were provided at minimal or no cost, and artistic performances were offered. With the government transition, responsibility for these enterprises was turned over to local authorities. Some communities have rallied and found alternative financial sources, including private donations, and the Culture Homes continue to thrive. In many rural communities, however, the buildings sit vacant and largely unused.

In 1999, the entire school system was reformed. Previously, an eight-year elementary school was followed by either a four-year vocational/technical or five-year college-preparatory high school. With the new system, pupils attend six years of elementary school, followed by a three-year middle school. School attendance through middle school is mandatory. At the conclusion of middle school (age 15-16), all students take an examination, the evaluation of which determines if the student will continue with university-profile or vocational/technical schooling. Although demand for university-profile schooling continues to increase, one structural problem is the fact that many communities have multiple vocational high schools and only one university-profile high school. Competition for enrollment in university-profile high schools is increasing, pressuring students who wish to qualify for entrance to spend extra time studying.

At the conclusion of university-profile schools (both profile-specific and general) students take a final examination known as the “matura.” The matura is a grueling two-day examination consisting of both written and oral testing in a variety of subjects. University education is provided free for the top-scoring students. Students who score poorly can opt to pay for a university education, but this is cost-prohibitive for many

families. Similarly, students who attend a vocational school and decide they would like to attend university can either pay for private universities, or attend an additional year of supplemental high school in order to prepare for the matura exam to compete for state-sponsored university education. With so much riding on the matura, many high school students spend much of their free time studying.

A cross-cultural study of adolescents in 11 European countries and the United States in the early 1990s, the “Euronet Project,” provides interesting data on this point. At least 200 teenagers in each country completed surveys which included a 24-hour itinerary of the previous days activities. Adolescents (age 15-16) in Poland indicated that they spent significantly more time studying and doing homework (avg. 2hr 35 min.) than did most adolescents in other countries (Alsaker & Flammer, 1999). In comparison, American teens reported spending on average just under an hour and a half on homework. In regards to time spent in leisure activities, which typically included playing or listening to music, playing sports, hanging out with friends, watching television and reading for leisure, Polish youth reported on average just under four hours of leisure activities. This was below the average for adolescents in all countries studied of 4 hr. 25 min. (5hr. 20 min. for American teens).

Another study of a representative sample of Polish high school students (N = 1275) found that the leisure activities of choice depend upon place of residence, gender, the availability of social opportunities, and most of all upon the type of school attended (CBOS, 1996). Students from the general and profile-specific high schools more typically reported academic and cultural interests, including study groups (often for preparation of the matura) and visits to theaters and museums. Students from vocational

and technical schools (of which, it must be noted, a greater proportion of students are male) expressed interests in sports and cars. However, “spending time with friends” was the most common leisure activity for students from all schools. Almost half of the respondents indicated that they most often spent time with friends in their homes. Other popular places to meet included discotheques and coffee shops (mentioned by one third of respondents), and public parks or on the street (mentioned by one fifth of respondents).

Beyond leisure activities, the Euronet Project study found that Polish youth spend more time on household chores than adolescents in the 11 other countries investigated (Alsaker & Flammer, 1999). In most Polish families, both parents work and so young people often help out with household shopping, cleaning and cooking. Less than 8% of Polish adolescents reported that they spent any time working for money, compared to about 17% of American adolescents. With high unemployment among adults in Poland, opportunities for youth employment are very rare.

Among study respondents, 93% of the Polish adolescents live in 2-parent families, compared to just 75% of American youth surveyed (Alsaker & Flammer, 1999). Poland is a staunchly Catholic country and divorce is not widely accepted. Over one fifth of Polish youth reported that one or both of their grandparents lived with the family. This has wide-ranging impacts on the lives of Polish young people. On the positive side, it means that there is much intergenerational contact and a strong sense of family values which includes developing responsibility for caring for older generations. In another component of the Euronet project, Polish adolescents ranked the importance of social responsibility, defined as “being useful to my country” and “caring for my parents” as a higher value than youth from the other nations (Nurmi, Liiceanu, & Liberska, 1999).

Living with grandparents could also have negative aspects for teenagers, in the form of restricted space and lack of privacy. The typical Polish family lives in an apartment in a large multi-storied building. Due to the consistency of communist-era architecture, it is possible to describe the average Polish apartment as consisting of an entryway, a small kitchen, a small bathroom, and two or three rooms. Depending on the number of people in the family, the rooms can be bedrooms, but more often they serve as common areas with furniture which functions as a couch during the day and a bed at night. Most Polish families have two children, and two parents, so with the addition of grandparents there can be up to six people sharing very limited living space. In one of the focus groups, a 14-year old girl stated that she didn't like having a computer in the home. When I asked her why that was, she explained that the computer had been installed in *her* room, and as a result she no longer had any privacy because her father and brother were always on the computer. Personal space is very important to teenagers.

This factor may not have been an issue in the past, but with the trends for increasing consumer spending in Polish society mentioned earlier, in addition to increasing media messages with examples of larger living spaces enjoyed by adolescents living in other countries, Polish teens may become more dissatisfied with their lack of private space in the future. As in other cultures, in Poland there is a large marketing industry which targets young consumers with advertisements and youth-specific magazines. Although Polish youth themselves rarely work for wages, the numbers of young shoppers in the trendy new malls and shopping centers imply that they have discretionary spending money available to them. Anecdotal observations suggest that for many families who lived under the constraints of deprivation during the communist era,

the opportunity to purchase Western-produced goods is perceived as a chance to demonstrate affluence. These types of shopping behaviors are generally limited to wealthier families, typically urban dwellers, and are largely unavailable to rural families.

As this new class of young shoppers indicates, there is a growing affluence in Poland, or perhaps more accurately a widening of the social strata. During the era of communist-rule, the vast majority of people worked for state-run institutions and enterprises and everyone received similar low wages. A common phrase to describe the pay situation of the time was “*We pretend to work, they pretend to pay us.*” With the creation of private enterprises and businesses since the government transition, a range of pay scales and levels of social status has developed rapidly. Some people employed in new businesses, particularly those with international connections, are making salaries comparable to salaries in Western Europe or North America. This group of people can afford to build large homes and drive late-model Japanese or American cars. Meanwhile, people employed in state-run institutions, notably public schools and those in the medical professions, continue to receive the low salaries previously described for teachers. Not surprisingly, many young people today express that they would like to become business leaders, and fewer are interested in becoming teachers or nurses.

The housing situation is an additional problem facing young Poles. There is a shortage of affordable housing options in Poland, and to purchase an apartment is quite expensive on a public employee’s salary. Interest rates were 21% during the second quarter of 2001,⁴ Although this is an improvement over rates which were close to 30% in the early 1990’s, bank loans are infeasible for most people. Even after marriage many

⁴ Source: Programme of Statistical Survey Publications, Central Statistical Office, Warsaw, Poland [Online database]. Available HTM: www.stat.gov.pl/english/index.htm

young adults must live with their parents, resulting in the crowded living conditions described above with three generations sharing an apartment.

A series of surveys conducted by the Social Opinion Research Center in Warsaw has tracked young people's aspirations since the early 1990s. In 1998, a representative random sample of young people aged 18-20 (N = 1316) was surveyed about their plans for the future (Sek, 1999). Compared to a similar survey in 1990, there was a two-fold increase in the proportion of young people interested in seeking advanced education at a university following graduation from secondary school. Most surprisingly, the survey found that 72% of respondents who were currently enrolled in vocational schools had plans to attend university. In the 1992 version of this survey, 77% of young people surveyed indicated that they were slightly or very worried about finding employment, but by 1998 only 50% were similarly worried (Sek, 1999).

The surveys also found that Polish young people have high aspirations for material possessions which were largely unavailable to their parents. In 1990, only one third of respondents believed they would own their own car, and one quarter believed they would own their own home in 10 to 15 years. By 1998, almost two-thirds of respondents believed they would own their own car, and over half believed they would own their own home. The author concluded that despite dire economic situations, Polish youth have increasing confidence in their abilities to achieve success and increasing optimism for the future (Sek, 1999).

In regards to the environment, youth in Poland express widespread enthusiasm for participation in school-organized events such as "Clean Up the World" and "Earth Day" activities. Children as young as three or four years old participate in environmental

actions which most frequently include litter clean-ups and tree planting. While adults are busy adjusting to the economic changes that accompany the political transition, youth have more time and energy to devote to active participation. Currently, most young people in Poland live in communities with very limited opportunities for out of school activities. This is due to a variety of factors, including the previously mentioned lack of funding for the sports and culture programs which were formerly provided by the state government, as well as the lack of an established tradition for involvement. As a result, many Polish youth have non-structured time periods, some of which could be spent in civic engagement.

Young people in Poland appear to be concerned with the state of the environment, yet there have not been large-scale surveys to assess youth opinions regarding the environment as there have been for adults. The present study was designed to gather data which can help identify program needs to encourage the involvement of more young people in their communities.

Global Support for Youth Involvement

In recent years, several prominent international documents have identified numerous reasons to encourage the involvement of young people in addressing community and environmental issues. Organizations and agencies are acknowledging that youth are an energetic and often overlooked “resource” for change. Two of the major documents to emerge from the United Nations Conference on Environment and Development (“Earth Summit”) specifically mention the need to involve youth. Principle 21 of the *Rio Declaration on Environment and Development* states: “The creativity,

ideals and courage of the youth of the world should be mobilized to forge a global partnership in order to achieve sustainable development and ensure a better future for all” (U.N., 1992). *Agenda 21*, the document which outlines objectives for achieving sustainable development, is even clearer in the rationale to encourage youth participation:

It is imperative that youth from all parts of the world participate actively in all relevant levels of decision-making processes because it affects their lives today and has implications for their futures. In addition to their intellectual contribution and their ability to mobilize support, they bring unique perspectives that need to be taken into account.

(Chapter 25, Agenda 21: Children and Youth in Sustainable Development)

These features were elaborated upon in 1995 when the United Nations adopted the *World Programme of Action for Youth to the Year 2000 and Beyond* (United Nations, 1996). The second paragraph of the preamble for this Programme was quoted on the first page of this introductory chapter. The Programme provides a framework with practical guidelines for national action and international support to improve the global situation of youth. Ten priority areas were identified, with the aim of strengthening national capacities in these areas in order to “increase the quality and quantity of opportunities available to young people for full, effective and constructive participation in society” (United Nations, 1996, Statement of Purpose, paragraph 4). Two of the priority areas are particularly pertinent to the present study. The focus of Priority 5 is the environment: “The deterioration of the natural environment is one of the principal concerns of young people world wide as it has direct implications for their well-being both now and in the future.” The Programme calls for integrating environmental education into school curricula, facilitating the dissemination of environmental information and strengthening

the participation of youth in the protection, preservation and improvement of the environment. Priority 10 addresses youth participation in the life of society and in decision-making, stating that “the capacity of each society to progress is based, among other elements, on its capacity to incorporate the contribution and responsibility of youth in the building and designing of its future.”

Resonating with the objective of Priority 10, in February, 1999, the European Union Council adopted a formal resolution on youth participation (1999/C 42/01). The Resolution calls upon Member states to adopt programs and policies which encourage the active participation of young people in democratic processes at all administrative levels, particularly local community development, and promote innovative and integrated participatory projects and learning opportunities so that young people have more chances to participate in all aspects of active citizenship (European Union Council, 1999). Currently, Poland is not an official member of the European Union, but there is a strong push to join the EU by many in the Polish political leadership. If Poland is accepted as a Member state, the government will be expected to comply with EU policies and regulations.

The international documents mentioned above are non-binding, and lack any real regulatory authority. Their acceptance by the various member states and the United Nations, however, is testimony to the signatory nations’ recognition of the importance of including young people in plans for the future. How these plans are implemented, and to what degree programs for youth are realized, remains to be seen.

Application of Research

The present study is the largest research project to date focused on the environmental attitudes and behaviors of Polish youth. Given the state of the environment in Poland, and the rapid pace of societal transitions, there is much to be learned from the young people who are growing up in a changing society. The insights and results can help inform the development of youth programming, in both formal and informal settings. In 1995 the Polish Senate passed a resolution mandating the development of a national environmental education program to be coordinated by the Ministry of Education and the Ministry of the Environment. A team of Ministry and university experts wrote *The Polish Strategy for Environmental Education*, with guidelines for developing a comprehensive program covering all aspects of environmental education, from formal school curricula to adult education and goals for mass media (Czackowska et al., 1997). School faculty are encouraged to help elementary and middle school students develop of a sense of personal responsibility for current and future environmental conditions. The document explicitly states that young people should be provided opportunities to be involved in projects in their communities. As part of the 1999 national education reform, environmental education was strongly recommended by the Ministry of Education to be taught in all levels of schooling.

As of September 2000, the national strategy for environmental education and the curriculum recommendation existed only as skeletal structures of guidelines. Teachers and school administrators are encouraged to develop curricula which includes environmental education, but there is very limited financial support for this. Officials in the Ministry of Education and Ministry of Environment hope to develop more specific

plans and curricula over the following several years, and officials from both Ministries appear to be interested in hearing and incorporating youth ideas. This research project provides much-needed information for educators and policy-makers in Poland. Krzysztof Kafel, the specialist in environmental education at the Ministry of Education, stated that information on the opinions of youth was exactly the kind of data the Ministry needs to help them design appropriate programming and curricula (K. Kafel, personal communication, 8/19/99).

Including youth opinions in the discussion of youth programming is a vital step towards meeting the goals of the above-mentioned international documents. Hence, this research project, designed in consultation with Ministry personnel, sought to gather youth opinions regarding environmental concern and the factors motivating or inhibiting the participation of young people in community and environmental actions.

CHAPTER 2.

RESEARCH THEORY & METHODS

There is too much air pollution in Silesia, and I am worried that we can die because of our thoughtlessness about the environment. But nobody listens to teens as they are not interested in what we have to say.

- 14 yr. old boy, from Katowice, one of the most polluted regions in Poland

The statement above was written by a youth in response to an open-ended question on the Youth Environmental Concern and Action (YECA) survey. His statement touches upon the three fundamental beliefs which formed the basis of this study. First, the environmental situation in Poland (and elsewhere) is serious, definitely deserving of attention and renewed efforts to encourage stewardship. Numerous chemical, biological, and medical studies attest to this. Second, research has confirmed that young people want to be included as active participants in society. This participation affords them multiple developmental benefits. Third, the people to ask regarding what is needed to motivate more youth are the young people themselves. They are the experts regarding their concerns, motivations and hesitations. This study was designed to record and present the opinions of Polish youth regarding their perceptions of the environment and of their roles in addressing environmental issues at the start of the 21st century.

In this chapter I present the theoretical foundations I considered in the development of the proposed model of youth involvement. I describe the research methods used, which included: (1) focus groups with youth active in environmental organizations as well as youth who are not involved in clubs or organizations; (2) a written survey conducted with a large sample of first-year middle school students across

Poland; and (3) follow-up focus groups with youth who had taken the survey. I conclude the chapter with a reflection on my role as an American researcher in Poland.

Theoretical Foundations

Most environmental education programs are directed at children and youth, yet few studies have investigated what actually motivates youth involvement in environmental issues. Most of what we know about what inspires people to action has been based upon studies conducted in North America, most frequently on samples of adults. Less is known about what factors inspire young people to action, and even less is known about the factors which are important to young people in a post-communist country. With this in mind, I will begin with an overview of the research literature.

Since it emerged as an area of inquiry, research in the field of environmental education has been almost exclusively positivist in orientation (Robertson, 1994); (Robottom & Hart, 1995). Many of the first studies were rooted in the theoretical aspects of science education research. Consequently, research in environmental education developed with a strong reliance on empirical data collection to establish links between *processes* or programs, such as teacher instructions or curriculum, and the *products* of student outcome, such as increased knowledge of ecological topics or issue awareness.

Research in the 1970s and 1980s focused primarily on the affective and cognitive domains, based on the traditional thinking which dominated the field of environmental education at that time (Volk & McBeth, 1997). This theory held that increased knowledge of ecological issues would lead to attitudinal change, which in turn was presumed to influence pro-environmental behavior (Figure 2.1).

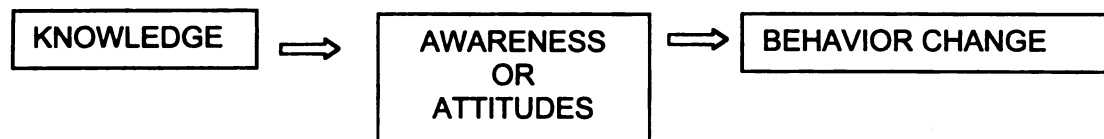


FIGURE 2.1 Traditional knowledge-attitude-behavior (“K-A-B”) model (as depicted in Hungerford & Volk, 1990)

Based on this reasoning, many of the early environmental education programs and curricula, both in formal and non-formal settings, placed heavy emphasis on knowledge delivery. Providing information about ecological topics was considered effective not only at changing attitudes, but also was considered by many to be the key to changing behavior. A survey of 1,225 nature centers in the United States found that approximately two-thirds of the centers identified program goals which endorsed behavior models that simplistically linked nature study directly to changes in environmental behavior (Simmons 1991).

The focus on knowledge and attitudes are somewhat surprising, considering that the founding definitions for environmental education stressed the importance of five complementary goals: awareness, knowledge, attitudes, skills and participation (UNESCO, 1977). A review of environmental education research conducted from roughly 1977-1995 revealed that the development of problem-solving skills, and the promotion of individual participation were the least often addressed goals in both the research and practice of environmental education (Volk & McBeth, 1997).

Through the years various researchers presented viewpoints which contested the primacy of knowledge transfer as the means for education about the environment. Iozzi

stressed how the cognitive and affective domains are interwoven and inseparable, and he cautioned against trying to focus solely on knowledge to bring about changes in environmental behavior (Iozzi, 1989a, 1989b). Researchers and educators working on UNESCO's "Man and the Biosphere" program reached similar conclusions regarding the need to incorporate both the cognitive and emotive spheres in the development of a framework for global environmental education (Kastenholz & Erdmann, 1994).

Similarly, international commissions and conferences, notably the Brundtland Commission (1987) and the United Nations Conference on Environment and Development in Rio de Janeiro (1992) have consistently expanded the focus of environmental education to incorporate social equity, economics, culture and political structure. In 1999, the North American Association for Environmental Education published "Guidelines for Learning", a collaborative effort of environmental educators and researchers. Representing the new vision for the field, this document described the ultimate goal of environmental education as the promotion of "a democratic society in which effective, environmentally literate citizens participate with creativity and responsibility" (NAAEE, 1999).

In the 1970s and 1980s, as the field was expanding, more and more researchers and practitioners began questioning the knowledge-attitude-behavior model. A number of researchers turned their attention to identifying the factors which could be linked with responsible environmental behavior. Hungerford, Peyton, and Wilke (1980) suggested that the "superordinate goal" for environmental education was "to aid citizens in becoming environmentally knowledgeable and, above all, skilled and dedicated citizens who are willing to work, individually and collectively, toward achieving and/or

maintaining a dynamic equilibrium between quality of life and quality of the environment” (Hungerford, Peyton et al. 1980, p. 91 *in* 1998 reprint). This superordinate goal was variously named “responsible environmental behavior” (Hines, Hungerford, & Tomera, 1986; Sia, 1984); Marcinkowski, 1989); (Sivek & Hungerford, 1990); “citizenship behavior” (Hungerford & Volk, 1990); or “environmental behavior” (McConney & McConney, 1995). These studies sought to determine which factors were most influential in bringing about the superordinate goal. In summarizing their findings, Hines et al. concluded with the suggestion: “It has long been known that the prediction of behavior is an extremely complex process which is based on a multitude of factors...However, additional research is needed in an effort to discover those interrelationships which exist between each of the variables in the model” (Hines et al., 1986).

All of the above-mentioned studies were conducted with adult populations and thus the models developed reflect the factors and experiences of adults that relate to environmentally-conscious behavior. During the same time period, studies involving youth continued to focus on environmental awareness, knowledge of issues and concepts, and attitudes and concerns. There has been little investigation into the precursors to environmentally-related behavior in children and adolescents. In several studies, adults were asked to respond to questions about the experiences which they considered to have been important in the formation of their environmental attitudes, and these often included childhood experiences. Thus, childhood experiences have been recognized as influential, but young people have rarely been asked directly.

Critique of Past Models of Precursors to Environmental Behavior

I suggest that there are at least three reasons why the models developed to predict environmental behavior in adults are inadequate to explain what contributes to youth participation in environmental and social action. These are the **lack of youth-specific variables** in adult models, the **presumed linearity** in existing models, and the **focus on environmental behavior**. I will elaborate on each of these in turn, and then introduce the model which I propose better explains the cycle of concepts which influence decisions by young people to participate in pro-environmental actions. I will discuss the past models of environmental behavior chronologically to present a sort of “evolutionary” standpoint to explain how I developed the proposed model of youth participation.

1. Lack of youth-specific variables

The classic studies on responsible environmental behavior depict models which diagram precursors to environmental behavior as defined by *adults* (Hines et al., 1986);(Hungerford & Volk, 1990). Hines et al. reviewed 128 studies published between 1971-1985, in which researchers investigated some element(s) of environmental behavior. Although some of the studies targeted children or young adults, most of the studies in the meta-analysis were targeted at adults. I base this interpretation on the admission by the authors that they found few studies which investigated classroom approaches or behavioral interventions (such as one-day camp experiences), and because of this they were unable to meta-analyze the results. Additionally, at least some of the studies in the meta-analysis reported on behaviors such as purchasing lead-free gasoline or reducing personal driving, behaviors which are unavailable to children and young adults. Other studies reported on differences in environmental attitudes and behaviors

attributable to education level attained (e.g., high school, college, graduate school), providing further indication that the studies reviewed were based on responses by adults.

The authors concluded that knowledge of issues, knowledge of action strategies, locus of control, attitudes, verbal commitment, and sense of personal responsibility were associated with environmentally responsible behaviors. Their model of Responsible Environmental Behavior (Figure. 2.2) presents the factors identified in the meta-analysis. The authors alluded to “Situational Factors,” defined as variables which can “interrupt” the path between an individual’s intention to act, and their participation in responsible environmental behavior. These include “economic constraints, social pressures and opportunities to choose different actions, [which] may enter the picture and serve to either counteract or to strengthen the variables in the model” (Hines et al. 1986, p.7).

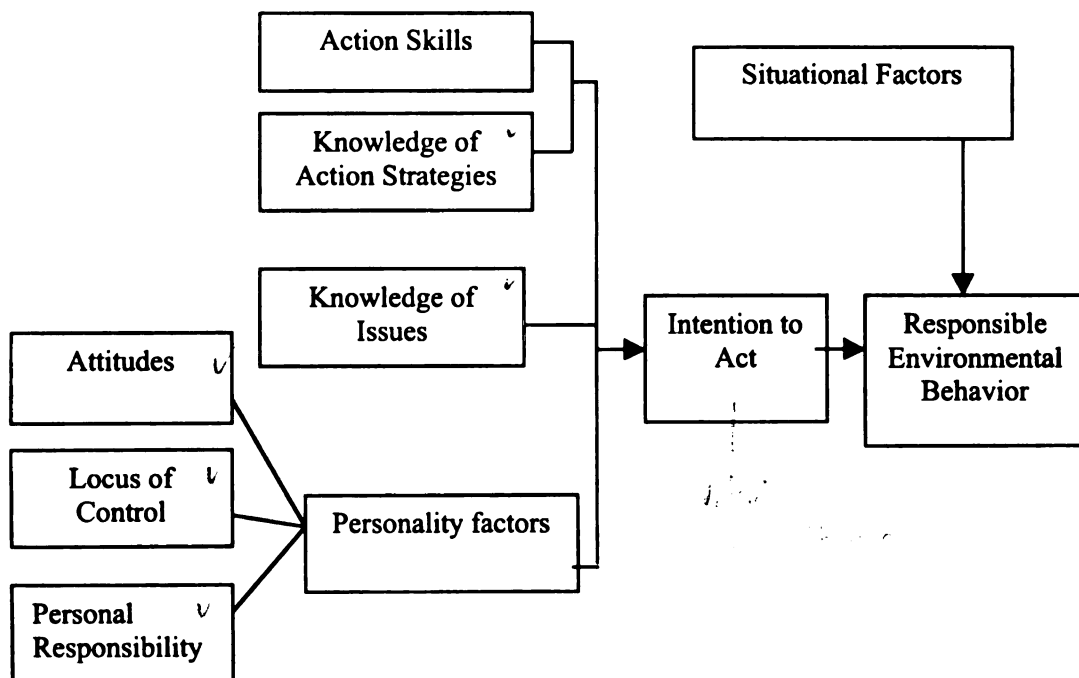


FIGURE 2.2 The Hines Model of Responsible Environmental Behavior (Hines et al., 1986, p.7).

The findings of the Hines et al. meta-analysis were synthesized with other studies on behavior, and crafted by Hungerford and Volk into a model of citizenship behavior (Figure 2.3). Variables are presented in three categories, “hypothesized to act in more or less of a linear fashion, albeit a complex one” (Hungerford and Volk 1990, p.237 in 1996 reprint). ‘Entry-level variables’ are conceived as prerequisites to ‘Ownership variables,’ which make environmental issues personal to the individual, which lead in turn to ‘Empowerment variables,’ which are necessary to instill in the individual a sense of personal ability to make changes to help resolve environmental issues. The variables in the Hungerford and Volk model are broad enough to apply to the general public, and there is no mention of variables which might be considered age-specific.

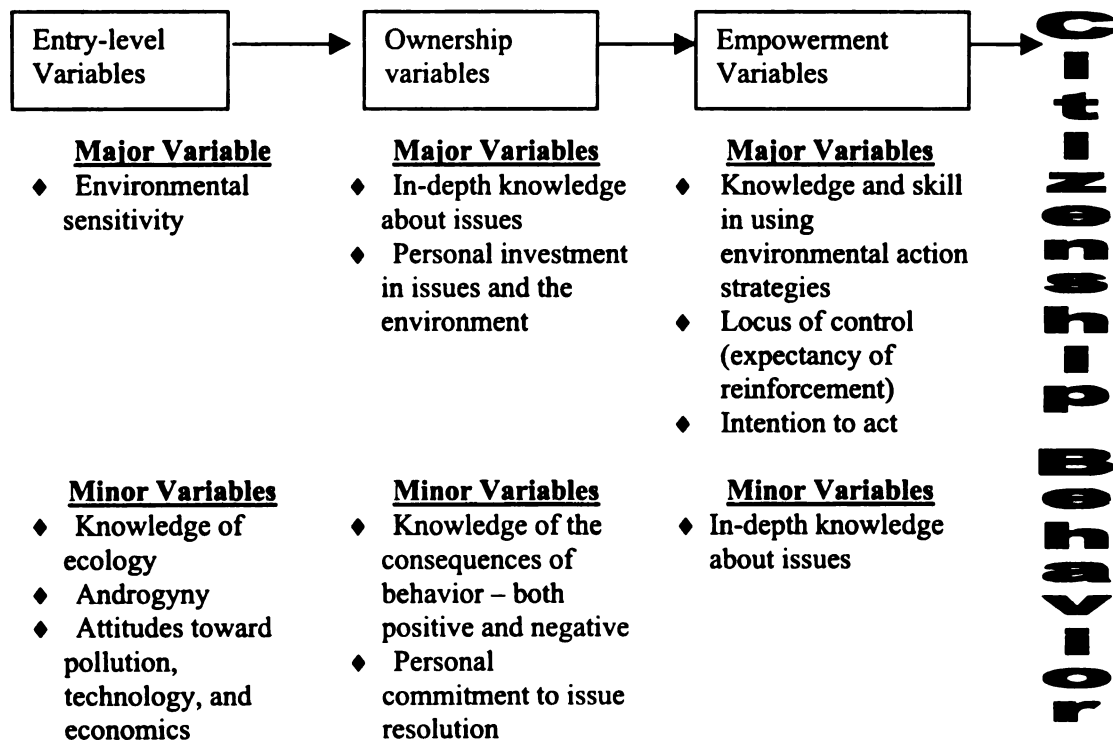


FIGURE 2.3 Hungerford and Volk (1990) Environmental Behavior Model: Major and Minor Variables Involved in Environmentally Responsible Citizenship Behavior (p.238 in 1996 reprint).

A study of the environmental behaviors of undergraduate students at a mid-western University is an exception among studies of adult behaviors (McConney and McConney 1995). The authors used path analyses to examine the variables contributing to students' self-reported environmental behavior. Since the participants were undergraduate students, they were closer in age to the Polish middle school students of the present study than were the sample populations of older adults from previous studies. Out of eleven factors tested in the McConney and McConney study, three were found to contribute significantly to environmental behavior. One of these was "opinions of others," a variable not mentioned in previous models but a factor which is definitely important for mediating adolescent behavior. The other two variables found to contribute to environmental behavior were the "self-reported skill in environmental actions" and "fear of negative environmental consequences." The subjects in the study were young adults, and there are enormous differences between the developmental stages of middle school students (aged 14 and 15 years) and university undergraduates (aged 19 and 20 years), however, the results provide support for the thesis that there are different variables which contribute to environmental behavior at different life stages.

The models created to explain the precursors to responsible environmental behavior in adults offer starting points for similar investigations with youth, and the literature support for the variables identified for adults provides a valuable background. However, factors identified by surveys or interviews with adults simply cannot be assumed to be completely transferable to explain youth behavior. In a review of studies published during the 1980s which evaluated behavioral interventions aimed at increasing pro-environmental behavior, researchers concluded that investigators should study how

children respond to efforts to initiate pro-environmental behavior, because in the authors' opinions, this area of environmental research had been largely ignored (Dwyer, Leeming, Cobern, Porter, & Jackson, 1993).

Leeming, Dwyer, Porter and Cobern (1993) undertook a review of studies that focused on school children as the primary targets of programs designed to cause changes in environmentally relevant knowledge, attitudes and/or behaviors. They reviewed 34 studies published between 1974 -1991, and found critical problems in many of the study designs as well as the resulting theoretical interpretations. The majority of the studies the authors reviewed involved pre- and post-tests of interventions such as classroom lessons and out-of-class activities. Since different methods and evaluation measures were used, the studies were not comparable and the authors made no attempt to summarize results in a meta-analysis as Hines et al. (1986) had done. Also, the authors did not propose a model of the antecedents to environmentally responsible behavior in children. Only 5 of the 34 studies reviewed measured changes in behavior, and the authors concluded that more research which investigates behavior is needed, because: "Although changes in knowledge or attitudes are important, we believe that changes in behavior will ultimately affect the quality of our environment" (Leeming et al., 1993 p.20).

A study in Australia involving focus groups with 15-17 year olds did not specifically address the antecedents to environmental behavior, but the findings suggest what the youth perceived as inhibiting their involvement. The youth expressed that they were worried about the state of the environment, but they felt powerless to do anything about it, explaining how they didn't know how to help and they believed that they were too young to be effective (Hillcoat, Forge, Fien, & Baker, 1995).

In general, there has been little attempt to identify the variables which could contribute to motivating environmental behaviors of youth. My research with youth in Poland indicates that the constructs of **peer pressure/peer support, adult encouragement/recognition, and opportunities for youth participation** are among the critical factors lacking in current behavioral models, e.g.,(Hines et al., 1986);(Hungerford & Volk, 1990). It is perhaps understandable why these variables do not appear in the models to explain adult behavior, but by their absence I suggest that the adult models are inappropriate for predicting youth behavior.

This is particularly important for any attempt to gain a better understanding of the experiences of a generation growing up in a post-communist society. The social conditions are changing so rapidly, that the situation of the young people in Poland today is definitely not compatible with previous models developed from studies of American or Western European adults. I would argue, similarly, that the pace of technological advancement, particularly in the area of communications, is sufficient to warrant caution when applying the results of studies on adults from decades ago to youth populations anywhere, regardless of their recent socio-political past. The current study deals specifically with youth in Poland, however there is application for youth in other countries, as will be discussed.

2. Error of presumed linearity

The second reason I question the existing models is because most attempts to describe the variables that contribute to environmentally-responsible behavior have depicted the relationship as linear and sequential. Specifically, I call into question the presumption that certain variables are pre-requisites to environmental behavior, and I also

question the depiction of behavior as the definitive concluding variable.

I hypothesize that the relationship of the constructs of environmental concern and participation is better depicted as *cyclical*. The cyclical nature of the model permits representation of the interactions between the elements (Figure 2.4). This is in contrast to linear models which tend to imply a mandate of uniform direction, with each step following the last in a prescribed regimen. Within the classic models of environmental behavior, concern is always presumed to precede behavior. More specifically, concern is typically considered a pre-requisite or necessary condition to action, although it should be mentioned that it has not been perceived as the *only* precursor to action. Sociological studies have repeatedly shown that many people are concerned about certain issues, but they may never translate that concern into demonstrable action.

A review of several of the current social psychology theories provides a good background for research investigating why disjoints exist between what a person thinks and believes, and what they say and do (Petty, Wegener, & Fabrigar, 1997). For over forty years, researchers have explored the dimensions of the theory of cognitive dissonance. The theory describes what happens to an individual when they receive information which is inconsistent with pre-existing knowledge structures (Festinger, 1957). These discordant messages can arise from a variety of sources, including formal or non-formal education programs, casual interpersonal interactions and media messages. When faced with reconciling this dissonant information, the individual must decide how to resolve the discrepancies, either by accepting or rejecting the new information.

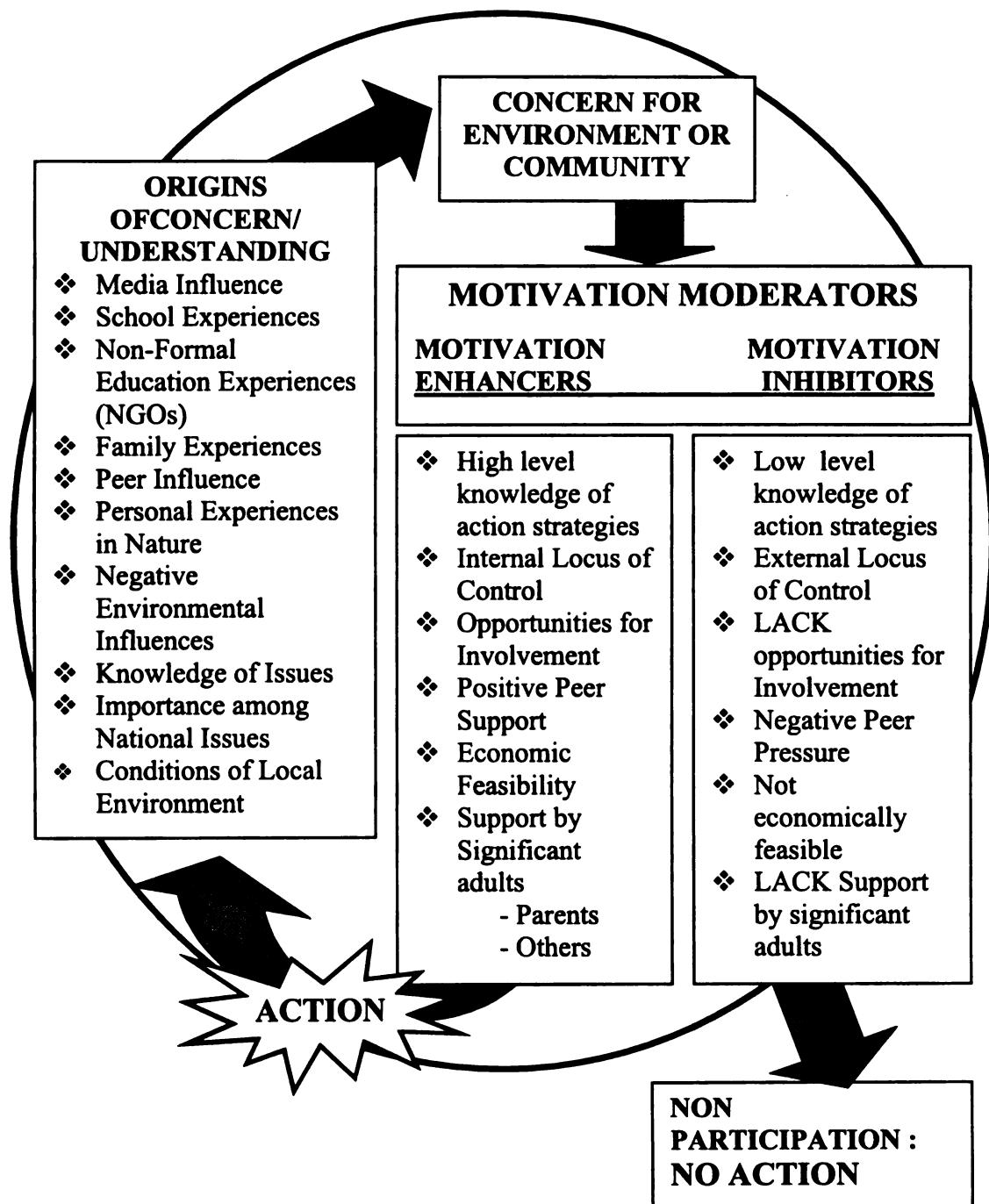


FIGURE 2. 4 Proposed general conceptualization of Motivation-Action Cycle of Youth Participation

One classic study demonstrated that when people were presented with evidence on two opposing sides of an issue, they were more likely to accept that the evidence on “their” side was more compelling (Lord, Ross, & Lepper, 1979). If the individuals were to select the opposing viewpoint, cognitive dissonance would occur, thus a “biased assimilation” is preferred because it is apt to produce less (or no) cognitive discomfort. Although these studies did not address environmental topics, they shed light on the thought processes which occur whenever an individual faces new information, including information about the environment and what is perceived as environmental behavior.

The current models of environmental behavior identify concern for the environment as integral to influencing pro-environmental behavior. Psychological hindrances, such as cognitive dissonance, are but one barrier to translating concern to action. I maintain that concern for the environment or social conditions is definitely influential in an individual’s decision to participate, but it is not exclusively a pre-cursor to action and can, in fact be the *result* of action participation.

Placing “action” as an element within a *cycle* recognizes that participation in action can actually be a causal variable which can contribute to increased knowledge and understanding, as well as increased concern and motivation for additional action. With this reasoning, a person who begins recycling because it is mandated by their municipal waste program may actually increase their awareness and concern for environmental issues, and seek additional information which spurs them to additional action.

I believe that particularly when considering the motivational factors important for teen participation, concern is not necessarily a pre-requisite for participation in action. In Poland I met many youth who became involved with environmental and social service

projects because it provided them with social opportunities to interact with peers. For some individuals, that incentive remains the key motivation throughout their period of involvement. For other teens, however, I have observed how participation in service and environmental projects has led to greater levels of concern for environmental and social conditions, which was manifested by subsequent participation in further actions. In the same vein, teenagers in the United States who are required to participate in community service as a graduation requirement may not enter into service out of altruism or heightened levels of concern, but the experiences as a volunteer may lead them to greater awareness and involvement.

As regards youth involvement in environmental and community actions, I propose that an adolescent's decision to participate in an action is strongly influenced by a suite of factors I have labeled "Motivation Moderators." These variables can either facilitate or hinder involvement. I propose that these factors are not extraneous, but are in fact the key elements which ultimately serve as the bridge or barrier between concern and participation. Hines et al. (1986) alluded to "Situational Factors" which could act to increase or decrease the amount of environmental behavior. It appears, however, that the authors chose not to pursue this line of reasoning, since situational factors are not included in the next genesis of the behavior model, the Hungerford and Volk model.

As I perceive the Motivation Moderators, each variable is a continuum of facilitating and hindering influences. It is the individual's perception of these variables which contributes to that person's decision to participate in a pro-environmental action. These variables include perceived knowledge of action skills; sense of personal control; opportunities for action; peer pressure/lack of social constraints; economic feasibility,

and acceptance by significant adults, including recognition/appreciation for participation.

The variables emerged from my observations and personal experiences while living in Poland for over two years (1995-97) as a Peace Corps volunteer. The youth I met expressed a great deal of concern for the condition of the environment, and they were motivated to become involved. In informal conversations with teens from communities throughout Poland, they confided that they desired to be involved in the community, but they felt constrained by the variety of factors I subsequently labeled **Motivation Inhibitors**. These same factors emerged in the analysis of three preliminary focus groups which I conducted with Polish teens in August, 1998. The discussions with teens both while serving in the Peace Corps and in the focus groups suggested that each inhibiting factor was linked to a contrasting **Motivation Enhancer**. For example, negative peer pressure was perceived by the young people as inhibiting their ability to participate in environmental actions, while positive peer support was perceived as enhancing their abilities to participate. Thus the idea of the continuum concept was developed.

Two of the Motivation Moderators, knowledge of action skills, and sense of personal control (locus of control), can be found in previous models for adult environmental behavior. Although these factors have been previously identified, I suggest that they should be positioned *between* concern and action. The remaining Motivation Moderators are factors which I consider specifically important for describing the constraints experienced by youth, in the hopes that by including these in the discussion, efforts will be made to address the issues they represent.

3. Action as opposed to Behavior

There is a third notable difference between past models and the proposed model. Most of the past research in this area has focused on participation in responsible environmental *behaviors*. I have chosen to focus instead on environmental *action* as distinct from behavior by classifying actions as a discrete subset of the larger suite of all possible behaviors. For the purposes of this study, I consider actions to be activities that are voluntarily and purposefully conducted, involving a conscious choice to devote discretionary time to organization and implementation. By this definition, activities that are legally mandated (i.e. meeting sewage discharge standards) or economically motivated (i.e. walking to school because you can't afford an expensive car) would be considered responsible environmental *behaviors*. Conversely, environmental *actions* would include organizing a water monitoring project to gather the information necessary to establish whether water quality standards had declined, or launching a campaign to encourage the development of safe bike paths to school.

In recent years, there has been some debate in the environmental education community as to what constitutes action versus behavior. Should environmentally-motivated decisions such as recycling cans and bottles, or purchasing organic foods be considered actions or responsible behavior? Some authors have been very specific as to what constitutes an action, such as Jensen and Schnack (1997) who argued that an environmental action must be intentional, and it must also be targeted to the resolution of a specific problem. Bishop and Scott (1998) countered that this definition is too narrow, because it would mean that students involved in a beach clean-up are not participating in an *action*, since the activity is not aimed at resolving the source of the trash problem.

Because of the conflicting opinions over what constitutes an action, I considered several factors in reaching my decision regarding how I measured action participation in this study. First, by asking students to report on the specific actions they had participated in over a distinct period of time (two years), I was hopeful of getting responses which could be easily measured. The action items included on the survey were specific events such as litter clean-up efforts, letter-writing campaigns and street demonstrations. I felt that these actions would be easier for students to recall, and be less prone to subjective interpretation, as opposed to asking about repetitive behaviors such as purchasing products in environmentally-friendly packaging or recycling. Second, by focusing exclusively on participation in specific actions, I sought to identify individuals who, by their participation in such actions, demonstrated higher levels of motivation and personal involvement than persons involved simply in responsible environmental behavior.

Another important consideration relates to the age of the study group. Because I was interested in participation by young people, I believed that it was necessary to identify actions which young people were most likely to be able to participate in. Previous studies have asked respondents about behaviors not readily available to young adolescents, such as purchasing alternative home-heating systems or choosing not to drive a personal vehicle. The construct of action participation was operationalized by a nine-item index of environmental activities drawn from real examples shared in focus groups with youth involved in environmental organizations.

One final consideration related to how environmental action was measured concerns the fact that survey respondents were middle school students. I was conscious of the fact that many of the actions available to them, e.g., litter clean-ups and writing a

report or article about environmental issues, would be organized by their teachers and thus their participation could not be considered completely voluntary. I decided, based upon my experiences in Poland, that if I were to exclude all school-based actions from the study, there would be insufficient reports of youth participation. Therefore, I developed a scoring system for the action index which assigned higher point values to reflect voluntary participation and greater levels of personal involvement. In analyzing the data, I was able to distinguish greater levels of involvement among respondents, while still including those youth who participated via school-organized actions.

Action Participation and Volunteer Service

In addition to the above-mentioned definitional distinctions between actions and behaviors, there is an additional theoretical component which supports measuring participation in environmental actions. I chose to focus on actions because many positive environmental actions can be considered examples of volunteer service. Participation in service projects can be influential in providing the life competency skills necessary for positive development in adolescents (Youniss & Yates, 1997; Youniss et al., 1997). Obviously, there are environmental actions such as protests and demonstrations which cannot be considered “service” projects. Since there are many types of actions which have the potential to provide individual developmental benefits and societal benefits, I believed that it was important to focus on measuring participation in environmental actions.

Participation in volunteer service has been shown to create opportunities for positive youth development (Blyth & Leffert, 1995). Compelling evidence is presented

by the Search Institute, an independent, nonprofit American organization engaged in conducting research of adolescents and children and applying the results toward developing community programs. The heart of the research base is a framework of developmental assets, forty “building blocks” which comprise the components of support every individual needs for positive development. These include twenty “External Assets,” consisting of the categories of Support, Empowerment, Boundaries and Expectations, and Constructive Use of Time. There are also twenty “Internal Assets,” consisting of the categories of Commitment to Learning, Positive Values, Social Competencies, and Positive Identity. Each of these assets is well grounded in extensive social and psychological literature (Benson, 1997).

The Search Institute surveyed 6th to 12th graders across the United States and found a distinct inverse relationship between the number of assets an individual reported, and participation in twenty “at-risk” behaviors such as sexual promiscuity, engaging in violent behavior, smoking, taking drugs/alcohol. For example, youth were asked about alcohol use, which was defined as three or more uses of alcohol in the previous month, or getting drunk once or more in the previous two weeks. Of the 250,000 youth surveyed, for those who could claim at least thirty of the forty developmental assets, only 4% reported alcohol use, compared with 53% of the youth who could claim having ten or fewer developmental assets (Benson, 1997).

Well-designed volunteer service projects, including environmental or community action projects, have the potential to enhance all forty assets (Benson, 1997). Studies have shown that communities can contribute to positive adolescent development in a number of ways, including providing opportunities for young people to participate in

group actions which contribute to the welfare of others (Blyth & Leffert, 1995).

Additionally, individuals who participate in volunteer service early in life are more likely to exhibit a greater appreciation for active citizenship and a willingness to participate in volunteer activities later in life (Clark et al., 1997). For these reasons, this study focused on environmental and community actions in order to highlight the positive developmental aspects attributable to involvement in service.

Methods

The study involved both qualitative and quantitative methods of data gathering. This diversity of methodology is recommended in studies of adolescents due to the complexity of developmental contexts (Lerner, Lerner, De Stefanis, & Apfel, 2001). I employed a methodology combining focus groups and a written questionnaire. In a study on the environmental opinions of Australian youth, the authors concluded that questionnaires were not the most appropriate method for investigating young peoples' opinions (Hillcoat et al., 1995). They found that feelings of cynicism, frustration and powerlessness emerged in focus group discussions, although they had not been reported in previous studies of youth environmental attitudes which had relied on questionnaires.

I present the methods chronologically, yet this in no way suggests a primacy of one method over the other. I consider each method to be complementary to the other. In the chapters that follow, I have interwoven the results of the focus groups with survey results, in order to present a fuller picture of the opinions the youth shared.

In all of my interactions with the subjects of this study, I closely followed procedures which had been pre-approved by the Michigan State University Committee

for Research Involving Human Subjects (UCRIHS). Approval began with endorsement of the Polish Ministry of Education. For the qualitative portion of the study (focus groups), I obtained written permission from the adult responsible for the group. For the quantitative portion (the written questionnaire), I obtained written permission from each regional superintendent and school principal. Parental authorization was not required, because in Poland school principals are granted authority to give permission for youth participation. As a further step (not required by the Polish system) I gave final approval rights to the young people, and obtained verbal assent from each youth who participated in the study.

Preliminary Focus Groups

I began the study with 13 focus groups with youth, in a variety of locations around Poland (Figure 2.5). Six of these focus groups were with young people who were not engaged in organizations or action, hereafter referred to as “non-joiners.” These students were identified by their teachers for *not* being involved in environmental actions or youth organizations (e.g., student council, scouts, etc.). I requested that the teachers select young people who would not be overly shy and reticent to engage in a discussion with a foreigner, and I asked the teachers to not reveal the environmental theme of the meeting, preferring instead for the topic to emerge naturally in the course of discussion. This type of “purposive” sample helps to ensure that the participants are willing to participate, and is quite common for soliciting participants in focus group research (Krueger, 1994; Morgan, 1997).

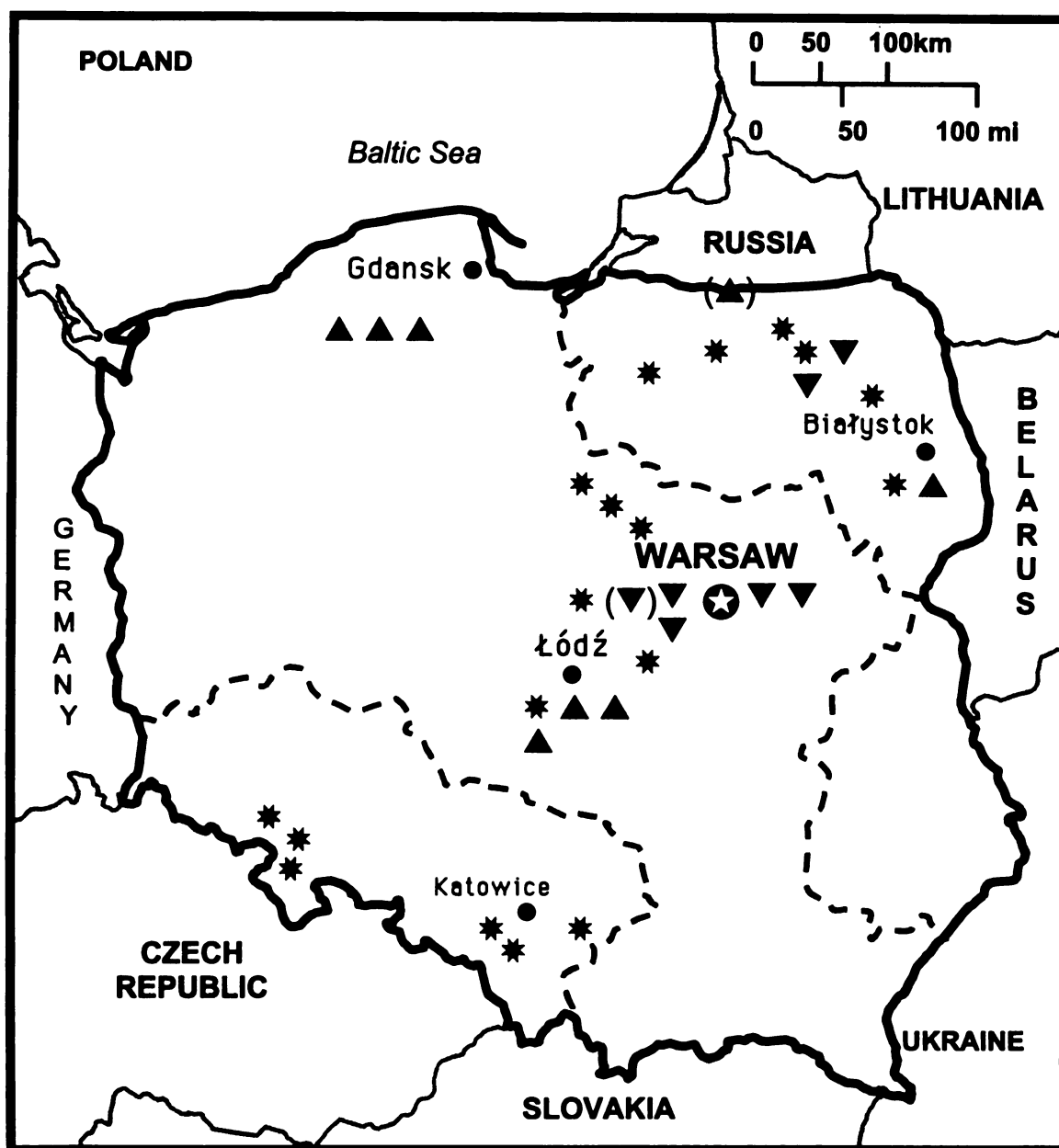


FIGURE 2.5 Map of Poland indicating locations of schools surveyed, and focus groups. Dashed lines delineate three geographic regions: southwest, central and northeast.

* = survey site

▼ = focus group with non-joiner youth

▲ = focus group with joiner youth

() = follow-up focus group after survey administration

I met separately with boys and girls, because I was conscious of the fact that for this age group mixed gender groups might not be as willing to discuss issues related to personal feelings (Morgan, 1997). I met with two groups of students (aged 16) in a mid-sized city in an agricultural region, two groups of students (aged 15) at a middle school in a large urban center, and two groups of students (aged 13-14) in a small village near a large city (see Appendix A for dates and gender break-downs of focus groups).

In order to gather the opinions of already active and involved young people, I conducted seven focus groups with young people who were involved with youth or ecological organizations, hereafter referred to as “joiners.” Selection of participants and groups varied as explained below. I wanted to meet primarily with young people between the ages of 13-15, since this was the age of the middle school students who were targeted for the subsequent survey research. Due to registration procedures for non-governmental organizations and clubs in Poland, however, it was difficult to locate younger adolescents who were active in clubs. For an organization to be formally recognized in Poland it must be officially registered with county authorities, and this requires that the organization maintain a bank account, which is limited to persons over age 18. Consequently, the members of registered organizations are typically older.

Anecdotal comments from teachers confirmed that younger adolescents form clubs without county registration. Unless the younger youth can team up with a person old enough to register with county authorities, however, they remain “invisible” and difficult to locate. This has been a problem particularly for youth-serving organizations trying to reach underserved areas, according to Anna Brzezick of the Polish Children and Youth Foundation (A. Brzezick, personal communication, February 10, 2000). The

Foundation offers project grants to youth organizations, but has had difficulty in eliciting proposals from rural areas where Ms. Brzezick believes there are spirited groups of young people who are simply too young to be registered, and thus “out of the loop” for receiving calls for proposals and material support. The exception is national organizations, such as the successful 4-H program, with more than 7,000 young people involved in over 400 clubs throughout Poland.

To reach rural youth, I contacted the National 4-H Foundation and received permission to visit a summer camp for members of 4-H clubs from around the country. I conducted three focus groups with campers (aged 12-17) who volunteered to participate in the study. To identify additional youth organizations, I sent letters of inquiry to organizations who had received a grant from the Polish Children and Youth Foundation within the previous year. Due to time and budget constraints I selected one group active in a city in the northeastern region, and one group active in a large city in the central region. The young people in these organizations were older (aged 16 – 23) than the other youth with whom I met. In data analyses, I was conscious of the fact that these young people represented different developmental stages than the early adolescents I had met with in the groups of non-involved students.

Finally, in order to meet with young people who were active in environmental actions through their schools, I met with twenty teachers at an environmental education workshop and asked for their cooperation. One teacher volunteered the opportunity for me to meet with two groups of active youth at her school: high school students enrolled in a special academic track of environmental studies (aged 17 – 18), and younger youth interested in environmental actions at their middle school (aged 13 – 14).

Except for one of the 4-H clubs (which was all female), the participants of the focus groups with involved students were male and female. This was done for practical reasons; since I met the young people during their regular meeting times, it would have been difficult to meet separately with boys and girls. I decided that the group dynamics of the discussion would not be compromised by meeting with boys and girls together because these young people were club members accustomed to functioning within their groups. Also, since many of the involved youth were in their late teens to early twenties, they were more comfortable speaking in front of the opposite sex than the younger adolescents I met with who were not active in clubs.

The sessions, for both “involved” and “uninvolved” youth, lasted between 45 and 90 minutes. The groups ranged in size from 5 – 14 individuals. The three focus groups with 4-H members were conducted in August, 1998, and the remaining ten focus groups met between February and April, 2000. All focus groups were conducted in Polish and audio tape recorded for transcription and professional translation.

I believed that the students would be less inclined to speak openly if there were teachers present, so I requested to meet with the youth alone. In only one case did the teacher stay in the room, and I felt uneasy about asking her to leave. As it turned out, she interjected herself into the conversation on numerous occasions, often answering my questions before the young people had a chance to respond. In such a situation, I felt that my only recourse was to ask directed questions to the youth, calling upon them by name, a tactic which hampered the flow of discussion. Fortunately, the students were all older (age 17) and enrolled in a special track of environmental studies with this teacher. As a class group, they had been with this teacher on numerous field trips, including week-long

field studies trips to other European countries to investigate environmental issues. This created a noticeable level of familiarity within the group, so I am confident that the students' remarks were not as censored as they would have been with another teacher present. As I analyzed the transcripts, however, I was mindful of the teacher's presence.

I conducted the focus groups "on-site." For groups of non--joiner youth, we met in an empty classroom during the school day; for the joiner youth, we met at their meeting site during their normal meeting time. I arranged the seating so that we were all seated in as close a circle as possible, with the microphone in the center. At the beginning of each session, I offered the participants soda and cookies, and asked them each to write their first name on a table tent in front of them. I also wrote my first name on a table tent.

These steps may sound unremarkable to our cultural background, but in Poland, they have deeper significance. In meetings of importance in Poland, distinguished guests are offered food. This is an unwritten yet universal code which indicates to the guest that they are respected. I was conscious of the fact that when a young person in Poland meets with an adult, it is practically unheard of for them to be offered food, and thus I purposely included refreshments. I did this in order to demonstrate that although I was older and a foreign guest in the country, features which under normal circumstances would make me "superior" to them, I was treating them as equals. I found, however, that the youth were so unaccustomed to this treatment that they were hesitant to partake, unless I did so first.

I used other subtle clues to indicate that I was not presuming a sense of superiority. In Poland, there is a strict code of respect which dictates that a person address an individual who is senior to them (in age, title, etc.) by "Sir" or "Madam." All

Polish students address their teachers and all adults this way. I wanted the students to know that I truly valued their opinions, and to do so, it was important for me to not be perceived as superior. I made an effort to dress much more casually than the adults the young people would typically see at school. When I introduced myself, I spoke honestly and with appropriate use of humor. I usually began by checking if they could understand my Polish (which suffers from the grammatical flaws of a non-native speaker). I would confide that I consider Polish grammar to be amazingly difficult, which was invariably well-received since youth at that age are struggling to learn the very complicated Polish grammar system. I always made a point to say “and please don’t call me ‘Madam’ – I’m American and we’re very informal.” It was surprising how much that statement caused a visible reaction. They would exchange glances and smiles, and lean into the table. I got the distinct impression that for many of them, it was similar to “playing hooky” to be able to engage in a conversation with an adult without having to use formal titles.

Despite my emphasis on informality, however, I also was careful to convey the serious nature of the group discussion. I explained the need to tape record the discussion in order to accurately record what they were sharing, and then asked for every participant’s verbal assent for participation, as per UCRIHS approval. I took notes carefully, and I have no doubts that the participants were aware of my attention to detailing what they were saying. By creating an informal setting, yet maintaining legitimate respect for what the young people said, I demonstrated that I valued their remarks, and I think that this contributed to their willingness to engage in the discussion.

Almost without exception, the young people I met in the focus groups were truly eager to share their opinions. I realize that the initial attraction was probably influenced

by the chance to meet an American, but other than a brief introduction, we didn't talk about the United States. Instead, we talked about their concerns, what they thought about the environment in Poland, and how they perceived their emerging roles. They seemed to share their opinions honestly; at least I was not aware of traces of sarcasm, condescension or subterfuge in their remarks.

When I was unclear about what they were trying to tell me, they patiently expanded on their remarks, often by use of descriptive examples. I think the fact that I was American actually helped me to uncover more of their perceptions, since they were willing to help me understand by describing things which would require no explanation if I were Polish (e.g., Polish sayings, historical allegories, the influences of the communist era). By their body language they indicated their interest and involvement in the discussion, leaning in to the table, and expressing a hesitancy for the session to end. The impression that I noted was that the young people were pleased and impressed that an American researcher was taking the time to include their opinions in her research. Even the groups of uninvolved boys who had been the most difficult to engage in discussion initially demonstrated periods of rapt engagement, including a plea from a boy in a mid-sized city in an agricultural region who commented, *"we need more meetings like this...you're the first person who has ever asked us what we think."*

All groups began with an "ice-breaker" activity in which the participants wrote down responses to several questions. We then discussed their responses in turn, as a way of helping the participants feel more at ease talking openly in an unfamiliar situation. At the close of each session, I collected the participants' written answers to the ice-breakers and these were translated by a professional translator for inclusion in the data set.

In the focus groups with non-joiner youth, I began with very general questions. The ice-breaker questions asked them to describe what they liked to do in their free time, what were their greatest concerns for the future, and what they would like to change about the community where they lived. After we discussed these, I asked them to explain more about their concerns, and their perceptions of their roles and responsibilities. I directed the discussion toward the environment only after it was mentioned by the students, and proceeded to ask for their opinions about actions and participation.

For the groups of joiner youth, the ice-breaker questions began with a recognition of their interest in the environment. I asked them to recall their earliest memories of concern for the environment, the individuals who were most influential to promoting this interest, and why they were personally involved in doing actions for the environment. After we discussed these responses, I directed the questioning to aspects of what the participants believed either helped or hindered their involvement, as well as what was needed to encourage other youth to participate.

The focus groups followed a semi-structured discussion guide (Appendix B). As each focus group progressed, unanticipated areas of inquiry emerged and were followed in the flow of conversation. The questions on the discussion guide were sequenced in an effort to lead the discussions from general topics to more specific conversations, ideally after the issue had emerged independently from the group. This type of “funnel” approach to questioning is recommended as the preferred compromise between a fully structured and an unstructured focus group (Morgan, 1997).

During the focus group discussions, I made an effort to present myself as sincerely interested, but neutral. Leeming et al. (1993) caution against the

methodological problem of researcher-caused “experimental expectancy” effects, which include the ways a researcher can bias subjects to perform or respond in manners consistent with the study hypotheses. This required a conscious effort to curb my enthusiastic remarks and encouragement to what the teens were sharing. Instead, I waited until the “formal” portion of the focus group was over and the tape recording was concluded to congratulate their involvement or share my real opinions.

I recorded brief notes of statements and observations during each session, as well as final summary notes written immediately after the group dispersed. Before conducting each focus group, I would reread my notes from the previous focus groups to identify topics and questions to include. Thus, each focus group was slightly different. This semi-structured interview format allows for new areas of inquiry to emerge from discussions with the target audience, and is one of the strengths of this method of data gathering (Patton, 1990).

Ideally, the researcher continues conducting focus groups to the point of “theoretical saturation” defined as when “no new or relevant data seem to emerge regarding a category” (Strauss & Corbin, 1990). In this case, time and budget constraints determined the number of focus groups. I was able to conduct 13 pre-survey focus groups, which was well above the minimum of three to five groups suggested by Morgan (Morgan, 1997), and I am confident that the breadth and depth of topics discussed are more than sufficient to inform this study. Based on many readings of the transcripts, I believe that I did actually reach theoretical saturation, since no new themes emerged in the later groups. The later groups, however, were valuable in that they provided clarification of points and issues that had emerged in earlier discussions due partly

because my skill as a moderator increased over the course of doing so many focus groups. In the first couple of focus groups, I rarely probed for additional information, yet in later groups my skill at listening and probing increased noticeably. Consequently, the later groups achieve much more depth and are more informative.

Survey Development and Administration

Survey Construction

Topics which emerged during the focus groups were incorporated into an 11-page written questionnaire. Due to the age (11-19 years) and nationality of the target audience, and the need to limit the survey to a length which could be completed by respondents during one 45-minute class period, the final survey was created of questions inspired by, rather than adopted from, questions and scales which had been successfully administered in other surveys. Inspiration for the survey was drawn from the following sources: the New Ecological Paradigm Scale (Dunlap et al. 1992); the Environmentally Responsible Behavior Inventory, the Environmental Action Internal Control Index, and the Index of Environmental Action Knowledge and Skills (Smith-Sebasto & Fortner, 1994); the Secondary School Environmental Literacy Assessment Instrument (Marcinkowski & Rehrig, 1995); the Environmental Issues and Actions Survey (McConney & McConney, 1995); the Survey of Social Environmental Awareness (Baturu et al. 1997); and the 2000 International Social Survey Programme Module on Environment (Jarvis, Park, & Jowell, 1999). The survey was written with assistance from specialists in environmental education in the Polish Ministry of Environment, the Polish Ministry of Education, and Warsaw University, as well as Polish non-governmental organization representatives and

teachers. Additionally, I received valuable input from my dissertation committee at Michigan State University, as well as several other environmental educators at different American universities.

Most of the questions were closed-response format, with response categories which emerged from the focus groups. The closed questions all offered a write-in response option or “difficult to say” option to ensure that respondents were not bound to listed responses. The survey also included six open-ended questions which were translated by a professional translator prior to coding. I explain the coding schemes for open-ended questions as well as additional methodological issues related to the construct of participation in Chapter 4. Question format was deliberately varied in order to avoid a response set and to keep the activity more interesting (Converse & Presser, 1986). I wrote the survey in English, and had it translated to Polish by a professional translator and translated back into English by another translator to check for clarity.

I paid careful attention to the ordering of the survey questions. Although most surveys put demographic questions at the end of the survey, I purposely began the survey by asking for the respondent’s year of birth and sex. Because the respondents were young, I considered it unlikely that they had ever taken part in a research survey before, so it was important to begin the survey with questions which would be easy to answer. These were followed by a general question about the major concerns facing Poland in the future, and respondents were asked to select up to three problems from a list generated in the focus group discussions. “Destruction of the environment” was listed among the nine options, but no mention was made at this point that the survey focused the environment. Succeeding questions gradually became more focused on the environment.

I wanted to reduce the possibility of question order biasing responses, and so open-ended questions were put *before* related closed-ended questions. There were two sets of open-ended questions which solicited opinions regarding key issues for the study: the respondent's self-assessment of involvement in actions for the environment, and knowledge of action strategies. I placed these in the survey so that each open-ended question was the last item on a page, thereby increasing the chances that a respondent's written comments wouldn't be influenced by reading related closed-response questions.

During survey development, I conducted two pilot tests with classes of first year middle school students. The first test confirmed that the lengthy questionnaire (11 pages) was possible for students to complete in 45 minutes. After each pilot test, I met with the pupils who had taken the survey to get feedback for clarity and improvement, and revised the surveys accordingly. A copy of the survey is included in Appendix C.

Environmental concern was measured by a five-item index consisting of questions with scaled response categories. Four of these items had response categories from "strongly agree" to "strongly disagree". The fifth question was taken directly from the Polish Adult Environmental Awareness survey (years 1992, 1993, 1997 and 2000): "To what degree does the state of the natural environment in Poland concern you?" Response categories varied from "very great" to "basically, not at all."

Internal consistency of the concern index, as measured by Cronbach's alpha, was .54. In one of the few studies of environmental attitudes of adolescents, researchers reported similarly low measures of internal consistency, with Cronbach's alphas as low as .59 (Lyons & Breakwell, 1994). The low value in the present study can be attributed to several factors. There were only five items in the scale, and all else being equal,

Cronbach's alpha increases with more items (Cortina, 1993). Also, as described above, two question formats were used in the index, further compromising internal consistency. Finally, the participants were a random sample of young persons, who would be expected to have less consistency in their answers since they might not have thought of these complex issues previously. In their meta-analysis of studies examining responsible environmental behavior, Hines et al. (1986) found a substantially lower attitude-behavior correlation in studies of children or the general adult population, as compared to studies of adult members of environmental organizations.

Participation in environmental actions was operationalized by a nine-item index of specific actions which the respondent had participated in during the past two years. Ajzen and Fishbein (1977) stressed that when studying behavioral antecedents such as beliefs, attitudes, or norms, the measurement items should be on the same level of specificity as the behavior of interest. In order that the action items in the present study be realistic as a measure for the population of the sample, I drew upon actual examples of environmental and social actions which were discussed in the focus groups with young people involved in environmental and youth groups (Table 2.1).

I selected examples of actions representative of four of the five types of action first described by Hungerford et al. (1980): direct ecomanagement actions, actions aimed at consumerism, actions aimed at persuasion, and political actions. I opted not to include their fifth category, legal action (e.g., filing suit against a polluter), because no examples of legal action were discussed in the focus groups, and I consider it unlikely that Polish youth have engaged in actions aimed at legal affairs.

TABLE 2.1. Types of environmental action, and corresponding items from the Youth Environmental Concern and Action (YECA) Survey

ENVIRONMENTAL ACTION CATEGORY – adapted from Hungerford et al. (1980)	YECA Environmental Action item: “In the past two years, have you...”
Ecomanagement: any physical action taken by an individual or group aimed directly at maintaining or improving existing ecosystems	Q27. Participated in litter clean-up activities
	Q28. Organized some type of activity to help a needy group in your community, e.g., activities for children from a Children’s Home, or programs to help the sick or elderly
Consumerism: an action aimed at some form of behavior modification in business or industry, or some conservation mode of behavior	Q29. Boycotted a product or business because you believe the product was harmful to the environment (e.g., cosmetics tested on animals)
Persuasion: an effort to motivate or convince other individuals to take positive environmental action; often includes actions aimed at increasing knowledge about an environmental issue, and transferring knowledge to others	Q30. Participated in a protest or demonstration because you wanted to change policy towards more pro-environmental practices (e.g. a demonstration to develop a nature reserve; a street happening to promote bike paths)
	Q31. Participated in a project where you collected data to monitor environmental conditions such as air and water pollution
	Q34. Created an activity to educate other youth, younger kids, or the public. This could be by teaching, theater or informational materials such as brochures, posters, newsletters, fliers.
	Q35. Written a research report or article for a newspaper or newsletter related to an environmental issue
Political: any action which brings pressure on political or governmental agencies or individuals to conform to the values of the person(s) taking the action	Q32. Signed a petition in support of environmental protection or the development of environmental policies in your community (e.g., segregation of trash; development of a center for homeless people)
	Q33. Written a letter to a legislator or government official to let them know your opinions about environmental protection

For each action index item, respondents were asked to indicate whether they had participated in such an activity over the previous two years, and if so, what had been their level of involvement. The response categories covered a range of personal involvement, from “I have not participated in this activity” to “I participated as the main organizer.”

Two of the response categories deserve explanation. These were suggested by teenagers who participated in the pilot test in March, 2000. Because activities such as litter-clean up events are often organized by school administration, the students suggested the inclusion of a response alternative for unwilling participants. We agreed upon the option “I participated in this activity because it was required by my school, but I did NOT want to participate.” Additionally, the students wanted a category to express their willingness to participate if the activity were available. The response category drafted by the teens in the pilot test was: “I did not participate in this activity, but if I had the opportunity to participate, I probably would.” At first I considered that this would create confusion, by mixing assessment of past participation with promise of future unrealized participation. However, the students in the pilot test group (a first year Middle school class in Warsaw) were persuasive about the need to include this response category. Their insistence corroborated what was revealed in focus group discussions, in that the youth were all expressing the fact that action participation is generally very low among Polish youth due in part to lack of opportunity for involvement. The category was included to provide insight on young peoples’ *willingness to engage* if future actions were staged.

The action index was designed to facilitate comparisons between teenagers with varying levels of participation in environmental action, e.g., youth who have never participated in environmental and community projects; youth who have participated in

actions organized by adults; youth who have been actively involved in organizing and planning environmental and community projects. Higher action index scores indicated higher levels of personal responsibility and involvement. Cronbach's alpha was .84, indicating a relatively high degree of internal consistency.

School and Participant Selection

In the early stages of developing this study, I met with specialists at the Polish Ministry of Education and the Polish Ministry of Environment to discuss which age group to target with the surveys. From these discussions, it was revealed that little was known about the environmental opinions of adolescents in Poland. There was consensus that due to the establishment of middle schools under the national education reform of 1999, there was a unique opportunity to evaluate the opinions of young people enrolled in the first year of middle school¹. These students were the first cohort of the new educational system, and as such were selected as the target audience to facilitate future comparisons. Specifically, the officials at the Ministries of Education and Environment were interested in gathering data which could help them design programming for the middle schools in order to provide lessons and curricula which supplied environmental education as per the education reform recommendations.

The unit of analysis was the individual teenager, although for practical purposes I administered the survey to entire school classes. In a review of over 30 studies which investigated efforts to change knowledge, attitudes and/or behavior of school-aged children, the reviewers critiqued many of the researchers for considering individuals within classes as independent measures (Leeming et al., 1993). The studies reviewed

¹ More detail on the Polish educational system can be found in Chapter 1 under the sub-heading "Youth Situation in Poland"

most often included pre-and post-tests around “treatments” such as lesson units or out-of-class interventions (e.g., attendance at an ecology camp). In situations such as these, where all of the students are being tested on the effectiveness of the intervention, individual students are not the most appropriate measure. In the present study, however, the survey focused on personal experiences not limited to school, knowledge and relationships (family and friends) and the influences of these and other factors on environmental attitudes. Thus, since the survey addressed individual experiences as opposed to classroom treatments, I decided that the individual student was the appropriate measure of analysis.

I consulted with Polish sociologists to design a sampling scheme that would better reflect the diversity of the socio-economic, ecological and cultural conditions of Polish adolescents. Past sociological surveys in Poland have identified three broad macro-regions distinct enough to warrant stratification (CBOS, 1993), (Burger & Sadowski, 1994), (Baturó et al., 1997), (Burger, 1999). The southwest region is the area of intense industrial concentration, with the most polluted conditions in the country (refer Figure 2.5). This region includes the infamous “Black Triangle,” so named for the concentration of coal mining, steel production, and tragic health issues attributable to environmental pollution. The central region is characterized as more cosmopolitan with large business centers, including Warsaw and Łódź (the second largest city in Poland). Within the larger cities there is a noticeable presence of foreigners and foreign-owned businesses (e.g., McDonalds, General Electric, Ikea, Toyota, etc.). The northeast region is the area of former agricultural cooperatives, and some of the largest national parklands in the country. The region is still largely agricultural, and considerably less polluted than other

regions of the country. It is also the area with the highest average unemployment. Since many of the Polish social surveys make comparisons based on these macro-regions, it was advantageous for my survey data to be compatible. It is important to remember, however, that demographic variables such as unemployment and environmental conditions vary widely within all regions.

Because I was administering the survey in person, sample sites were limited to six communities in each of the three macro-regions, for a total of 18 sites. Sixty-eight percent of the Polish population lives in incorporated cities, and I maintained this ratio in the selection of the sample sites. Communities selected included villages (population less than 5,000), small towns (population 5,000 – 20,000), medium cities (population 20,000 – 100,000), and large cities (population greater than 100,000). Polish sociologists familiar with survey research assisted me in the selection of two large cities in each region. I then randomly selected villages and towns in each population categories within each region from a list of all communities which met two criteria: (1) for practicality, the chosen communities had to be within a feasible travel distance from the main urban center, and (2) they also had to possess at least one middle school. The Ministry of Education provided a list of all the middle schools in the country. After the communities had been identified, I randomly selected a middle school in each community.

Survey Administration

When I arrived at each middle school, I randomly selected one class for survey administration from all available first year classes so that there was no possibility for the teachers “preparing” the students for my arrival. Usually the principal or an assistant would introduce me to the class. As we made our way to the classroom, I always made a

point of requesting that the topic of the survey not be revealed to the class, preferring instead to be introduced as “an American studying youth opinions.”

On three occasions, despite my request, the principal introduced me as “an American with a survey on ecology.” Fortunately, my concern for concealing the subject of the survey related only to the first page where the questions were more general. Respondents were asked to select from a list of nine options the three issues they believed to be the greatest threats for Poland. In the three classrooms where I had been introduced with a “survey about ecology,” 49% of respondents selected “destruction of the natural environment” as one of the three most important problems, compared with 39% of respondents from other classes where the subject of the survey had not been announced. Statistical analyses confirmed that this difference was not significant (Chi-square = 3.329; $p = .068$; $df = 1$). Beyond the first page the fact that the survey focused on environmental topics was very clear.

After I had been introduced I addressed each class, explaining that I was an American conducting research on the opinions of Polish youth, and I asked for volunteer participation in the survey. It was obvious from the way virtually all of the students seemed interested by my presence, that I was a novelty for many of them. I could tell by their reactions that they appreciated my speaking in Polish. Every student, in every class I visited, agreed to fill out the survey ($N = 453$). It took between 30 and 45 minutes for the young people to fill out the 11-page survey. It did not appear that the students felt coerced or pressured to take part, and most seemed very appreciative that I was interested in their opinions. Admittedly, my visit also meant that the students would be spared that day’s lesson on chemistry or math, which no doubt contributed to my popularity.

The fact that I was American seemed to add legitimacy in their eyes, and perhaps reduced suspicion of ulterior motives which might have been the case if the survey were administered by their teachers. In their concern for “experimenter expectancy,” Leeming et al. (1993) were particularly concerned about situations in which a researcher, or often a collaborating teacher, would administer a survey immediately following an intervention such as a lesson or curriculum activity. In these cases, it would be possible for responses to be biased by the timing of the survey, and in studies where authority figures (e.g., teachers) administer the survey, there may be pressure to comply that could bias results. These concerns do not apply to the present study, since I personally administered the YECA survey independent of classroom interventions. When I introduced the survey to each class, I made a point of stressing that it was not a test, and that I was interested in their honest opinions. Since I visited each class only once, and the surveys were completely confidential, there would be little chance of students’ perceiving that they would personally gain from taking part in the survey.

The United States Forest Service generously provided Smokey Bear and Woodsy Owl trinkets for all survey participants. Due to the conservation-theme of the trinkets, and because I did not want the participation to be coerced by the prospect of a gift from the United States, I never announced that they would receive these trinkets until after the students had turned in the surveys.

Post-Survey Focus Groups

After compiling summary descriptive statistics from the survey data, I conducted follow-up focus groups with young people who had taken the survey. I met with these

groups to gather opinions regarding the survey as a mirror to the pre-survey focus groups. One group was selected to be representative of “un-involved” youth - a group of boys and girls (age 14) from one of the small town middle schools where I had administered the survey. The other group was representative of “involved” youth - a group of high school girls (aged 16 – 19) who had founded a social services club in a rural village. Due to timing and budgetary constraints, I was limited to two post-survey focus groups.

During the post-survey focus groups, I shared preliminary survey results with participants for their feedback, and they helped clarify some of the responses. As an example, one of the questions on the survey asked the respondent to select from a list of options what was needed to get more youth engaged in activities. One of the most popular responses was “more clubs and organizations for young people.” It became clear from discussions in both post-survey focus groups that many of the young people had interpreted “clubs” to mean “a physical space to meet.” This interpretation expanded my understanding of what the young people believe is needed.

This second post-survey group was the final focus group I conducted in this research project. The girls in the social services club had responded favorably to the letter of inquiry I had sent to youth organizations who had received a grant from the Polish Children and Youth Foundation. The girls returned their completed surveys by mail, and agreed to meet with me for a focus group as well. The girls in this group were bright and articulate, and exuded such a sense of pure joy for what they had accomplished that I was captivated by their stories. From analysis of the transcript it is easy to read that I was very supportive of what they had accomplished. The achievements of this small group of girls were particularly remarkable given the context of the setting: a rural

community set amidst now-defunct communist farm collectives where fewer than one in ten adults is employed (P. Kwiatkowska, personal communication, September 8, 2000). However, since this focus group was convened as a post-survey assessment, I don't believe that my lack of "researcher-neutrality" was a significant factor in the girls' responses to my questions regarding the preliminary results of the survey.

Data Analysis

Data Analysis: Focus Groups

Analysis is an on-going process of qualitative research. The process began with the creation of the discussion guide (Appendix B), and the sequencing of the questions to funnel the discussion to deeper and more specific topics. All focus groups were tape recorded, transcribed and professionally translated. For budgetary reasons, I employed separate people in the transcription and translation. At the close of each focus group, as a method of verification, I asked each individual to share their final thoughts by summarizing and highlighting what they believed were the most important topics. This manner of participant verification is recommended to assure that the researcher is accurately capturing the participants' viewpoints (Krueger, 1994).

Immediately following each session I wrote summary notes of my general impressions. These notes, hand-written during and after each focus group, were edited and expanded upon as I entered them into computer files a day or two after each session. Krueger recommends a multi-stage analysis strategy which begins during the group session, and involves returning to the notes as needed for deeper understanding (Krueger, 1994).

The initial stages of analysis included interpretations based upon my notes, in addition to the accumulation of experiences gained from personally conducting each focus group. The day before each focus group, I re-read the discussion guide. I also re-read the notes written during each previous focus group as a way of reviewing the data and identifying additional questions to add to the discussion guide, as well as questions that could be deleted once I felt I had reached saturation point for that issue. This meant that by the time I was conducting Focus Group 10, I had read the notes from Focus Group 1 nine times. I kept a running research journal to record any ideas, queries, and thoughts for future investigations.

After all 15 focus groups had been conducted, and I had received the English translations for all the transcripts, I conducted a transcript-based analysis. Each transcript was read at least four times. As I read the transcripts, I made notes of possible coding labels in the margins. Themes that emerged were compared across groups to look for trends and differences. After I had determined the entire suite of themes which emerged from all of the focus groups, I selected four of the focus group transcripts for deeper analysis. For comparative purposes, I included two groups of uninvolved youth (one male, one female) and two groups of involved youth that in my estimation best represented the themes that had been identified from consideration of all the groups. These were groups in which all the major themes had emerged, and the participants had engaged in lively discussions.

I copied each transcript onto different colored paper, and then cut out each unit of text which represented a single idea, based upon the systematic analysis strategy recommended by Krueger (1998). These individual units were sorted by themes on

poster paper. I found that the ability to look over all the themes with color-coded quotes greatly increased my interpretative ability. I was able to see networks of thoughts and themes and draw inferences from this new view.

Quotes were selected for inclusion in the text of this dissertation following criteria established in a study of youth opinions regarding community service in the United States (Youniss & Yates, 1997). The criteria for quote selection in the text was: 1) that the excerpts be representative of what several students said and, 2) the concept or theme was stated clearly. Two of the quotes were included because I believe that they add a particularly compelling insight. In these cases, I indicate that the statement was a unique opinion of one individual, and not representative of a group of young people. To protect confidentiality, I attribute quotes to speakers by their sex, age and community size only.

Data Analysis: Survey

I personally entered all of the raw data from the surveys into a SPSS® datafile for analysis². Closed-ended questions were entered directly. A professional translator translated the open-ended questions into English, and then another American environmental educator and I independently developed coding categories from the translated responses. Using the master list which emerged, I personally coded all surveys. To verify proper data entry, after all surveys had been entered into the computer program, I conducted data checks on random surveys. Prior to analysis, I cleaned the data by checking for missing entries and checking all variables for appropriate distribution frequencies.

² SPSS is a registered trademark of SPSS Inc. of Chicago, IL

I used SPSS 10.0 for Macintosh to perform all of the statistical analyses. These included summary descriptive statistics, bivariate correlations and multiple regression analyses. An additional method of interquartile comparisons will be discussed in Chapter 5. In order to preserve the number of cases included in analysis, I established a rule that only those respondents who answered 60% of the items in a given scale would be included in calculations for that scale. This meant that in calculations related to the Environmental Concern Index, I included those individuals who answered at least three of the five questions. For the Environmental Action Index calculations, I included those individuals who answered at least six out of the nine questions. To adjust for missing scores, after I excluded those cases with less than 60% of the scale items, I calculated the mean score for each of the scale items and added that as the missing value in cases with between 60-100% of the items answered. As an example, if a student answered four of the five items in the concern index, I substituted the mean score of the fifth item calculated from all persons who had answered that item.

Data Analysis: Stakeholder Verification

Data analysis was further informed by seeking verification and feedback from several of the stakeholder groups involved in youth issues in Poland. This was an especially critical element of analysis for this study since I conducted research in a foreign country. Verifying initial interpretations with interested stakeholders is a recommended tactic for any study of social phenomenon (Denzin & Lincoln, 1994). Following completion of data collection in Poland, I met with several groups of stakeholders who expressed interest in the results of the study. The purpose of these

meetings was to gain a clearer perspective on the types of analyses that would be considered most useful to these stakeholders, and also to solicit their interpretations of the preliminary results.

I gave a presentation of preliminary results to a combined meeting of education experts from the Polish Ministry of Environment and the Ministry of Education. The rough descriptive summaries of the data were very well received. The group was particularly intrigued by results of the scale reporting knowledge of environmental issues. The average middle school survey respondent answered only three of the six questions correctly. The Ministry experts seemed convinced that the low level of knowledge demonstrated the need for more environmental education. They urged me to compile descriptive statistics for national figures, as well as regional and county summaries which would be more useful for school superintendents' offices.

I also had the opportunity to get feedback from elementary and middle school teachers when I led an interactive workshop with 15 teachers trained in environmental education. According to the Education Director at University of Warsaw's Environmental Studies Center, the teachers at this workshop represent a highly dedicated and devoted minority of teachers in Poland, but their numbers are increasing (A. Batorczak, personal communication 3/27/00). I structured activities in which groups of two or three teachers reviewed portions of my data for presentation to the rest of the group. The teachers enthusiastically reviewed my findings, and their comments added another dimension to my interpretations. They were particularly dismayed over the results of a survey question which asked respondents to select the main reasons why young people in Poland are not doing more to protect the environment. Over 50% of the

middle school students responded “They just don’t think about it.” To this group of dedicated teachers who spend so much time teaching about the environment, this response was quite disheartening, and they agreed that this was indeed evidence of the need to increase the amount of environmental education available. As a point of clarification, it must be noted that none of these teacher’s classes participated in the survey, so the responses reflect different students’ opinions.

One of the small groups of teachers reviewed a portion of the focus group data. Although there wasn’t time for them to read the complete transcripts, I provided them with several pages of excerpted sections. The themes identified by the teachers corroborated the major themes I had identified independently. The teachers particularly noted the frequent perception by the young people that adults did not listen to them. The teachers concluded that this was a clear sign of the need to take youth ideas into account.

I also returned to the offices of the Polish Children and Youth Foundation for their feedback on the early results. The Foundation has been actively involved in developing programs for youth in Poland since 1992, and the staff expressed great interest in my research. The survey results on knowledge of environmental issues were of less interest to the Foundation, instead the program directors were much more interested in learning what the young people perceived as inhibiting their involvement, and what they identified as helping more youth to get involved. They were also interested in which threats were identified as the most important by survey participant, and they were interested to learn if there were differences based on size of community.

I found it very informative that these groups each focused on different aspects of the study. The Ministry officials were interested in factual knowledge of environmental

issues, the teachers were concerned that the existing methods of environmental education aren't effective if most young people "just don't think about it," while the non-governmental organization was eager to learn what is needed to get more youth active. This type of feedback was very instructive as to the multiplicity of data application, and it helped clarify the different perspectives of the stakeholders involved.

Limitations of Research

All research efforts are limited by a variety of factors, including the study parameters, capabilities of the researcher, and time and budget constraints. The most obvious limitation to this study relates to the fact that I am an American adult studying Polish adolescents. I will address the limitations and benefits of this at length below. The following limitations have to do with study methodology and implementation.

The first feature to note is that the data are derived from self-reported measures. I relied on what the young people shared in focus groups, and how they responded on the survey to draw my conclusions. For example, I have relied on participation levels reported by the young people, since I was not able to actually observe them over a long period of time to verify their participation in various actions. This is a common limitation for studies of reported behaviors. I attempted to minimize the errors due to misreporting by presenting myself sincerely to the survey and focus group participants and asking for their authentic and honest responses. I have no way of knowing how truthfully they gave their answers, but by their interest and enthusiasm for taking part in the research, I presume that they were not deliberately trying to mislead me. The large sample size ($N=453$) helps to compensate for this. Due to this large sample size and the

stratified random selection of middle schools to be included in the sample, I am confident that the survey results are sufficiently representative of the population of first-year middle school students in Poland in the year 2000.

One of the weaknesses of the survey was the fact that several of the constructs identified in the textual analysis from the open-ended questions as being very important for youth, were only included as single items in the survey. I had initially hoped to be able to test the cyclical nature of my proposed model with structural equation modeling, however, the procedure is not recommended for use with single-item constructs. I would suggest that in future studies, multiple items be used, particularly in the areas of peer support/peer pressure, opportunities for involvement, and personal experiences in nature.

In qualitative research, the researcher is interested in achieving a level of understanding of how the *subject* perceives the issue or object of study. The participants of the focus groups are not presumed to be representative of all Polish youth. As mentioned earlier, the youth I met who were active in environmental organizations tended to be older than the non-joiner youth, because of the restrictions for official registration of organizations. This means that the young people in the joiner and non-joiner focus groups were at distinctly different developmental life stages, which could be perceived as a limitation of the study. Since I was unable to meet with younger joiner youth, I made an effort to be conscious of the age differences while conducting data analyses. I used a consistent methodology of textual analysis to identify statements which I consider to be representative of recurrent themes from the group discussions.

Another restriction related to the focus groups was that due to time and budgetary limitations, I was unable to conduct focus groups with youth living within the highly

polluted regions in Upper Silesia. I think that my interpretations would benefit from the chance to meet with uninvolved and involved youth from that region to explore their feelings of living there, as well as the factors which motivate or inhibit their involvement in environmental actions. Similarly, I would have enjoyed the opportunity to conduct more focus groups with young people who are already active in groups and actions in all regions of the country, since these meetings were so informative.

I found that when I conducted focus groups of uninvolved boys, there was sometimes an initial hesitancy for the boys to engage in conversation. This was perhaps influenced by the fact that I was an adult female, and the students might have been nervous. I found, however, that even in these groups the tempo of discussion typically picked up as the conversation proceeded. Focus groups with the uninvolved girls, or mixed genders in the case of groups of involved youth, were all longer in length perhaps because the girls in these groups felt more comfortable engaging in conversation with a female group moderator. I would recommend that future researchers consider the gender of the group moderator, particularly for work with teenagers.

Considerations as a Researcher-Participant

In this research study, I was trying to understand how Polish youth construct the nature of their perceptions about the environment and of their roles in a changing society. It was critical that I include qualitative methodologies to collect information from a variety of sources, including focus group discussions and open-ended textual responses. According to Denzin and Lincoln (1994), it is vital to acknowledge the Self in inquiry, because “human knowledge is literally constructed during inquiry and hence is inevitably

entwined with the perceptual frames, histories, and values of the inquirer” (p.539).

Therefore, it is necessary for me to introduce my background and perceptions in order to help clarify how to interpret my findings, to help describe the “lens” through which I participated in the data gathering.

Most obviously, as an American adult, I was distinctly separate from my target audience by age and nationality. It is not unusual for researchers to have a different personal background from the group they are studying, but it is vitally important to be conscious of this fact. Since I did not grow up in Poland, I cannot have cultural understanding based upon my own experiences. I was very cognizant of this, and I made a point to stress this to the youth in the study, both in the focus groups and when I administered the surveys.

I decided very early on that the participants of the study, the Polish teenagers, were my real “experts” in the area of youth opinions. I maintained this philosophy in all my contacts with Polish youth, as well as interactions with Ministry officials and teachers. In my meetings with young people, I told them sincerely that I valued their opinions. I emphasized that since I was *not* Polish, and *not* a teenager, I was seeking their assistance to help understand the opinions of Polish teenagers. I did not realize at the time how much my attitude would ultimately benefit my research project. The youth responded by enthusiastically taking part in the focus group discussions and completing the written surveys.

I began this chapter by stating three fundamental beliefs which formed the foundation of this study: the seriousness of the environmental situation in Poland and elsewhere; the desire of young people to be active participants in society; and the

recognition that young people are the ones to be consulted regarding their concerns and motivations. These beliefs and attitudes were based upon and inspired by my experiences in Poland since 1995. I was a Peace Corps volunteer in a community in northeastern Poland from 1995-1997. As an ecological advisor to the city government, I assisted a citizens' group in a pilot project which engaged townspeople in creating an environmental action plan for sustainable development. Through my position, I had the chance to meet many of the prominent players in the environmental movement in Poland.

I also organized a youth environmental club in my town, and assisted the Polish 4-H Foundation where I met young people active in clubs around the country. I realized that the youth had much to say, and they wanted to be valued members of their communities. Through these experiences I became convinced of the powerful potential for Polish youth to assist in the transition to democracy by their active participation.

While in the Peace Corps, I learned to speak Polish with a fluency which permitted me to conduct this research, and I traveled widely through the country. I saw firsthand the breadth of diversity of economies, lifestyles and landscapes that are the mosaic of modern Poland. From the shining glass and steel office buildings of Warsaw, to maze-like warrens of identical socialist-designed apartment complexes; from spike-haired youth in black leather, to kerchief-headed grandmothers riding atop wagons of sugar beets on a rutted country road; from rolling green fields where white storks search for frogs to feed their clattering young, to hillsides where skeletal trees stand in leafless testimony to air pollution...I have seen that there is far too much variation in Poles and Poland to attempt a simple characterization.

I approached this research with a desire to allow the young people the chance to

voice their concerns and share their ideas. My experiences as a Peace Corps volunteer in Poland form the background of my understandings of the country. The results and interpretations of this study are detailed against that background.

All of this contributes profoundly to my role as researcher. I am cognizant of the historical, social and ecological realities facing the country, and am aware of the challenges that are faced by a very dedicated cadre of teachers and non-governmental organizations. I have worked closely with teenagers both at the local youth club level and at national 4-H workshops, experiences which made me sensitive to the concerns and humor of youth. I don't believe that all youth in Poland aspire to be more involved, but I know from experience that many do.

Throughout data collection and analysis I incorporated several checks and safeguards to increase the trustworthiness of my interpretation of the attitudes and opinions of Polish youth as expressed in focus groups and written responses. These have been described in detail earlier in this chapter. Finally, since I was participating so intensely in the research, I designed an overall study plan which blended quantitative and qualitative methods as a way of gathering data from a multiplicity of approaches. In this way, the focus groups helped enrich my interpretation of the survey results, and the survey results informed my interpretation of the focus groups. This combination of multiple methods is not "triangulation" as a tool, but instead a "strategy that adds rigor, breadth, and depth to any investigation" (Denzin & Lincoln, 1994, p. 2).

CHAPTER 3.

ENVIRONMENTAL CONCERN

I think every person should be interested in the state of the environment in which they live. I am scared by the vision of global warming which can be the end of the world. Besides, I don't want my kids to live on a planet without beautiful trees, smell of meadow flowers, the song of the nightingale in the evening...

- 14-year old girl, industrial city, north-central Poland

How does a person develop concern for the environment? What factors influence a person's concern? These questions are at the heart of this chapter. Following a brief review of studies which have assessed environmental concern in various countries around the world, I summarize studies which have evaluated environmental concern among Polish adults. I then present the results of my focus groups and survey to describe and explain the levels of environmental concern among Polish teenagers. The chapter concludes with a discussion of the variables found to influence feelings of environmental concern among Polish youth.

Theoretical Foundations

Terminology

In the research literature, the terms "attitude" and "concern" have been used somewhat interchangeably. This lack of consistency, and the differences in word choice and research approaches means that caution must be exercised when trying to draw comparisons between studies. *Attitude* has been the construct of interest in several studies of environmental education (e.g., Burrus-Bammel, 1978; Cervera-March & Gomez-Granell, 1993; Fortner & Lyon, 1985; Ganser, McCay, & Padalino, 1978; Hines

et al. 1986; Iozzi, 1989a; Jaus, 1984; Newhouse, 1990; Ramsey & Rickson, 1976). In contrast, *concern* appears more frequently in sociological or psychological studies related to the environment (e.g., Axelrod & Lehman, 1993; Buttel, 1978; Catton & Dunlap, 1978; Lyons & Breakwell, 1994; Stern, Dietz, & Kaloff, 1993; and Stern, Dietz, & Guagnano, 1995). The issue is further complicated because researchers have rarely included definitions of the constructs used in their studies. Peterson provided a definition, but her target of interest was *environmental sensitivity*, which she defined as “a basic appreciation and concern for the natural environment” (Peterson, 1982, p. 5). There seems to be a general understanding throughout the relevant research that “concern” is a type of “attitude,” although this is not clearly stated.

It is vital to define the construct of interest, and in this study I have chosen to evaluate *environmental concern*. When a person is worried or frightened, such as the girl quoted at the beginning of this chapter, he or she has moved beyond simple awareness of an issue to a perception of how that issue can – or could – affect them personally. I define that perception as **concern**, an attitudinal construct which encompasses the emotions of worry, compassion, sympathy and regard for somebody or something. As I define it, this presumes an associated desire to alleviate the causes of worry, compassion and sympathy. *Environmental concern* relates specifically to personal feelings of worry (even fear), compassion, and caring regarding environmental issues. These emotions can reflect concern for self or other humans, but also include caring for other species and ecosystems. An environmentally concerned person is interested in reducing the causes of environmental degradation and in reconciling past damage. This concern is a cognitive and emotional process which may or may not be translated into behaviors and actions.

Environmental concern can be influenced by a great many factors, including an individual's level of understanding and past experiences, and it is distinct from a simple awareness of issues which doesn't incorporate personal feelings of worry. A person can recognize and display greater or lesser degrees of concern for the environment, but any degree of concern can be interpreted as being positively inclined toward the environment.

In contrast, *environmental attitudes* exist on a continuum which includes positive and negative inclinations toward the environment. A person who dislikes snakes and insects may have a negative attitude toward the environment. By limiting this study to an exploration of *environmental concern*, I have chosen to focus on the degree of positive or supportive sentiment regarding the environment. As a point of clarification: on the survey I have used the term "attitude" in order to accommodate responses which indicate either positive or negative feelings toward the environment, yet I report specifically on environmental concern.

Origins of Environmental Concern

Most of the studies cited above focused on measuring the levels of environmental concern (or attitudes) in adults. It is instructive to briefly review what is known about how an individual develops the capacity for concern. Before a person can develop concern for something, they need to become aware of it, and develop some level of understanding or perception regarding it. Chawla and Hart (1995) reviewed the literature in early childhood development and found very little theory or research related to how children learn to understand natural systems, however, they established that the classic studies of the development of moral cognition by Piaget and Kohlberg provide support

for the foundations of environmental concern.

Piagetian theory describes three complementary processes which occur in children between the ages of two and eleven years (encompassing two of Piaget's stages of cognitive development, the "preoperational stage" and the "concrete operational stage") (Piaget, 1954). These processes involve the child's cognition of the differentiation of self from surroundings, the perception of a distinction between the child's viewpoint and other's viewpoints, and the growing realization that phenomena are dependent upon each other and relative to the observer. This sets the stage for the child being able to distinguish the presence of the natural and manmade worlds around themselves.

Kohlberg based his six stages of a child's moral development on Piaget's ideas (Kohlberg, 1975). His stages are not defined by content or age, but by ways of thinking about moral issues and reaching moral judgments. Kohlberg's stages track how moral reasoning develops in general, and thus can be applied to an individual's evolution of thinking related to "right" and "wrong" treatment of the environment. As a person matures in moral reasoning, they are more able to consider the complex social issues related to environmental problems.

Even stronger connections to the bases for environmental concern can be found in Carol Gilligan's ethic of care (Gilligan, 1982). Gilligan is often credited with identifying a gendered perspective in moral development, specifically how an individual perceives of moral obligations. Although Kohlberg considered the ethic of justice to be the highest representation of moral right, Gilligan drew attention to the development of caring for self and others. Caring for the environment is one manifestation of caring for "others,"

because a feminist perspective considers the frequently voiceless and historically overlooked entities, including women, indigenous peoples, minority groups, other species and landscapes.

Careful attention to developing moral reasoning is an imperative for enhancing a sense of environmental concern. Iozzi (1989b) cautioned that the quality of the environment would not improve until people recognize that environmental problems are really moral value problems. Rhoads added that moral development, particularly the development of the sense of caring is essential to promoting democracy. He argued that fostering a sense of self grounded in an ethic of care should be considered one of the “central challenges of education” because fostering an ethic of care “encourages the sense of otherness needed for democracy to survive and , indeed, thrive in a complex and fragmented social world” (Rhoads, 1998, p.296). Clearly there is a need to foster an environmental concern rooted in a sense of caring.

As to how recognition of environmental issues is transferred to concern, Chawla and Hart (1995) concluded that there are three sources of environmental concern: fears for self-preservation; a sense of responsibility for the welfare of present and future human populations; and an ecological conscience which grants rights to nonhuman things. The authors noted that in most cultures in northern countries, children learn about natural systems increasingly from media or school and decreasingly from direct contact with the natural world. They caution that without personal contact with nature, the individual is likely to develop only two of the sources of concern for the environment, those of self-preservation and intergenerational preservation. They recommend that concern for the intrinsic rights of other species can be cultivated only by direct contact with nature.

In addition to providing the foundation for environmental concern, direct contact with nature offers opportunities for greater understanding of natural systems. There are many examples of how structured environmental education activities can be organized in formal and non-formal educational settings to help young people develop this connection and concern. In order to be most effective, these experiences should be balanced and designed to match the developmental stage of the individual.

Similar to the developmental stages of Piaget, Kohlberg and Gilligan, environmental educator David Sobel has defined three stages of development for environmental concern in children. He suggests that between age 3 and 7, the focus should be on the development of empathy and emotional attachments to the environment. According to Sobel, the period between age 7 and 11 is “the critical period for bonding with the earth,” and it should be devoted to encouraging exploration of the natural environment (Sobel, 1995). From ages 11 to 14, social action opportunities should be encouraged, in order to provide the chance for children to work on local problems where they can make a real difference. Sobel’s three stages reflect the optimum periods for educational approaches which focus on affect, cognition *and* behavior, in contrast to programs which focus only on affect and/or cognition.

Kellert (1985) identified similar stages related to how young people develop attitudes toward animals, and he also suggests that environmental programming be targeted to match the children’s level of development. Kellert found that between 2nd and 5th grade (typically age 7 to 11) most children experience a notable increase in emotional concern and affection for animals. From 5th to 8th grade (age 11-14) children demonstrate an increase in cognitive understandings of animals, whereas between 8th and 11th grade

(age 14 and up) they became more concerned for the ethical and ecological values associated with animals. Older students frequently express their desire to get involved with actions associated with ethical and value issues. Like Sobel, Kellert's stages recognize that affinity towards nature begins with emotional affect in the younger stages, moves to greater understanding of ecological concepts and knowledge, and then evolves into a need to demonstrate these concerns.

To understand how participation in social and environmental action could affect concern and youth development, recall Erikson's stages of human development. The critical challenges for the adolescent developmental lifestage are to establish a sense of personal identity and a sense of social relatedness (Erikson, 1968). Research has shown that participation in social actions, including environmental actions, provides developmental benefits for young people (Blyth & Leffert, 1995; Scales, et al. 2000; Youniss, et al. 1997). These include the development of a positive self image, a refined sense of identity and group affiliation, an increased understanding of self in relation to others, a deeper comprehension of real social issues, and the development of personal and social skills (Rhoads, 1998). From a moral development standpoint, participation in social actions provides the opportunities for young people to develop an ethic of caring as they experience a transition from solely self-centered orientation to other-directed orientation. These features of altruism and civic engagement are considered among the core components of positive adolescent development (Larson, 2000).

In summary, developing an awareness of one's external environment is a fundamental cognitive process. Research has shown that a variety of experiences affect how an individual feels about the environment. Non-formal and formal educational

experiences can be structured to help younger children develop a concern for the environment by including opportunities to develop an affinity for nature and animals through direct contact with nature which establishes an emotional attachment and appreciation. As they mature in their ability for moral reasoning, young people have a developmental need to demonstrate their increased capabilities. Participation in social and environmental actions provide opportunities for developmental growth, and enhances an ethic of caring.

Studies of Attitude and Concern

Several decades of research into the correlates of environmental concern have examined various demographic characteristics. Studies have shown that people who are younger, urban-dwelling, politically liberal or Democrat, with a higher education, a higher socio-economic status, and who are employed outside of primary industries are more likely to be concerned about the environment (Arcury & Christianson, 1993; Jones & Dunlap, 1992; Wall, 1995). Regarding gender, the research has been less conclusive, but females are more frequently reported to have higher levels of environmental concern than males (Hampel, Boldero, & Holdsworth, 1996; Hausbeck, Milbrath, & Enright, 1992; Schahn & Holzer, 1990; Stern et al. 1993; van Liere & Dunlap, 1981).

One of the most widely-used measures of environmental concern is the New Environmental Paradigm Scale (Dunlap & van Liere, 1978). The scale consists of 12 items which characterize a respondent's adherence to a pro-environmental worldview, the "New Environmental Paradigm" (NEP), which recognizes humans as part of a complex ecosystem, as opposed to the "Dominant Social Paradigm" (DSP) which

supports an anthropocentric worldview emphasizing economic growth and supremacy of humans over other species (Dunlap & van Liere, 1984). Comparative studies have found that respondents who identify with the principles of the NEP tend to also display an awareness of the consequences of environmental problems, as well as specific pro-environmental attitudes and behaviors (Stern et al., 1995). In addition to numerous studies in the United States, the scale has been used in studies in countries around the world , including Canada (Edgell & Nowell, 1989), Sweden and the Baltic states (Gooch, 1995), and Turkey (Furman, 1998).

Despite its popularity, there have been relatively few studies that have used the NEP to investigate changes in public attitude over time. A study of recycling attitudes and behaviors of residents of Illinois recorded that pro-environmental opinions as measured by the NEP scale increased from 1986 to 1988 (Vining & Ebreo, 1992). A revised instrument called the “New Ecological Paradigm scale,” with 15-items, is currently receiving wide use (Dunlap, Van Liere, & Mertig, 2000). In 1990, the authors recorded a “modest increase” in the endorsement of the beliefs of the New Ecological Paradigm worldview by survey respondents in Washington State as compared with a similar study in 1976 (Dunlap et al., 2000).

In a review of research related to the components of environmental education, Volk and McBeth (1997) reported that the majority of studies have been directed at measuring environmental attitude and/or knowledge of environmental issues. Individual lesson plans and curriculum units, instructional media and extracurricular activities such as field trips and summer camp experiences have all been evaluated for the measurable effects on participants’ knowledge and attitude toward the environment. Most of these

studies have involved quantitative analyses of the knowledge and awareness of environmental issues, or analyses of environmental attitudes, often by the use of pre- and post-test surveys to evaluate how effective various environmental education programs were at changing attitudes or knowledge. Many studies involved administering a survey to a group of students and then engaging half of the group in a new environmental education program or camp activity while the other half, the control group, continued with traditional programming. After the completion of the novel program, a post-survey was administered to both groups to compare differences in attitude and knowledge attributable to the program.

The popularity of such programs, and the preponderance of this type of research, was influenced by the predominant thinking about environmental education in the early 1970s. Ramsey and Rickson (1976) paraphrased the reasoning which drove so many of these studies in this way: "Increased knowledge leads to favorable attitudes toward pollution abatement which in turn lead to action promoting better environmental quality." Although the authors state within that same publication that there is no clear link between increased knowledge, attitude and pro-environmental behavior, environmental education programming was based on this belief for many years.

Most of the published studies have not specifically measured environmental concern as I have defined it for this study, rather the construct of interest has been attitudes toward the environment. Researchers who have investigated the relationship between attitudes and knowledge have found contradictory results. In some studies, students who took part in environmental education programs had more favorable environmental attitudes than did their classmates who did not have environmental

instruction (Fortner & Teates, 1980; Jaus, 1982, 1984). A study of high school students which included surveys before and after a 10-day course on environmental studies found a statistically significant correlation between students' environmental attitudes and knowledge (Bradley, Waliczek, & Zajicek, 1999).

Other studies have failed to establish any links between knowledge and attitudes (Armstrong & Impara, 1991; Borden & Schettino, 1979). Some studies have even reported inverse relationships between greater knowledge and attitudes regarding the environment. In a survey of over 3,200 11th grade students in New York state, Hausbeck, et al. (1992) found a small but significant correlation between higher environmental knowledge and reduced optimism for the future quality of life. Over 80% of the students surveyed expressed pessimism by disagreeing with the statement, "The quality of life in the future looks like it will be better than the quality of life we have now." Almost three-quarters of the students surveyed agreed that an environmental crisis exists, yet their overall knowledge, as tested by a series of fact-based questions, was low. The study did not specifically address concern for the environment, nor did it track trends over time, so it is impossible to state if the environmental knowledge caused the pessimism regarding the future, or if the pessimistic outlook caused the students to seek more knowledge on the environment. The fact that there is a correlation between these two constructs suggests that educators need to take into account the possibility that providing students with discouraging facts about the environmental situation can contribute to pessimism.

Other studies have found optimism even while participants acknowledged the worsening state of the environment. In 1998, the National 4-H Council commissioned a poll of environmental attitudes and behaviors of teenagers (aged 13 -18, N= 1,000).

Sixty percent of teens surveyed believe that the world's environment will worsen in the next twenty-five years, and more than three-quarters agreed that time is running out to prevent permanent damage to the world's air and water (4-H, 1998). Despite these pessimistic predictions, this survey found that 81% of teens expressed faith in the belief that technological advances will help solve environmental problems. Almost half of the teens surveyed said that the biggest barrier to a better environment was a lack of concern among their fellow Americans.

Another study used qualitative methods to explore the environmental attitudes of 8th graders in Canada (Sherlock, 1995). In their journal entries and group discussions, the youth participants brought up nine themes related to their feelings about the environment. These included mentions of direct experiences in nature; previous outdoor experience; the influence of family attitudes; the influence of media; the influence of teachers, peer influence; knowledge of ecological topics; the sense of "feeling in control"; and the enjoyment related to environmental activities. As a qualitative study, there was no attempt made to quantify results. Instead, the research included in-depth case studies of the personal experiences of five middle school students. All of the participants in the study mentioned experiences in nature as being formative, and four specifically mentioned how family members were role models.

The largest study to consider the environmental opinions of adolescents involved over 10,000 teenagers in nine Asian-Pacific countries (Yencken, Fien, & Sykes, 2000). The survey included a suite of questions which assessed the degree to which young people had moved away from beliefs associated with the traditional dominant social paradigm towards new paradigms of ecological harmony based on the NEP scale

previously discussed. The majority of young people in all countries, with the exception of India, expressed beliefs strongly aligned with the environmental paradigm.

At least 59% of respondents in each country indicated that protecting the environment is more important than economic growth. Respondents were also asked to rank the four most important goals for their country, selecting from a list of 11 options which included reducing unemployment; protecting the environment; preventing war; strengthening the economy; improving educational standards; overcoming poverty; and limiting population growth. “Protecting the environment” was ranked the most important goal by respondents in Australia, Brunei, Hong Kong, Japan and New Zealand. In the remaining countries (China, Bali, Fiji, India and Thailand), “protecting the environment” was ranked as the second, third or fourth most important goal.

The study included focus groups with youth in Australia, Fiji, India, Japan, New Zealand, Singapore and Thailand. The youth discussed their hopes and fears about the future, and in several countries, concern for environmental destruction was mentioned by the youth. In other instances, when the moderator shifted the discussion to the topic of the environment, strong levels of concern were expressed about a range of environmental problems. Researchers found that many students expressed a general concern for environmental issues, but expressed a fairly limited understanding of the social and economic links and consequences of environmental degradation (Yencken et al., 2000).

Trends in American Environmental Attitudes

For two reasons, I consider it informative to present an overview of trends in American attitudes toward the environment as an introduction to environmental attitudes among Polish youth. First, there is a longer history of research of public opinions in the

United States, so there is more data available than in Poland. Examining the patterns and trends of environmental concern in the United States helps to bring understanding of the patterns and trends of environmental concern elsewhere. Second, in many spheres – from cultural aspects of style and entertainment choices to trends in employment and marketing -- what happens in the United States influences other countries.

In a survey of youth opinions in 11 European nations, researchers asked teenagers to identify which nationalities were considered the most interesting to youth. The young people were shown a list of countries which included the eleven nations in the survey, plus the United States, and asked to rank the countries in order of their preferences to meet people from these nations. Youth in all countries ranked the United States either first or second only to their own country, indicating that European youth were very interested in meeting American youth (Alsaker & Flammer, 1999). My own anecdotal observations in Poland suggest that Polish youth are very interested in mimicking the styles and trends of the United States. American brand-name clothing, cigarettes and other products are very popular in Poland. I do not presume that political or ideological trends are afforded such popularity, but it is worth remembering that much of what happens in the United States will impact issues and opinions in other countries.

Measurement of American public opinion concerning environmental issues began in the mid-1960s. In 1965, respondents in a national public opinion survey of the most important problems facing America ranked pollution 9th among 10 listed problems (Dunlap, 1995). By 1970, the year of the first “Earth Day”, pollution was ranked second. Public concern for the environment remained high through the 1970s, and in the 1980s there was a renewed public interest in environmental support, often described as a kind of

backlash to the anti-environmental policies of the Reagan administration (Dunlap & Mertig, 1994). Gallup surveys in the early 1990s found that three-quarters of Americans considered themselves to be “environmentalists,” while a Roper survey in 1992 reported that only 17% of Americans surveyed were neutral or “unsympathetic” to environmentalism (Dunlap, 1995). At the end of the twentieth century, public concern for the environment remained high. A 1999 Roper poll reported that 56% of Americans surveyed worry that the first ten years of the 21st century will be “the last decade when humans will have a chance to save the earth from an environmental catastrophe” (Whitman, 2000).

As with studies of youth, the link between knowledge and attitudes is unclear in studies of the general public. An early study of the environmental attitudes of adults in Minnesota found that persons who were more informed about environmental consequences of local issues were not necessarily more favorable toward greater enforcement of regulations, suggesting that the link between knowledge and attitude is not consistent (Tichenor, Donohue, Olien & Bowers, 1971). Many of the respondents indicated that personal sacrifices are not necessary, since technology will solve environmental problems.

Gigliotti (1992) also found a strong negative correlation between a person’s belief in technology and their reported willingness to give up items for the sake of environmental frugality. His findings were part of a study which evaluated the attitudes of Cornell University students in 1971, 1981 and 1990. He concluded that students in 1990 were less willing to make personal sacrifices in lifestyle items than students two decades previous. Additionally, the three surveys indicate a trend that demonstrates that

fewer of the students surveyed believe that material and energy resources in the United States are limited. A persistence in the belief that resources are limitless has profound impacts on resource consumption patterns and ecological orientation. One of the fundamental concepts of an environmentally-conscious worldview is the acceptance of the finite amount of resources available and the ability of the planet to handle wastes and byproducts (Meadows, Meadows, & Randers, 1972, 1992; Milbrath, 1989).

Other studies shed some light on the continuing status of environmental concern in the United States. Since 1992, the National Environmental Education and Training Foundation has commissioned the annual “National Report Card on Environmental Attitudes, Knowledge, and Behavior” of a representative sample of American adults. One consistent trend indicates that pro-environmental sentiment declines as people get older, a finding which confirms earlier reports (Jones & Dunlap, 1992). In the 1999 Report Card survey (N = 1,501), when asked to choose between environmental protection and economic development in a situation where a compromise agreement was not possible, 77% of young Americans (18-34) chose environmental protection (NEETF & Roper Starch Worldwide, 1999). The proportion of middle-aged Americans with this opinion was 71%, and only 57% of those aged 65 or older.

The report card surveys also recorded a high level of ignorance regarding environmental issues. The average survey respondent could only answer correctly three of ten questions on environmental issues (NEETF & Roper Starch Worldwide, 1999). On the multiple choice survey, only 28% of respondents could identify the leading source of electricity in the United States, and less than one in ten could identify the leading cause of childhood death worldwide. Kevin Coyle, the president of the National

Environmental Education and Training Foundation, the organization which commissions these annual studies, stated in the foreword to the 1999 report: “Americans as a whole are vastly unprepared to address the suite of future environmental issues that will require personal knowledge and action. You might say that our cumulative ‘EQ’ – our environmental intelligence quotient is dangerously low” (NEETF & Roper Starch Worldwide, 1999).

Two Theories of Environmentalism

Despite the displays of environmental ignorance described above, the majority of Americans consider themselves to be supportive of the environment. This has lead theorists to hypothesize about why environmental concern is so widespread in the United States, and to question what might explain the reasons for the increase in environmental concern since the 1960s. Two theories have dominated this discussion. The culture change theorists (e.g., Inglehart 1990) assert that the post-WWII generations, having grown up with economic security, have been able to meet their first order survival needs as postulated by Maslow’s (1973) hierarchy of needs theory. According to culture change theorists, this relative security allows societies to pursue *post-materialist* values which include higher order needs such as concern for the environment.

Opponents to this post-materialist viewpoint assert that a society does not need to be “post-materialist” to appreciate and be concerned about environmental issues (Dunlap & Mertig, 1997). The proponents of the social context theories assert that the increase in concern for the environment is a reflection of the objective reality that environmental problems have become more diverse, serious and life threatening. Concern for the environment has increased because environmental conditions have worsened, not simply

because material needs have been addressed. Investigations into the levels of environmental concern in other nations have contradicted the post-materialist theory described above. In “Health of the Planet Survey,” a 1992 study of 24 countries, researchers found that residents of low-income nations had *higher* levels of environmental concern on several indicators than did residents in high income nations (Dunlap & Mertig, 1995). Thus, for persons living in the so-called developing countries, protection of air and water are not “post-materialist” but fundamental needs which address very real and serious health concerns for survival.

Diekmann and Franzen (1999) compared the results of the 1992 “Health of the Planet” (HOP) survey which included 24 nations, with the 1993 International Social Survey Program (ISSP) which included 21 nations. In the HOP survey, when respondents were asked to *rate* the seriousness of environmental problems in their countries, the correlation with GNP per capita was negative, but when respondents were asked to *rank* environmental problems in comparison with other important problems, the data displayed a positive correlation to GNP per capita. When asked to *rate* the seriousness of environmental problems, 66% of Polish respondents stated that environmental problems in Poland were “very serious” (Dunlap et al. 1993). Conversely, when respondents were asked to *rank* the major problems facing the nation, only 1% of Polish respondents volunteered environmental problems as the most serious problem for the nation. A greater proportion of respondents in wealthier nations (such as The Netherlands) replied that environmental problems were the most serious.

Diekmann and Franzen assert that this disparity in correlations is because the HOP items are at least two-dimensional, measuring two different aspects of concern. I

agree with the authors that the question formats measure different dimensions, however, I disagree with their distinctions. By their distinction, how respondents *rated* the seriousness of environmental problems, was a measure of one dimension which they labeled “environmental concern,” defined as “an awareness of environmental problems mainly in one’s community that are rated as more or less serious” (Diekmann & Franzen, 1999, p. 546). In my opinion, this is an oversimplification of the meaning of concern, and it demonstrates an example of the definitional problems that have been common in research on environmental concern. Their second dimension is the “willingness and ability of people to give up something for the priority of environmental goals.” It was measured by how people *rank* environmental problems in relation to other problems.

It is logical to assume that for countries with many pressing problems, there is likely to be a suite of problems competing for peoples’ attention. In situations such as these, the argument would be that environmental problems would be perceived as less important. Diekmann and Franzen’s study confirmed a positive correlation between this second dimension and GNP, however, I caution that this is also an oversimplification. Further studies may reveal that the relationship is much more complex and actually a reflection of an assortment of factors which may include the number and seriousness of issues facing a nation, the longevity of a stable government, the sense of military and economic security, etc. With this in mind, I will now turn to studies of environmental concern in Poland, a country experiencing transitions in many of these factors.

Trends in Polish Environmental Attitudes

It is important to understand that there was little public research done regarding the environmental situation or on public opinions regarding the environment in Poland

before the political transition in 1989. Sociologists and biologists were keenly aware of the growing environmental problems, but the authoritarian stance of the communist government precluded any public disclosure or discussion on topics which could be seen as critical of the government. Accordingly, during this period:

The regime's modus operandi precluded any real protest by environmentalists, and when such did occur, it was construed by officialdom as an activity that was hostile to Poland and that threatened to undermine the foundations of the system and its alliances. Environmental warnings and activities in the field of environment protection were a political problem closely controlled by censorship.

(Szacki, Glowacka, Liro, & Szulczewska, 1993)

The first studies to address the social problems of the environment in Poland took place in the 1980s, including various studies about the environmental movement, empirical studies on the levels of pollutants, and social analyses about threats and social conflicts related to the environment (Szacki et al., 1993). Due to the era of censorship which prevailed, some studies – both formal and informal – were “published” anonymously by an underground press. Since I could not locate the original studies, I will summarize the key findings of these early studies as they have been mentioned in research reviews (Mirowski, 1999; Szacki et al., 1993).

In early studies of popular ecological values, researchers found that in regards to the values of nature, people more often identified “consumptive” or “instrumental” values which are based on the ability of an object or entity to be utilized, such as clean drinking water or clean swimming water. The alternative are “intrinsic” values which afford worth to an object or entity for its own sake and not limited to human utility, such as the need to protect biodiversity or the integrity of beautiful landscapes. Studies found that the visibility of environmental threats had a huge impact on public awareness and, by

extension, public concern since many of the threats were linked with considerable health impacts. Issues that were dramatically visible such as pollution from smoke stacks, or factory pipes dumping directly into rivers, gave rise to much more public concern than less visible, but very dangerous, problems such as contamination of groundwater. One notable exception, which was the subject of numerous sociological studies, was public reaction to the invisible threats from the nuclear fallout following the accident at the nuclear electric plant in Chernobyl in April, 1986. The general awareness and fear of health impacts among the Polish people escalated after Chernobyl, and environmental issues were finally publicly discussed by the communist regime (Hicks, 1996).

The transition to democracy in 1989 brought about a new climate of openness for research. In 1992, the Public Opinion Research Center in Warsaw launched the first of a series of surveys on environmental awareness. The studies involved face-to-face interviews with over one thousand adults selected randomly to be representative of the population. To date, surveys have been conducted in 1992, 1993, 1997 and 2000, with different participants each year. As mentioned in Chapter 1, in the first three survey years, respondents consistently ranked “poisoning of the environment” as the first or second most dangerous threat facing Polish society (Baturio et al. 1997). This is similar to the question on the HOP discussed above in which respondents had to rank the issue in relation to other important issues. In 2000, environmental concerns fell in rank to fifth place, behind crime, drugs, alcoholism, and terminal diseases as the greatest threats facing Polish society (Burger, 2000). For a variety of reasons that will be discussed below, other problems have eclipsed the priority of environmental degradation.

When the public is asked solely about concern for the environment, and not

ranked in relation to other issues, it is clear that the general level of concern for the environment remains high. This is similar to the rating question from the HOP above. In 1992, 80% of respondents indicated that they had “great” or “very great” concern for the condition of the environment. In 1993, this figure was 78%, and in the years 1997 and 2000, the number declined to 72% of those polled (Burger, 2000). Even with this slight decline, the majority of those surveyed indicated that they are greatly concerned about environmental conditions in Poland.

The surveys also identified a “pro-ecological” segment of the population on the basis of responses to four questions related to environmental concern and perception of economy-environment trade-offs. To qualify for this label, the respondent needed to answer all four of the questions in the index with a pro-ecological stance, including support for closing down factories and increasing unemployment in order to protect the environment. In 1992, 1993 and 1997, this accounted for one third of the respondents, with greater representation of this perspective among more affluent, better-educated, urban people. In the 2000 survey, the proportion of the population which could be classified as “pro-ecological” fell from 32% (1997) to 22% (Burger, 2000). Only 19% of respondents aged 18-24 were designated “pro-ecological”. This finding contradicts other studies which have found younger persons to be *more* environmentally concerned than older persons, although the studies are technically not comparable because they used different measures (Dunlap et al. 1992; Jones & Dunlap, 1992).

When taking into account occupational classes, 48% of the persons who are members of the social class known as “intelligentsia” (higher educated occupations and/or ancestral links to nobility) were classified as pro-ecological (Burger, 2000). In

contrast, only 8% of persons employed in farming answered the questions in a way which classified them as pro-ecological. Except for the age disparity mentioned above, these figures corroborate similar findings in the United States where younger, well-educated, politically-liberal urban dwellers employed outside of primary industries are considered more supportive of environmental protection (Jones & Dunlap, 1992). Interestingly, in the Polish 2000 survey, 24% of the unemployed persons surveyed were also pro-ecological (a higher proportion than the total population at 22%), yet another indication that concern for the environment is not limited to post-materialist societies.

Is support for the environment declining in Poland? There are at least two factors to consider here: the rise in importance of other pressing issues, and the perception that the situation is not as dire as before. Other issues have risen in importance probably because they have been increasing in severity. Unemployment and crime have both increased since the early 1990s (GUS, 2000a). At the same time, due to a combination of economic restructuring (e.g., factory closures), investments in environmental remediation and protection measures (e.g., sewage treatment facilities) and increased enforcement of regulations, many of the more visible problems have been addressed (Andersson, 1999). The environmental conditions in Poland are improving at a considerable rate (Andrzejewski & Baronowski, 1993; NFEP, 1998).

These trends echo similar patterns seen in the United States. Dunlap (1995) argued that the general public is less likely to be personally concerned about the environment when there is a presumption that the government is taking care of the problem. As evidence, he referenced U.S. polling data from 1970 to 1990. After the initial flurry of environmental laws in the early 1970s, public concern for environmental

problems declined because “the public thought they were being solved, presumably because laws were passed, agencies were established, and money was spent to solve them” (Dunlap, 1995, p.81). Then in the 1980s, during the anti-environmental Reagan administration, public concern for the environment rose as people worried that the government was no longer taking care of the environment. In Poland, after years of environmental destruction and neglect at the hands of the communist leaders, the post-transition governments have brought about much needed environmental improvements. The public has witnessed dramatic improvements in environmental conditions, which undoubtedly contribute to reduced concern. Polish scientists worry that public attention will turn away from environmental problems which, although not as visible as previous problems, are very serious and will be expensive to address (NFEP, 1998). In addition, there are new problems developing, notably waste management issues, noise pollution and ground-level smog from increased personal vehicle usage.

In the opinion of Polish sociologists, the two major factors which determine the character of ecological awareness in Polish society are the personal experiences of individuals and the environmental condition of the community in which they live (Burger, 1999). This type of knowing is not easily quantified by traditional methods, but there is recognition of the fact that persons who live and work in regions of severe environmental damage are aware of these facts on a very personal level.

A survey of university students in Katowice, the heavily industrialized city at the heart of the “Black Triangle” complex, provides compelling insight into how people process this kind of information. Over three-quarters of the respondents agreed that simply residing in the region for long periods is harmful to the health of all persons

(Wodz, 1994). Forty-five percent of respondents indicated that children should be raised in areas outside the region where conditions are healthier, while 34% said it was possible to raise children in the region as long as they took care to frequently spend time in less polluted regions. In another study from the same region, the majority of university students indicated that they would like to live elsewhere because they considered the environment unhealthy, but they admitted this would be unlikely due to financial, family and housing constraints (Tomeczek, 1995). Housing is so expensive in Poland that most young adults live with their parents until they are married, and often after marriage. Clearly, the negative health impacts of the region are an important factor influencing how young adults feel about the area, as well as their decisions to settle and raise families.

Other anecdotal evidence of the impacts of living in environmentally degraded areas comes from my personal observations. In May, 2000, I was a houseguest of a family in a city in the heart of the coal mining region. The city of over 130,000 residents literally is situated on top of a coal vein. Six coal mines operated within the city limits until the mid-1990s when changing economic conditions and increasing environmental concern brought about the closure of all six mines. At the time of my visit, the rate of unemployment was over 20% in the city. The people I visited were retired from positions in the mining industry, and they told me stories of friends who had developed respiratory illnesses. My hostess told me that when the mines were in operation, she had to wash the windows of the apartment every week because they became so sooty from coal dust that you couldn't see out of them. Her husband told me how after spending the afternoon outdoors watching soccer, his white shirt would be gray. Their neighbor explained how her family had wanted to be sure that their garden plot was safe for growing vegetables,

so they had the soil tested. They removed the top four meters of soil before they reached a layer without excessive amounts of heavy metals. They all assured me that with the closure of the mines, environmental conditions had improved dramatically.

As I traveled throughout the region, one of the most striking features was the dirtiness of the buildings. Since coal provides the major source of home heating, the walls of most structures are covered with a coating of black soot. In the winter months thick smog hangs over the cities with a density you can taste. Ignoring for a moment the associated health risks posed by air pollution, on a purely aesthetic level there was a bleakness which I have no doubt affects the way people think about their communities.

These anecdotes are representative of the everyday experiences of the lives of people in this region of Poland. Cumulatively these experiences affect not only how the people think about their communities, but how they perceive the environment, and their levels of concern for their health and quality of life. None of the studies cited above examined what people younger than university students think about the environment. In my study I begin to fill this information gap by exploring what young people think about the places they live, and their feelings of concern for the environment.

Contributions of Study: Origins of Understanding & Concern

As was revealed in the literature reviewed above and in Chapter 2, most research related to environmental attitudes and concern has focused on measurement and description of attitudes regarding specific environmental issues, and measurement to assess environmental concern. In her review of attitude and behavior research related to environmental education, Newhouse (1990) concluded that too many studies have

focused on outcome assessment, such as studies designed to assess the effectiveness of various educational programs. She suggested that there was a need for more research to examine how environmental attitudes are formed, specifically research into how life experiences affect attitudes toward the environment. In this study, it was my intention to examine not only the breadth and depth of environmental concern of Polish teenagers, but also to explore how attitudes about the environment are formed, and investigate which elements influence the development of environmental concern.

In Chapter Two I introduced the proposed Motivation-Action Cycle, and suggested that there are a series of variables which I have labeled “Origins of Concern and Understanding.” The Motivation-Action Cycle is reproduced in Figure 3.1 with the variables which I have labeled “Origins of Concern and Understanding” highlighted.

These variables emerged from focus group discussions with Polish youth who are involved in environmental organizations. After common themes were identified from the focus groups, I organized these conceptually into a model of variables likely to contribute to a person’s level of concern for the environment. Since the themes emerged from discussions with adolescents, they are specifically the variables which contribute to environmental concern among adolescents. In total, ten variables were identified as origins of understanding. It is my contention that all of the origins of understanding variables are inter-related, and further study may elucidate relationships between the variables. In the present study all of the variables are considered separately as independent variables capable of influencing the dependent variable of environmental concern. The variables tested in the Youth Environmental Concern and Action survey are displayed with their measurement items in Figure 3.2.

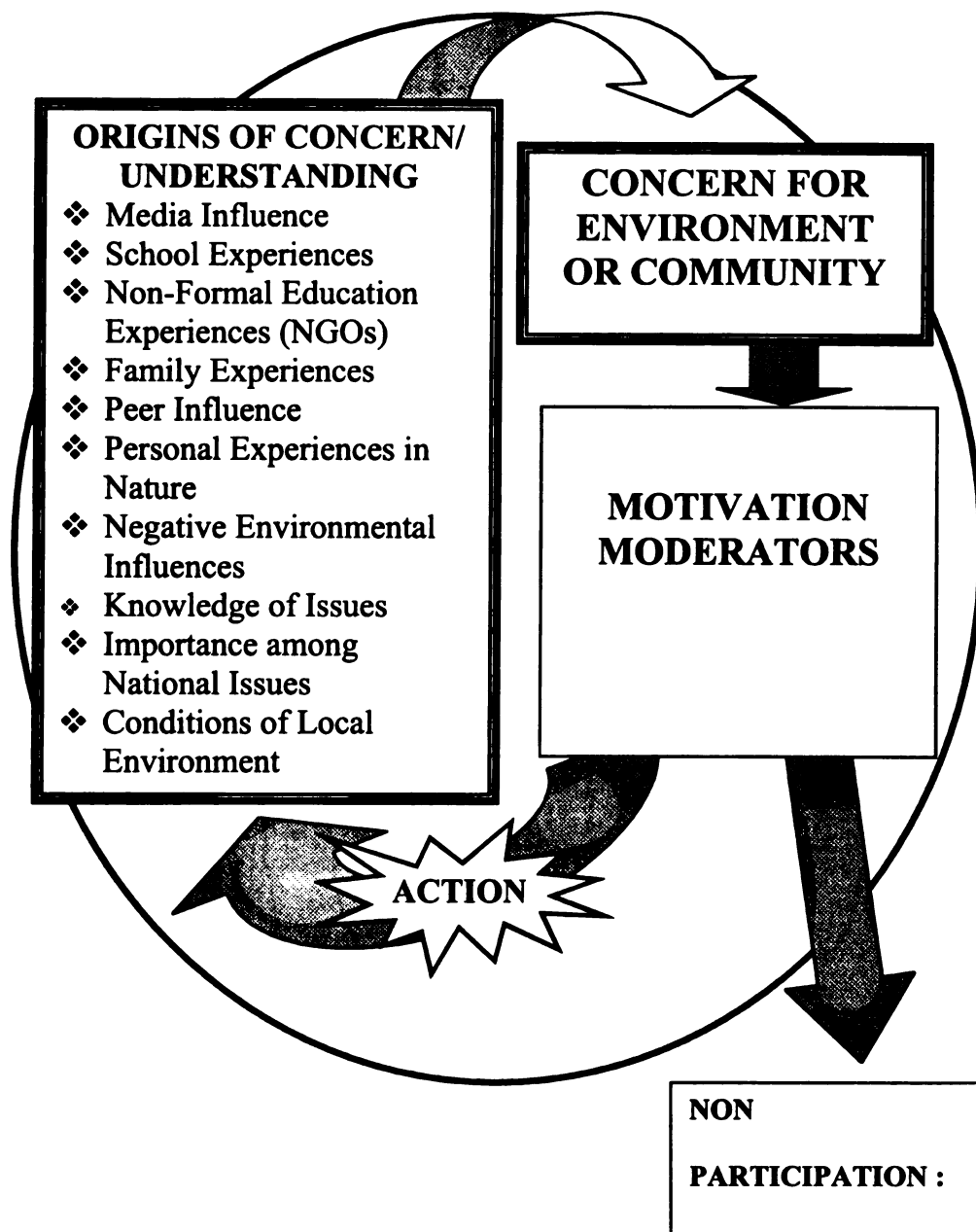


FIGURE 3.1 Proposed general conceptualization of Motivation-Action Cycle of Youth Participation: focus on the variables which influence environmental concern

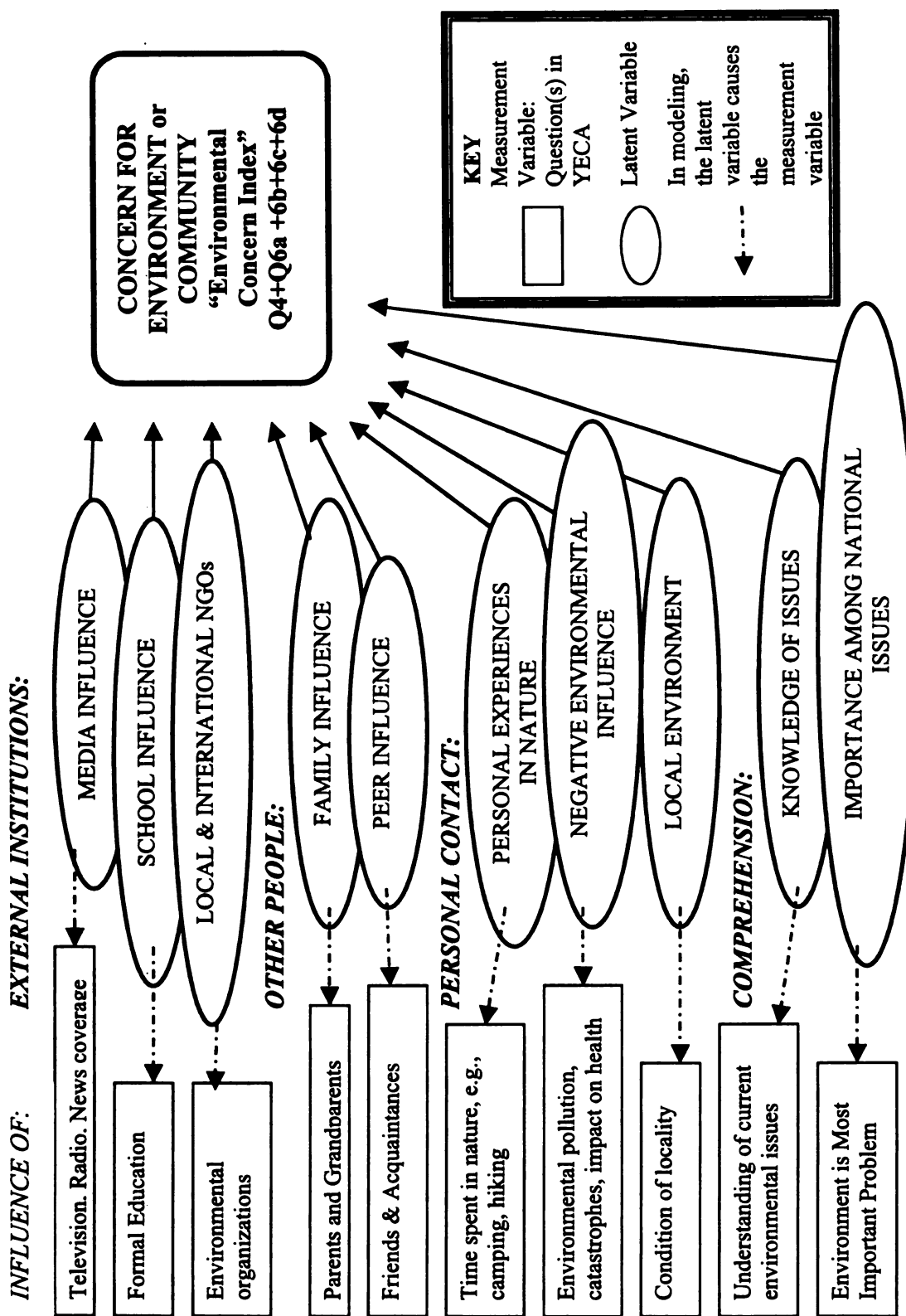


FIGURE 3.2 Operational Model of the Origins of Environmental Concern in Youth

For organizational purposes, I have subdivided the ten origins' variables into four categories which are described below: external institutions, other people, personal contact, and comprehension. These sub-headings should be considered organizational since the factors are not totally discrete. For example, I would expect a person's school experiences (an example of external institutions) would generally be colored by their perceptions of peer influence (other people).

On the survey, most of these variables were addressed in a section titled "Attitude toward the Environment" which included a list of people and experiences based on the nine origins of environmental concern (below; refer to complete survey in Appendix D).

Questions from YECA:			
ATTITUDE TOWARD THE ENVIRONMENT			
21. What or who has had an influence on your attitude toward the environment? On each line below, mark an "X" in the box which best describes your opinion.	This has had a MAJOR/ VERY GREAT influence	This has had a MINOR influence	This has had NO influence
(a) Experiences in nature, e.g., camping, hiking, gathering mushrooms, fishing			
(b) Specific examples of environmental destruction and pollution where I live.			
(c) My parents			
(d) My grandparents.			
(e) My friends and acquaintances			
(f) Things I've learned about nature and the environment in school			
(g) Things I've seen on television or read, or heard on the radio			
(h) Environmental catastrophes, such as Chernobyl, or the flooding in southern Poland .			
(i) Negative effects of environmental pollution on my health, or someone close to me.			
(j) Polish Local or national environmental organizations, i.e. PKE, LOP			
(k) International Environmental Organizations, i.e. GreenPeace; WWF			

External Institutions

Information and understanding about environmental issues can come from many sources which can influence how a person thinks about the environment. I defined external institutions to include official and quasi-official sources, including professional organizations, educational institutions, and the mass media. Government agencies and institutions would also be included in this typology, however, since the young people in the focus groups did not mention governmental sources specifically, I did not include it on the survey. The following variables were included:

Media Influence –

“Things I’ve seen on television, or read, or heard on the radio.”

School Influence –

“Things I’ve learned about nature and the environment in school.”

Local and International Non-Governmental Organizations – two items, scores averaged:

“Polish local or national environmental organizations, e.g., Polish Ecological Club; League for Protection of Nature.”

“International environmental organizations, e.g., Greenpeace, World Wide Fund for Wildlife.”

Mass media, as a channel for information and agenda setting unquestionably has an impact on what people think about the environment. Ostman and Parker (1987) found that persons who said they regularly read a newspaper indicated greater levels of environmental awareness and participated in more pro-environmental behaviors. The same study found that television viewing was negatively correlated with environmental concern and behavior. Other studies have reported increased levels of environmental concern and understanding of issues among viewers who watched a television documentary on environmental topics (Fortner & Lyon, 1985).

Other People

This category includes all other people who can exert influence on the concern of an individual. Three items were included in the survey to record the influence of significant actors in the lives of young people:

Family Influence – two items, scores averaged:

“My parents”

“My grandparents”

Peer Influence –

“My friends and acquaintances”

Families can influence the attitudes of young people in many ways, by actions and words, as well as by encouraging or discouraging certain types of behaviors. Positive affinities toward nature are passed down to younger generations on family trips to camp, hunt and gather mushrooms (a favorite activity of Poles). Similarly, if a parent fears or dislikes nature, these attitudes can exert strong influence over the attitudes of the children. The level of parental education has also been identified as a factor which contributes to the environmental attitudes of youth. In a study of Australian adolescents, researchers found that the level of the mothers' education was the best discriminator of higher levels of environmental concern among boys, however, it was not an important feature for girls (Hampel et al., 1996).

I included questions about parents and grandparents separately because several of the participants in the focus groups mentioned their grandparents as being extremely influential in their attitude toward the environment. Polish families are very close, and generations usually live in the same area, sometimes in the same apartment.

Consequently, most Polish children have extensive contact with their grandparents. In households where both the husband and wife work, often the grandmother is the primary care provider for the children. Alternatively, if the younger generation has moved into the city, and the grandparents remain in rural areas, children often spend holidays with their grandparents. In both situations, the younger generation is in frequent contact with their grandparents, and for many of the people I met in the focus groups this has been quite influential for them.

Peer groups are very important influences during adolescent development. Establishing a sense of identity and affiliation with a group is one of the characteristics of adolescent development, particularly important during early adolescence (Erikson, 1968; Newman & Newman, 1976). Studies have shown that young adolescents experience an increasing need for peer conformity, followed by a declining need in the late teens (Brown, Clasen, & Eicher, 1986; Steinberg & Silverberg, 1986). This relationship is often pictured by an inverted U-shaped age pattern (Brown et al., 1986).

Peer influence can occur directly, such as when an individual models behaviors they have either seen performed or discussed by influential peers, or through more subtle ways such as reactions to peer teasing and gossip (Ryan, 2001). All of these are ways by which “acceptable” and “unacceptable” behaviors are communicated within the peer group. Peers can exert influence in positive behaviors such as school performance, and negative behaviors, such as drinking. Studies have shown that the influence of the peer group varies in regard to the behavior measured (Brown et al., 1986; Ryan, 2001). Further, studies have shown that due to diversity within and between ethnic, racial and cultural minority groups, generalizations about adolescent behavior are not advisable

(Lerner et al. 2001). Thus, peer influence is widely recognized as being definitely influential for adolescents, but it has not been specifically examined in the context of environmental attitudes among Polish youth.

Another group of individuals who are particularly influential to the opinions and attitudes of young people are their teachers. In the Motivation-Action cycle I perceived that the impact of teachers and other significant adults was better conceptualized as a “motivation moderator” rather than a contributor to environmental concern. I discuss the various motivation moderators in Chapter 4.

Personal Contact

The next category encompasses the personal experiences an individual has that can affect the way he or she feels about the environment. It is important to consider that personal experiences can have positive, negative or no noticeable influence on an individual. There were five items on the survey, providing information for three factors:

Personal Experiences in nature –

“Experiences in nature, e.g., camping, hiking, gathering mushrooms, fishing.”

Negative Environmental Influence – three items, scores averaged:

“Specific examples of environmental destruction and pollution where I live.”

“Environmental catastrophes, such as Chernobyl, or the flooding in southern Poland.”

“Negative effects of environmental pollution on my health, or someone close to me.”

Local Environment –

“In your opinion, is the place where you live especially polluted?” Five response options: “not at all,” “not really,” “somewhat,” “definitely,” and “difficult to say.”

Spending time in the outdoors has long been recognized as being very influential to a how a person develops his or her attitudes about the environment (Carson, 1965; Dunlap & Heffernan, 1975; Theodori, Luloff, & Willite, 1998). Dunlap and Heffernan (1975) concluded that there was a positive relationship between participation in outdoor recreation and concern for the environment. Subsequent studies found inconsistent links between outdoor recreation and environmental concern, although a recent study concluded that participation in outdoor recreation is positively correlated with environmental concern as demonstrated by pro-environmental behaviors (Theodori et al., 1998). A study of the levels of environmental consciousness of Australian teenagers found that boys who had spent time alone in the wilderness were significantly more likely to score higher on an environmental concern index than boys who had not been in the wilderness (Hampel et al., 1996).

In another area of research, a group of studies by a variety of researchers has become known collectively as Significant Life Experiences literature or “SLE.” These studies all utilized a technique piloted by Tanner who used qualitative methods which involved asking people committed to environmental causes and careers to examine their lives from a retrospective viewpoint in order to identify life experiences which were significant to their environmental activism (Tanner, 1980). The research reports on the kinds of life experiences which have influenced career decisions by staff officers of environmental organizations (Tanner, 1980), environmental educators (Palmer, 1993;

Palmer et al., 1998; Peterson, 1982) and active environmentalists (Chawla, 1999).

Childhood experiences in the outdoors were the most frequently mentioned factor identified as contributing to environmental concern. In a similar study in nine countries, childhood experiences outdoors was also the most frequent mention (Palmer et al., 1998). These studies are all limited by the fact that the participants were all active in the environment, either by profession or affiliation with an environmental organization. They did not compare the significant life experiences of non-involved persons.

In the current study, in the focus groups I asked the young people who were active in environmental organizations to explain the origins of their interest. Also, in the survey all respondents – regardless if they were active in an organization or not – were asked to respond to an open-ended question which addressed their origins of interest in the environment. This results from this question are discussed in Chapter 5. Notably, my respondents were much younger than the participants in the SLE studies. Although their life experiences were considerably shorter, I consider the experiences of the adolescents to be no less intense than those recalled by adults, and definitely less clouded by memory.

Another important factor which can contribute to a person's attitude toward the environment is exposure to negative experiences related to the environment. Within this category, I included witnessing the effects of environmental degradation and pollution, the experiences of environmentally-caused health impacts, and perceptions of fear or heightened concern related to an environmental threat. Collectively, these represent evidence that either the environment is *being* harmed, or the environment can *cause* harm. It is very likely that in an expanded study, this construct of fear would be subdivided into separate dimensions of actual and perceived harm, and further subdivided

into harm to people and harm to the environment, but for the purposes of this study I believe the overall construct was sufficient.

Fear factors were not included in the early studies of environmental concern in the United States. Subsequent studies in Europe found links between fear for environmental conditions and pro-environmental behavior. In research on the environmental opinions of Swiss adults, Finger found that a person's exposure to environmental catastrophes was among the main factors to predict pro-environmental behavior (Finger, 1994). A study of the precursors to pro-environmental behavior in adults in France, Germany, Italy, Portugal and the United Kingdom found that the perception of risks associated with environmental degradation was correlated with pro-environmental behavior (Levy-Leboyer, Bonnes, Chase, Ferreira-Marques, and Pawlik, 1996). Inspired by these findings, the fear variable was included in a study of the precursors to environmental behavior among university students in the American Midwest, and emerged as one of three factors to significantly influence behavior (McConney & McConney, 1995). Although these studies implicated fear as a precursor to behavior, I suggest that it is also a factor which contributes to environmental concern.

Fear as a factor which elevates environmental concern in the United States became mobilized in the environmental justice movement beginning the 1980s (Di Chiro, 1998). The environmental risks illustrated by the events of Love Canal, Three Mile Island, and extreme levels of environmental toxicity in inner-cities across the nation began turning attention to the problems of environmentally-caused health risks and inequality (Freudenberg & Steinsapir, 1992; Hofrichter, 1993; Krauss, 1993). At this time, "environmental justice" as a social movement does not exist in Poland, although it

is widely acknowledged that environmental problems are indeed health issues (Nowrocki & Szczepanski, 1995; Wodz, 1994).

The condition of the environment where a person lives is another dimension of personal contacts and experiences which contribute to levels of environmental concern. In a study of the environmental attitudes of residents of Estonia and Latvia, countries which, like Poland, suffered through Soviet domination, researchers found that although respondents did not express high support for the New Environmental Paradigm scale, they were very concerned about local environmental problems (Gooch, 1995). The researchers concluded that environmental attitudes in these countries were strongly influenced by the direct physical and mental impacts of living in a location which was environmentally unsafe and unhealthy. In the "Health of the Planet Survey" 71% of Polish respondents rated the quality of the environment in their community as "very bad" or "fairly bad," and this proportion was the highest of all 24 nations surveyed (Dunlap et al., 1993). Additional sociological studies in Poland have concluded that the perception of pollution in one's locality is a definite predictor of environmental concern (Burger, 1999). This is a particularly important factor for Poles, since the majority of Polish people spend most of their lives in one community.

Comprehension

The final category is broadly titled "Comprehension" to represent two related factors which contribute to an individual's level of environmental concern: their understanding of environmental issues, and their perception of the importance of environmental problems in Poland. Both of these latent variables are influenced by the previously mentioned variables, however, each variable was considered independently.

Knowledge of Environmental Issues was measured by a 6-item index (Appendix D). The multiple choice questions were written with the assistance of Polish education specialists and environmental education teachers. The questions covered a range of environmental issues including water pollution, global warming, acid rain and biodiversity.

Importance among National Issues was an assessment of how urgent the respondent thought environmental problems were relative to other importance issues. It was measured by a question which asked respondents to select from a list of national problems up to three issues they believed were the *most important* problems facing Poland. The nine issues emerged from the focus group discussions: threat of war, crime and violence, drugs, unemployment, lack of tolerance for other people (races, religions, etc.), destruction of the environment, not enough money for living, disease (e.g., cancer), and purchase of Polish land and businesses by foreigners. For regression analyses with the Environmental Concern Index, this item was dummy coded (1 = environmental destruction selected among three most important problems, 0 = not selected).

The five items included in the Environmental Concern Index (below) were coded such that higher values indicated greater levels of environmental concern. An individual's Environmental Concern Index score was the total of all five questions. In the survey results section I present bivariate correlations between each of the nine origins of concern and the Environmental Concern Index, as well as multiple regression analyses of all nine factors. But first, I present the results of the focus groups and highlight the elements of concern which emerged from discussions with Polish young people.

Questions 4 and 6a-d, the Environmental Concern Index items, from the Youth

Environmental Concern and Action Survey:

4. To what degree does the state of the natural environment in Poland concern you? When we say “environment”, we mean all the elements that make up the surroundings and conditions for life of the individual and society, including the natural environment and the built environment. Select ONE answer and mark an “X” in the box: [Very great degree, Great degree, Not Much, Basically not at all, Difficult to say]

6. *Below are some statements about the current environmental situation.*

For each of these statements, please mark one box to indicate how much you agree or disagree [response options: strongly agree, agree, disagree, strongly disagree, or difficult to say]

- (a) I feel that we need to change the way we treat the environment as quickly as possible.
- (b) I believe that the seriousness of the environmental situation has been greatly exaggerated.
- (c) I am very concerned about the impact that present environmental problems might have on future generations.
- (d) Quite honestly, I am not very concerned with the environment

Results

Focus Groups

I conducted 15 focus groups over the course of this study (Appendix A). A complete description of the selection of group participants and how focus groups were conducted is provided in Chapter Two. The major themes of discussion with young people included general concerns for the future, their opinions of the condition of the environment, their perceptions of the role of young people in addressing environmental problems, and the kinds of environmental actions in which youth in Poland were involved. I met with youth who participate in environmental or social organizations (hereafter “joiners”), as well as youth who do not participate in environmental or social

organizations (hereafter “non-joiners”). The terms are simply a categorical description that I used to distinguish whether young people were members of an organization or not, and are not indicative of personality traits which are beyond the scope of this study. For consistency, in the survey results I have also categorized as “joiners” respondents who indicated that they were a member of at least one organization.

I will begin by describing some of the themes which emerged in discussions with non-joiners, and then turn to the themes that arose from discussions with joiners.

Focus Groups with Youth not Involved with Organizations: Non-joiners

I conducted six focus groups with non-joiners. Because I was conscious of the fact that mixed gender groups might not be as willing to discuss issues related to personal opinions about the environment, I met separately with boys and girls. The focus groups were conducted during the school day at the young peoples’ schools, and lasted between 45 and 90 minutes. I met with two groups of students from a high school in a mid-sized city in an agricultural region (aged 16), two groups of students at a middle school in a large urban center (aged 15), and two groups of students at a middle school in a small town near a large city (aged 13-14). All focus groups were conducted in Polish and audio tape recorded for transcription and professional translation.

The focus groups began with an ice-breaker activity to help the participants adjust to sharing their opinions. I asked them to write down what concerned them the most about the future, and we discussed these in turn. One of the most common concerns mentioned by both boys and girls was fear of war. The boys also mentioned a concern for unemployment, as well as the concern that the salaries of many jobs were too low to make a living. Girls more often expressed concern about admission into a university, the

destruction of the environment and the loss of family and friends. The nine issues which emerged most often in the focus groups were included on the written survey (see Figure 3.3 in the upcoming section on survey results).

Two of the issues which were brought up by the young people deserve further explanation. In several groups, the topic of purchase of land by foreigners was mentioned as a great threat to the future of Poland. I think this reflects conversations the youth might have overheard from adults or in the media where a vocal minority expresses great concern over the sale of Polish lands to foreign owners. Considering Poland's history, this is perhaps not surprising. For over a century, from 1795-1918, Poland did not exist as a nation, having been subdivided by Russia, Prussia and Austria. Between 1945-89 Poland was under the authority of the Soviet Union. Recently, due to privatization, many foreign-owned businesses are being developed in Poland, a trend which most Poles see as economically benign but there is some worry about the future consequences. In two of the focus groups with boys and one with girls, the youth mentioned the slogan "Poland for Poles," explaining to me that this is the rallying cry of one of the nationalistic political parties.

Of all the issues raised by the youth, the most unexpected area of concern was the topic of prejudice or intolerance. This topic arose independently in the focus group with girls in a city in an agricultural region, as well as the focus group with girls in Warsaw. Since there are extremely few ethnic minorities living in Poland, I was very surprised when this was mentioned as one of the main concerns for the future of Poland. Upon further probing, the young girls elaborated that there was a great deal of intolerance in Poland, directed towards different ethnicities, specifically black people, Asians, and

“Romany,” the gypsy clans with origins in Romania. The girls also described feelings of intolerance exhibited by many people towards others not based on ethnicity, but for a variety of reasons which included persons who dress differently, listen to different music, support rival soccer teams, behave badly, are poorer, diseased or mentally challenged – an entire list of features which the young girls illustrated with examples of intolerance. Although this finding was beyond the scope of this study, I believe that it is a path of inquiry which deserves further study in order to define the boundaries of perceived intolerance and the depth of these feelings among Polish youth.

When environmental issues were mentioned by non-joiners, it was most often in terms of fears for some kind of environmental catastrophe, such as wide scale flooding or disasters associated with global warming. In recent years, notably 1997 and 1999, regions of Poland experienced severe flooding when major rivers rose over flood control walls and caused much damage. Nightly news programs had graphic film footage of the destruction, thus even people who lived in regions not affected physically by the floods were definitely aware of the consequences. Global warming was mentioned in several of the focus groups, however by their comments the young people indicated a very limited understanding, such as this 15-year old boy at a middle school in Warsaw: *“In a few years, the water will flood us, when the ice will melt in Antarctica, the sea level will rise...”* (at this point, several of the other boys in the group nodded their heads and voiced their agreement).

Local issues mentioned in the focus groups included the lack of recycling and waste segregation facilities. The youth in urban settings expressed concern over the loss of green spaces as building projects proliferated. It needs to be pointed out that since the

transition in governments, there has been a building boom in the large cities throughout Poland. Many new apartment buildings have been built or are being built, a testament to the growing wealth of the middle class. Additionally, many new businesses, the majority of them western-owned (e.g., Ikea, McDonalds, and enormous French- and German-owned supermarkets, etc.) are springing up in and around the major Polish cities. For the youth I met in Warsaw, this impacted their lives directly since they no longer had play spaces and ball fields. As one 15-year described: *"The housing estates are growing and there is less space even for dogs to run, not just us."*

In the small town near a large urban center, the young people were even more specific on this point and both boys and girls mentioned the problem of urban and industrial development. One 13-year old boy made an observation that was much more advanced than I had heard in other groups with non-joiner youth:

Towns are more and more industrialized. Industry develops. They closed down the coal mines and factories because they do not have money and do not make a profit, but now they build new factories to make plastic things and the all the fumes go into the air and create really strange things...smog.

It would be incorrect, however, to presume that the young people were completely opposed to these developments. Many Poles consider moving into one of the newer housing developments to be an elevation in social status, particularly in comparison with older apartment buildings which pre-date the war or were built immediately following the war. Similarly, foreign businesses are among the most preferred by Polish youth. When I asked non-joiners in a mid-sized town in the agricultural region what they would like to change about their community, boys and girls both mentioned that they would like to have a McDonalds or a Burger King in their town.

One of the perceptions about the environment that came up frequently in discussions with non-joiners was the belief that environmental problems were limited to specific regions. The 15-year old boys I met in northeastern Poland seemed convinced that ecological problems were an issue only in the Silesian regions in south-western Poland (the “Black Triangle”). The girls in the same town were also convinced that ecological problems existed in distant places *“where there is pollution.”* Somewhat surprisingly, the 15-year old girls I met in a focus group in Warsaw also expressed the opinion that pollution was a problem for distant Silesia. When I asked them about Warsaw, the only environmental issue they mentioned was lack of recycling facilities. I found it interesting that the young people I met seemed to overlook, or perhaps not notice, local environmental issues. Only one boy in the agricultural region made the connection: *“here the environment is destroyed also, but you just can’t see it.”*

Due to lack of time, I was not able to conduct a focus group with young people from the Silesian region, the area considered to be the most ecologically devastated in Poland. As I mentioned in my discussion of study limitations in Chapter 2, I would recommend that in future studies, young people who are growing up in these conditions be interviewed for their opinions. I visited the region to administer the surveys, and that information is presented later in this chapter.

The most resounding theme to emerge in discussions with non-joiners was the perception that many young people in Poland simply do not care about the environment. Consider this exchange between 15-year old girls in a city in an agricultural region:

Annelise: *Can you tell me why you think young people are not interested in the environment?*

Girl 1: *They do not care about it.*

Girl 2: *They are not interested.*

Girl 3: *They know too little.*

Girl 4: *No! Young people know but they do not care.*

Girl 1: *Young people are at such an age that they do not care.*

Girl 5: *They are interested in putting make-up on their faces and so on. Who would think that the paper that they toss will change anything?*

This lack of caring was identified by the young people as both as a major source of environmental problems, and as a justification to not get involved. Rational choice theorists refer to this as the “free rider” issue, whereby many people enjoy the benefits of, in this case, a cleaner environment, but they do not want to become personally engaged in the co-operative behavior necessary to bring these changes about (Wall, 1995). They “free ride” by taking advantage of the benefits without personally paying the cost.

It was apparent by their comments that the non-joiners did not recognize a sense of personal responsibility. When I asked about the sources of ecological problems, a 15-year old boy in Warsaw responded : *“I think the mentality of the people. I think that people do not think about it, are not aware of many things.”* A 16-year old girl in an agricultural region answered : *“Carelessness. People do not look where they throw the litter. People are lazy.”* It is notable that many of these young people spoke most often of third parties, distinct from themselves, as being the cause of ecological problems.

Over and over I heard the young people say that ‘*people just don’t care.*’ There was a clear perception that the majority of their peers, and the majority of the population, were simply not concerned about the environment. A 13-year old boy in the town near the urban center explained: *“They throw waste away, and then they are through with this problem. They do not care what will happen in 100 years because they will not be here anymore. They just do not care.”*

The impression was clear: the non-joiners were convinced that most people are not interested in the environment, and thus they could think of no reason why they themselves should get overly concerned about the situation. As a 13-year old girl in a large city put it:

I think that our generation is a generation of new technologies and they are lazy to go outside and clean up. They prefer to listen to music. Why should they clean up after somebody they do not even know? It is simply nonsense.

Several of the young people explained how most teenagers prefer to watch television, or play on computers, or spend time with friends, rather than be concerned about the environment. A 14-year old girl in a small town said that the reason young people are not interested in the environment is because: *"They have other things to do. They prefer to go play soccer and make a mess of that. Nothing happens if they throw a few papers around."*

Several times I heard them describe that environmental problems *used to be* a concern, but they didn't really see that now. A 15-year old boy at a Middle School in Warsaw explained : *"the environment is better now...it was the fashion 3 or 4 years ago and everyone was concerned, so now most people think everything is taken care of, and that things are better."*

To many of these non-joiners, the environmental situation was virtually a non-issue. When I asked them directly about environmental problems in Poland, they answered that there were indeed problems. In the discussions, however, it became obvious that they hadn't thought about these issues on a personal level and they hadn't developed a real concern for the situation.

Focus Groups with Involved Youth: Joiners

Conversely, the youth I met who were actively involved in environmental groups had thought about what the environment meant to them, and they were most definitely concerned. I met with seven groups of young people active in youth organizations. Four of these groups were specifically environmental in nature. Three of the focus groups were with young people active in 4-H clubs that had environmental components although the clubs themselves were not exclusively “environmental.” Since I met with the young people during the regularly scheduled meeting at the group’s meeting site, and because the groups were smaller, it was not practical to meet separately with boys and girls. I do not think this affected the dynamics of the discussions since the group members were accustomed to functioning together in an informal matter. All focus groups were conducted in Polish and audio tape recorded for transcription and professional translation.

For the ice-breaker activity in the focus groups with joiners, I asked the young people to write down their answers to several questions about the origins of their own environmental concern, and then we discussed these in turn. The first questions asked them to describe why they personally are involved in actions for the environment. A common theme to emerge was that these young people felt a sense of personal responsibility for the environment. Often they cited instrumental values of clean air and water. A 13-year old boy in a large industrial city explained :

People should take care of the environment because of their place in nature. If there was no nature, there would be no life on earth. Taking care of nature has a big influence on the lives of people. It's much better to live in a clean environment than in polluted cities.

Many of the young people noted the direct connection between the environment

and themselves. A 14-year old girl in a large industrial city said: *“By taking care of the environment, we take care of ourselves.”* Her 13-year old classmate, another girl, added: *“We should care for nature as we care for our own homes, because the environment that surrounds us is our one common home.”*

The older youth I met in groups articulated this as part of their sense of self.

Their concern was marked by a “need” to do something, as these statements exemplify:

19-year old boy, ecological organization in eastern city: *I am involved in environmental actions because I have an inner need to do so. It is for me something natural and I cannot imagine going through life ignoring nature and the destruction caused by people.*

18-year old girl, same organization: *I have an inner drive to do something. I observe the problems in environmental protection, and I want to leave the world better after I'm gone. I want to change the world. I want to live in a clean environment, I want my children to have the possibility to live in a healthy world.*

There was frequent reference to future generations in the remarks of the joiners, both human generations and animal populations. A 15-year old girl who is a member of a 4-H club in rural northern Poland said : *“We all know we'll be grandmothers and grandfathers....we'll have grandkids and we should take care of the planet so it will still be there for them.”* It was clear that the joiners I met had recognized a responsibility and personal commitment to future generations which I had not heard from the non-joiner youth. A 19-year old girl active in an organization in eastern Poland was even more specific when answering why it was important to care for the environment:

First of all, I do something because of egoistic reasons, because I do not want to be passive seeing everything that is happening. I know that I am responsible and I want to influence the situation, even in a minimal way. Besides, I would like to have children and I would like it so that my children will not see a lake with trash in it and gasoline on the surface...that they will

see what a forest looks like, and what a squirrel looks like, that they will not have to see such things in a zoo...

Another question from the ice-breaker activity was designed to solicit opinions and experiences about the origins of their interest in the environment. I asked the joiner youth to think back to when they first became interested in ecology, and describe a specific incident which depicts their early interest in nature and the environment.

Many of the young people described experiences in nature as being pivotal to their interest. Some of them recalled pleasurable times in the outdoors, such as this 13-year old boy from a large industrial city:

Environment and nature have value – I found this out when I was five years old. At that time I was with my grandmother in the country. It was wonderful! The sun was setting behind the trees. The nature to me was super.

Others recalled moments when they first became aware of the loss of nature, such as this 15-year old girl from a 4-H club in northern Poland:

I don't remember anybody telling me about nature, it just came the natural way. I had a small dog and loved it and protected it. I went to the woods with my grandpa where he showed me birds. I enjoyed it a lot. I thought that everything was so positive, nice and good. Nature is so beautiful, so why should anybody destroy it? And only when I went with my parents to the seaside and we wanted to enter the water to swim ...we usually swam in the lake which was clean....And suddenly we had to enter the water that was full of bottles and other things, then I realized that it's not so beautiful, that it's destroyed. When I was a small child, I thought like a child that everything is beautiful and positive and not destroyed.

For this young girl, the realization that the environment was being destroyed was a sobering and very memorable experience. She had come to love nature through her experiences with family and pets, and therefore the recognition that nature was being harmed was a pivotal moment.

Some of the youth recalled being encouraged by friends to join organizations or become vegetarian. A few mentioned how they had heard of the actions of Greenpeace or other non-governmental organizations. Several of the older youth I met at a focus group in a large city in eastern Poland recalled the impact of Chernobyl, as in the statement of this 19-year old boy:

I remember the catastrophe in Chernobyl, 1986. I was in kindergarten. We did not really know what was happening. They gave us some cheap medicine to minimize the results of the radiation, but I didn't understand why it was dangerous if it happened in Russia.

It is apparent from these statements that initial interest in the environment can come from many sources, including personal and family experiences in nature, the realization of the loss of nature, the influence of friends and the influence of threats. These will be discussed further in the results from the survey.

From all these various paths of initial engagement, the joiners I met expressed a common theme in an appreciation for the environment, along with a belief in their responsibility to do something. They were keenly aware of the fact that many people did *not* share their sense of personal responsibility for the present state of the environment or for future generations. In three of the groups, the issue of the lifestyle changes taking place in Poland since the government transition was mentioned as a major factor. An 18-year old boy in an industrial city described it this way:

Quite simply, people are not willing to do things. For example, it is possible to do a lot and people realize that...but after communism came the western model, the model of life with money, lots of money, and this is such a consumer style. Basically, people are more concerned with what they can get for themselves, and they do not care for others. Somewhere the highway is built, somewhere the bus line is closed down, but it is not my business. It is somewhere on the other side of town, somewhere far away. It does not concern me.

Comparison of Non-joiners and Joiners: Summary

In summary, the defining difference I noted between the non-joiners and the joiners is in the way they have responded to the realization that the general Polish population does not appear to be overly concerned about the environment. The non-joiner youth seemed to accept the basic apathy of their classmates and culture as a reason to justify their lack of concern. Non-joiners expressed the sentiment: "If no one else does it, then why should I?" They were aware of the condition of the environment in a very shallow, impersonal way. When I asked non-joiners about the greatest environmental problems in Poland, they quickly agreed that the environment in Poland is polluted. When I pressed the discussion to ask for specifics, global warming was mentioned most frequently, followed by vague descriptions of pollution in distant parts of the country. Because of their inability to identify local environmental issues, I got the distinct impression that the non-joiners were simply repeating the "environmental issues" they had been taught in classes. Global warming is a serious issue that warrants attention. I suggest, however, that the fact that these young people were either unaware of or unable to identify local environmental issues is a far more serious problem for the environmental future of Poland.

In contrast, the joiner youth were not only very aware of the more visible environmental problems in their areas, but also concerned about the root contributing causes such as consumerism and lack of personal responsibility. They were definitely concerned about the environmental situation, and by their comments they described a sense of personal responsibility. Like the non-joiners, the joiners acknowledged that most people in Poland are not interested in the environment. Rather than becoming

discouraged by this, the joiners seemed to draw inspiration for the potential of making a difference. While the non-joiner youth saw public apathy as ample reason for *not* becoming involved, the young people who have decided that the environment is important to them see apathy as a compelling reason *for* becoming involved.

Results

Survey

I further explored the findings from the focus groups by conducting a survey of first year middle school students. I used the modified stratified random sampling technique described in Chapter 2 to select survey respondents (N = 453) from 18 communities throughout Poland. Ninety-four percent of respondents were aged 14 (range 11 – 16 years), and 53% of respondents were female.

Most Important Problems Facing Poland

Nine topics of concern which were mentioned in the focus groups were included in a multiple choice question on the survey. Respondents were asked to select up to three issues which they believed were the most important problems facing Poland (Figure 3.3).

“Unemployment” was most frequently identified as the most important problem, selected by 55% of respondents, followed by “violence and aggression” (53%) and “destruction of the environment” (42%). Although war was commonly mentioned in the focus groups with uninvolved youth, on the survey it ranked 6th overall among selections for the most important problem, having been selected by 25% of the respondents

Almost 20% of respondents selected the option “lack of tolerance towards other

people, e.g. other races, religions, etc.” as one of the three greatest problems facing Poland. Although, compared to the other threats selected, “lack of tolerance” ranked low overall (7th out of 9 threats), the fact that it was identified by a sizeable amount of respondents suggests this is an area needing additional research.

Question 3 from Youth Environmental Concern and Action Survey:
 “From the list below, select UP TO THREE of the issues which IN YOUR
 OPINION are the MOST IMPORTANT problems in Poland:”

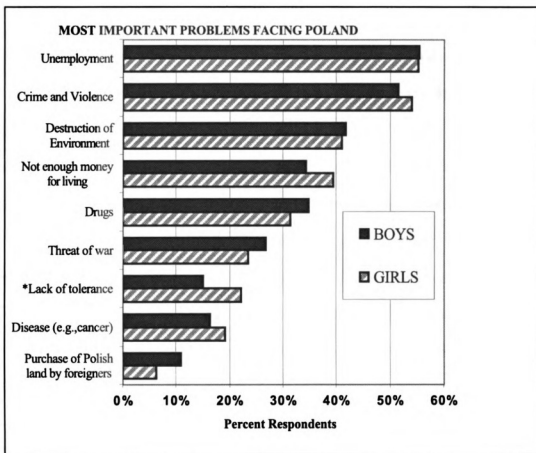


FIGURE 3.3 Most Important Problems Facing Poland. Presented in rank order by proportion of Middle School Students selecting each problem. N = 452;

* indicates significant difference between genders ($p < .05$)

There were some differences in the issues selected by boys and girls, but this was only statistically significant for the problem of intolerance which was selected more frequently by girls (Chi-square = 3.864; $p < .05$; $df = 3$). Other differences included the selection of “drugs” as the 4th ranking problem by boys, while “lack of money” was ranked 4th by girls.

Environmental Concern Index

Environmental concern was measured by a five-item index consisting of questions with five response categories. Four of these questions had Likert-type response categories ranging from “strongly agree” to “strongly disagree.” The fifth question was taken directly from the Polish Adult Environmental Awareness survey (years 1992, 1993, 1997 and 2000), and reads: “To what degree does the state of the natural environment in Poland concern you?” Response categories varied from “very great” to “basically, not at all.” Two thirds of youth respondents selected “great” or “very great,” which is slightly less than the 72% of adults who answered similarly to this question in the 2000 survey, however, as this is just a single-item measure the reliability is questionable.

The answer categories were assigned point values such that higher point values indicated greater environmental concern. Response categories which indicated pro-environmental or strongly pro-environmental opinions were scored four or five points respectively, undecided answers were scored as three points, and opinions negative or strongly negative to the environment scored two or one point respectively. The five questions were summed to create the Environmental Concern Index (ECI) score. At the upper level of environmental concern, the maximum possible score of 25 indicated

people who selected the strongly pro-environmental option for all five questions.

Environmental Concern Index scores are presented in Figure 3.4. There is a noticeable negative skew to the distribution, indicating that there is a tendency for higher levels of environmental concern as measured by this index.

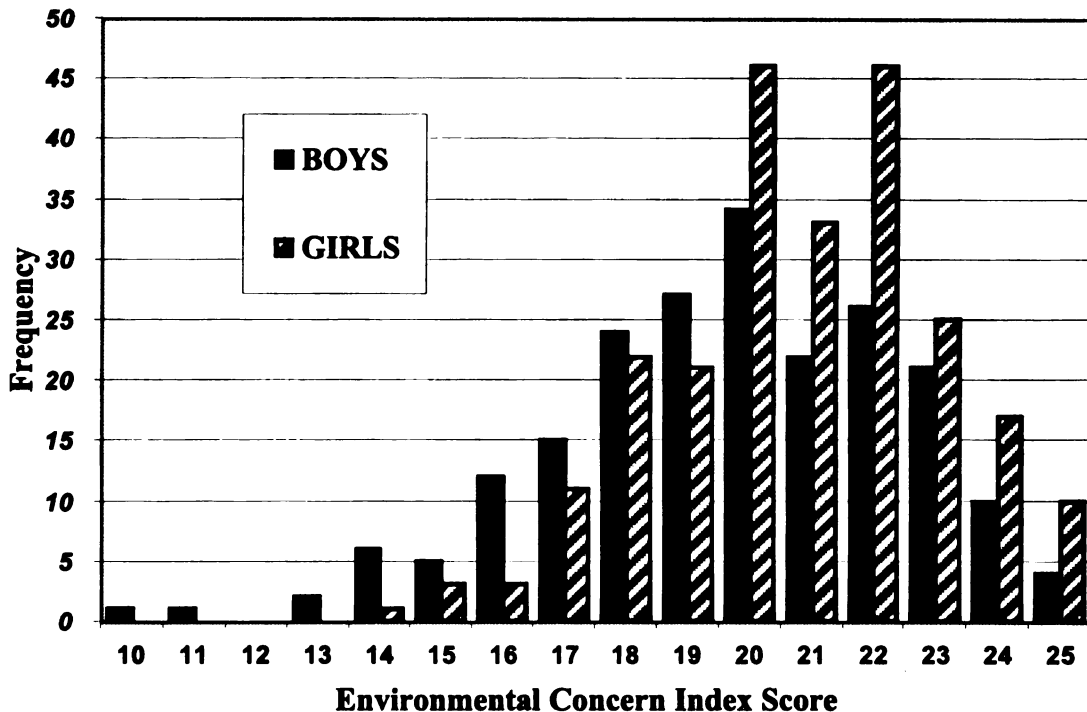


FIGURE 3.4 Environmental Concern Index scores of Polish Middle School Students. N = 448

The average ECI score for the entire sample was 20.29. Fully 75% of the respondents selected pro-environmental responses for at least four of the five questions in the index. Girls had higher mean scores for environmental concern than boys and this difference was statistically significant ($F = 19.456$; $p < .000$). This difference was consistent for boys and girls from all population categories, from villages to large cities.

When average ECI scores were compared by region, respondents living in the

central region had higher mean ECI scores (avg. score = 20.85) than respondents in the northeast (avg. score = 20.04) and respondents in the southwest (avg. score = 19.91), and this difference was significant ($F = 6.191$; $p < .01$). The lowest mean ECI scores by region were recorded for respondents from the southwestern region, the area considered to be the most polluted. A significantly greater proportion of respondents in the southwest (41%) indicated that the area where they lived was somewhat or definitely polluted, compared with 29% of respondents in the central region, and 19% of respondents in the northeast (chi-square = 18.543; $p < .01$; $df = 5$). In each of the three geographic regions, respondents who indicated that they lived in a polluted area were significantly more likely to have higher ECI scores (Northeast: $r = .26$; $p < .01$; Central: $r = .24$; $p < .01$; Southwest: $r = .18$; $p < .05$).

The survey included a section for respondents to indicate if they were a member or leader of eight popular types of youth organizations in Poland (including Scouts, 4-H, church clubs, etc.). Respondents who indicated that they were a member of one or more youth organizations were labeled “joiners,” while those who did not belong to any organization were labeled “non-joiners.” Joiners had significantly higher average ECI scores than non-joiners ($F = 8.445$; $p < .01$). When club membership was controlled, girls had significantly higher ECI scores than boys ($t = 4.564$; $p < .000$). There was no correlation between the education level of either parent and the concern levels for boys. For girls, the educational level of their mothers, as well as of their fathers, was significantly correlated with environmental concern ($r = +.195$; $p < .01$; $r = +.298$; $p < .000$ respectively).

Bivariate Correlations

I computed bivariate correlations between each of the ten origins of concern and the Environmental Concern Index. While this technically violates the assumptions behind the correlation coefficient, it is common practice in social science. Additionally the correlation coefficient is considered relatively robust (Zeller & Levine, 1974). I looked at correlations for boys and girls separately in order to determine key variables associated with environmental concern by gender (Table 3.1; Table 3.2).

For the boys, eight of the ten origins of concern were significantly positively correlated with levels of environmental concern. These were: Media Influence ($r = .27$; $p < .000$); Influence of School Experiences ($r = .14$; $p < .05$); Influence of Non-Governmental Organizations ($r = .19$; $p < .01$); Negative Environmental Influences ($r = .36$; $p < .000$); Conditions of Local Environment ($r = .14$; $p < .05$); Knowledge of Environmental Issues ($r = .18$; $p < .01$); and Importance among National Issues ($r = .25$; $p < .000$). The two variables which were not correlated with concern were both in the category of "Other People." The survey results indicate that there was no correlation between Family influence ($r = .07$; $p = .322$) or Peer Influence ($r = .07$; $p = .312$) and environmental concern. The other variable not significantly correlated for the boys was "Personal Experiences in Nature" ($r = .12$; $p = .097$).

The results were very different for the girls. Only four of the ten origins of concern were significantly positively correlated with environmental concern: Family Influence ($r = .16$; $p < .05$), Personal Experiences in Nature ($r = .17$; $p < .01$), Conditions of Local Environment ($r = .27$; $p < .000$), and Importance among National Issues ($r = .18$; $p < .01$).

TABLE 3.1 Bivariate Correlations between Origins of Concern and Environmental Concern Index (ECI); Middle School BOYS, N = 203. Abbreviations and measurement values described below. Shaded areas indicate significant correlation ** p < .01 *p < .05

	ECI	Media	School	NGOs	Family	Peers	Nature	Negative Influences	Local Env't	Know Sum	MIP
ECI	1.000	r = +.27 p < .000**	r = +.14 p < .05*	r = +.19 p < .01**	r = +.07 ns ^a	r = +.07 ns	r = +.12	r = +.36 p < .000**	r = +.14 p < .05*	r = +.18 p < .01**	r = +.25 p < .000**
Media		1.000	r = +.38 p < .000**	r = +.14 p < .05*	r = +.35 ns	r = +.16 p < .05*	r = +.03 ns	r = +.28 p < .000**	r = -.04 ns	r = +.02 ns	r = +.18 p < .01**
School			1.000	r = +.21 p < .01**	r = +.22 p < .01**	r = +.08 ns	r = +.01	r = +.33 p < .000**	r = +.04 ns	r = -.03 ns	r = +.21 p < .01**
NGOs				1.000	r = +.34 p < .000**	r = +.42 p < .000**	r = +.30 p < .000**	r = +.38 p < .000**	r = +.07 ns	r = +.11 ns	r = +.01** ns
Family					1.000	r = +.52 p < .000**	r = +.24 p < .01**	r = +.15 p < .05*	r = +.06 ns	r = -.10 ns	r = +.05 ns
Peers						1.000	r = +.24 p < .01**	r = +.17 p < .05*	r = +.15 p < .05*	r = -.14 ns	r = -.04 ns
Nature							1.000	r = +.09 ns	r = +.09 ns	r = +.02 ns	r = +.04 ns
Negative Influences								1.000	r = -.04 ns	r = +.05 ns	r = +.15 p < .05*
Local Env't									1.000	r = +.05 ns	r = +.12 ns
Know Sum										1.000	r = +.08 ns
MIP											1.000

ns^a = not statistically significant

Measurement Values for variables below:

1 = no influence, 2 = minor influence, 3 = major influence

Media: influence of media;

School: influence of school experiences

NGOs: influence of local, national and international NGOs

Family: influence of parents and grandparents

Peers: influence of friends and acquaintances

Nature: influence of personal experiences in nature

Negative Influences: negative environmental influences

Local Env't: Condition of local environment. YECA Question: Is the place

where you live polluted? 1 = not at all; 2 = not really polluted;

3 = difficult to say; 4 = somewhat; 5 = definitely polluted

KnowSum: Environmental Issue knowledge score = total correct, range 0 -6.

MIP: 1 = Selection of Destruction of the Environmental as one of three Most Important Problems in Poland; 0 = not selected as among top three problems

TABLE 3.2 Bivariate Correlations between Origins of Concern and Environmental Concern Index (ECI); Middle School GIRLS, N = 236. Abbreviations and measurement values described below. Shaded areas indicate significant correlation. ** p < .01 *p < .05

	ECI	Media	School	NGOs	Family	Peers	Nature	Negative Influences	Local Env't	Know Sum	MIP
ECI	1.000	r = -.01 ns	r = -.05 ns	r = +.09 ns	r = +.16 p < .05*	r = +.05 ns	r = +.17 p < .01**	r = +.07 ns	r = +.27 p < .000**	r = +.03 ns	r = +.18 p < .01**
Media		1.000	r = -.36 p < .000**	r = +.21 p < .01**	r = +.01 ns	r = +.10 ns	r = +.10 ns	r = +.17 p < .01**	r = -.06 ns	r = +.03 ns	r = -.07 ns
School			1.000	r = +.17 p < .05*	r = +.10 ns	r = +.15 p < .05*	r = +.15 p < .05*	r = +.18 p < .01**	r = -.06 ns	r = +.02 ns	r = -.11 ns
NGOs				1.000	r = +.17 p < .01**	r = +.17 p < .01**	r = +.23 p < .000**	r = +.25 p < .000**	r = +.05 ns	r = +.13 p < .05*	r = -.001 ns
Family					1.000	r = +.46 p < .000**	r = +.13 p < .05*	r = +.10 ns	r = .00 ns	r = -.04 ns	r = -.02 ns
Peers						1.000	r = +.14 p < .05*	r = +.07 ns	r = -.01 ns	r = +.02 ns	r = -.13 ns
Nature							1.000	r = -.15 p < .05*	r = -.09 ns	r = -.03 ns	r = -.12 ns
Negative Influences								1.000	r = +.02 ns	r = -.04 ns	r = -.01 ns
Local Env't									1.000	r = -.08 ns	r = +.12 ns
Know										1.000	r = +.06 ns
Sum											1.000
MIP											1.000

ns = not statistically significant

Measurement Values for variables below:

1 = no influence, 2 = minor influence, 3 = major influence

Media: influence of media;

School: influence of school experiences

NGOs: influence of local, national and international NGOs

Family: influence of parents and grandparents

Peers: influence of friends and acquaintances

Nature: influence of personal experiences in nature

Negative Influences: negative environmental influences

Local Env't: Condition of local environment. YECA Question: Is the place where you live polluted? : 1 = not at all; 2 = not really polluted;

3 = difficult to say; 4 = somewhat; 5 = definitely polluted

KnowSum: Environmental Issue knowledge score = total correct, range 0–6.

MIP: 1 = Selection of Destruction of the Environmental as one of three Most Important Problems in Poland ; 0 = not selected as among top three problems

Although for the boys, all three of the variables in the category of “External Institutions” had been significantly correlated with concern, none of these variables (media, school, NGOs) were found to be significantly correlated with levels of environmental concern for the girls. “Peer Influence” was the only variable not found to be significant for either boys or girls. The results are summarized in Table 3.3. Only two of the variables were found to be significant for both boys and girls. Not surprisingly, how an individual perceived the importance of environmental issues among national issues was correlated with levels of environmental concern. Boys who selected “destruction of the environment” as one of the top three problems in Poland were significantly more likely to have higher levels of environmental concern ($r = .25$; $p < .000$), as were girls ($r = .19$; $p < .01$). There was a significant correlation between a person’s perception of the local pollution and their level of concern (boys: $r = .14$; $p < .05$; girls: $r = .27$; $p < .000$).

Bivariate correlations between the ten origins revealed that for boys, the perception of negative environmental factors was significantly correlated with five of the other variables, with correlations ranging from 0.17 to 0.38. For girls, negative environmental factors and personal nature experiences were both significantly correlated with four of the other variables, with correlations ranging from 0.13 to 0.25. Notably, both boys and girls who indicated that non-governmental organizations have had “very great” influence on their attitudes about the environment were also more likely to express the opinion that family, peers, personal experiences in nature and negative environmental factors were similarly influential.

TABLE 3.3 Summary of Bivariate correlations: Origins of Concern and Understanding and Environmental Concern Index, by gender. Only those variables which were significantly positively correlated to increased levels of environmental concern are indicated: X = ($p < .05$) XX = ($p < .01$)

Origins of Concern and Understanding	Middle School Boys N = 203	Middle School Girls N = 236
EXTERNAL INSTITUTIONS:		
Media	XX	
School Influence	X	
Local and International NGOs	XX	
OTHER PEOPLE:		
Family Influence		X
Peer Influence		
PERSONAL CONTACT:		
Personal Experiences in Nature		XX
Negative Environmental Factors	XX	
Condition of Local Environment	X	XX
COMPREHENSION:		
Knowledge of Environmental Issues	XX	
Importance among National Issues	XX	XX

Multiple Regression Analyses

Bivariate analyses only consider two variables at a time. I also wanted to explore how the suite of variables (the origins of concern) could collectively and in sub-group combinations influence environmental concern, so I used multiple regressions to incorporate the effects of all of the variables simultaneously. This allowed me to calculate the variance explained by all of the variables, as compared to bivariate analyses which can only explain the variance using one variable. As a preliminary step in the multiple regression analyses, I verified the normality of the data by plotting standardized residuals and checking for outliers with Mahalanobis distances (Norusis, 1999). This is done to establish that the data are a sample from a normal distribution, which is a criterion for many statistical analyses. The sample met assumptions of normality.

I computed multiple regressions with the ten origins of concern. As in bivariate correlations, the sample was split by gender in order to evaluate the variables which most affect levels of concern for boys and girls. I decided to use stepwise variable selection, the most commonly used method in building models of factors (Norusis, 1999). Stepwise multiple regression is based on complex computer calculations to test the selection of variables in a proposed model by sequentially adding variables that improve the predictive power into the model, and removing variables whose importance diminishes as additional predictors are added. I also tested an alternative method, in which all of the proposed variables are entered and retained in final calculations. With this second method, the total variance explained by the model was slightly higher than with stepwise regression, but this is a mathematical artifact of calculations with many variables. Stepwise variable selection is a more parsimonious method in which only variables which help to improve the predictive power of the model are selected.

Results of stepwise multiple regressions are shown in Table 3.4. For boys ($n = 199$), out of the ten variables entered, four were selected as significantly affecting the dependent variable, the Environmental Concern Index. These were perception of pollution in the local environment, negative environmental influences, knowledge of environmental issues and importance among national issues. The total variance explained was 22.8%. For girls ($n = 236$), there were also four variables selected by stepwise regression, but only two of these were similar for the boys: perception of the local environment and importance among national issues. The remaining significant predictors for girls were family influences and personal experiences in nature. The total variance explained was 14.7%.

TABLE 3.4 Multiple regressions for the variables suspected to influence environmental concern among teenagers. Dependent variable = 5-item Environmental Concern Index score. Table displays only those variables determined to be significantly affecting environmental concern by stepwise variable selection. All beta values are standardized.

Origins of Concern and Understanding	Middle School Boys n = 199	Middle School Girls n = 236
	Stepwise variable selection	
EXTERNAL INSTITUTIONS		
Media		
School Influence		
Local and International NGOs		
OTHER PEOPLE		
Family Influence		$\beta = .130$ $t = 2.092$ $p < .05$
Peer Influence		
PERSONAL CONTACT		
Personal Experiences in Nature		$\beta = .171$ $t = 2.727$ $p < .01$
Negative Environmental Factors	$\beta = .328$ $t = 4.968$ $p < .000$	
Condition of Local Environment	$\beta = .164$ $t = 2.498$ $p < .05$	$\beta = .269$ $t = 4.323$ $p < .000$
COMPREHENSION		
Knowledge of Environmental Issues	$\beta = .142$ $t = 2.163$ $p < .05$	
Importance among National Issues	$\beta = .200$ $t = 3.011$ $p < .01$	$\beta = .167$ $t = 2.671$ $p < .01$
R squared	.228	.147

Discussion

The first notable result from the survey analysis was the fact that the majority of adolescents who participated in the YECA survey indicated that they are concerned about the environment. Two-thirds of all respondents described their level of concern for the environment in Poland as “great” or “very great,” and the strong negative skew in the scores of the Environmental Concern Index indicates that the majority of respondents are concerned about the environment. Forty-two percent of respondents selected “destruction of the environment” as among the major problems facing Poland, selecting it more frequently than fear of war, concern about drugs, even the lack of money. In a related study in Norway, Norwegian youths were found to be more worried about environmental threats than threats of war (Sorgaard & Lyngstad, 1994). The authors concluded that “whereas the threat of war is (at least in our part of the world) only potential, the threat to the environment is a factual one.” In the current study, only 25% of Polish youth selected “threat of war,” ranking it 6th overall among the major problems facing Poland compared to destruction of the environment which was ranked third.

These findings suggest that despite what the young people in the focus groups said about “people not caring,” the majority of young people surveyed expressed a level of concern for the environment.

The young people I met with in focus groups of non-joiners seemed convinced that most of their classmates did not care about the environment. Yet the survey results suggest that more young people are concerned about the environment than are not concerned. The concern index could be improved, perhaps by additional items to further discern the characteristics of environmental concern as perceived by adolescents, but it is

an adequate measure of environmental concern. I am fairly confident that due to the methods employed to gather the survey sample, using a stratified random selection to assure representation of various community sizes within three distinct regions, and due to the large sample size ($N = 453$) the survey results offer an adequate representation of the opinions of first year middle school students in Poland.

The survey measured personal opinions about the environment, including measures of agreement or disagreement with statements about changing environmental behaviors and worry for future generations. In contrast, the focus groups were where young people shared their personal opinions as well as their perceptions of the attitudes and opinions of young people in general, in an open forum in the presence of their peers. Most of the statements regarding environmental attitudes were delivered in third person, as in “they don’t care” or “they are lazy.” None of the young people stated boldly “I don’t care about the environment,” yet in their statements they expressed the belief that the majority of their classmates did not care about the environment.

This disparity indicates that there could be differences between what people do or say publicly versus their private intentions. For adolescents in particular, this is a consideration, since they are at the age when group affiliation and the opinion of their peers matters greatly to them. Erikson concluded that adolescents are striving to develop a personal identity which includes “the *style of one’s individuality*, and that this style coincides with the sameness and continuity of one’s *meaning for significant others* in the immediate community” (Erikson, 1968, p. 50)

This fact was illustrated by an incident which occurred in a focus group with non-joiner boys in an agricultural region. During the ice-breaker activities I asked the boys to

write down their answers to several questions, and we then discussed the answers in turn. At the end of the focus groups, I collected the written comments for translation, and would cross check them with the notes I had taken during the session. One of the questions asked the participants to describe what they would like to change about the community in which they lived. I urged them to think creatively about the things they would like to change, and not to feel limited by money. In this focus group, many of the common ideas were shared during the discussion, such as the need for ball fields or parks and a McDonald's restaurant. Later, when I read the boys' written answers, I found that one boy had written "build a homeless shelter," yet I know that this was not brought up in the open discussion. It is possible that when he heard his colleagues talking about soccer fields and restaurants, he did not feel comfortable mentioning his very altruistic idea.

This incident demonstrates that there can be a wide chasm between a person's private thoughts and their public voice or actions. Social norms and expectations can cause people to censor their remarks and actions. This aspect of human nature needs to be considered when interpreting the findings of focus groups. In my opinion, this is both a limitation and a strength of focus groups. Since so much of our life is spent in social interactions, much can be learned by studying people in the course of interacting socially.

By piecing together the results from the focus groups and the survey, I have concluded that the majority of first year middle school students in Poland are concerned about the condition of the environment, yet there appears to be a strong perception by the young people that concern for the environment is not popular, and this perception has impacts on how young people think and act regarding the environment. In the cross-national study of nine Asian-Pacific countries, focus groups with young people revealed

very similar findings. When asked about the causes of environmental problems, youth in every country responded, “People.” More specifically, the young people described laziness, ignorance and a lack of responsibility as the main human traits contributing to environmental destruction (Yencken et al., 2000). The comments reported in that study are almost identical to what I heard from the Polish youth in the focus groups with non-joiners. There appears to be a widespread perception among youth in communities around the world that “people don’t care” about the environment. If this perception is indeed common enough to be considered a social norm, this can have formidable impacts on how young people today perceive the environment and consider their roles in it.

Normative influences can exert strong influences over behavior, even behaviors as simple as expressing opinions and values. Newhouse (1990) suggested that *“if a social norm for responsible environmental behavior existed, more people might behave responsibly, even if they did not have strong attitudes about environmental protection.”* It has been shown that individuals’ attitudes are more likely to predict their behavior when there are no strong social norms associated with a particular behavior (Ajzen & Fishbein, 1977). For example, twenty years ago when smoking in public in the United States was common enough to be a type of social norm, persons opposed to smoking rarely gave voice to their opinion in the face of widespread societal acceptance.

Perhaps environmental education programming could be directed to help influence the establishment of pro-environmental social norms, and to help remove the barriers of existing social norms which are less environmentally oriented. This would present a large challenge, but I believe that each approach also offers large promise.

Identifying the predictors and formative experiences which contribute to the

development of a person's environmental concern could provide some of the information needed to tackle these challenges. If certain life experiences can be identified which lead a person to greater concern, perhaps it is possible to help create opportunities and experiences which will result in the evolution of a more pro-environmental social norm.

Variables Identified by Multiple Regression Analyses

I proposed ten variables which I hypothesized contribute to the development of environmental concern. Of the ten variables analyzed in multiple regressions, six were indicated to significantly influence environmental concern: (both genders) Condition of Local Environment, and Importance among National Issues; (Girls only) Family Influence, and Personal Experiences in Nature; (Boys only) Negative Environmental Factors, and Knowledge of Environmental Issues. Before discussing the variables found to influence environmental concern, I will briefly mention the four variables which did not prove to significantly contribute to concern. The variables are organized by the four categories previously mentioned.

External Institutions

None of the three variables in the category External Institutions were selected in the multiple regression model as predictors of environmental concern. These include the influence of **media, school experiences and local and international non-governmental organizations**. In bivariate correlations, for boys only, all three of these variables were found to be significantly correlated with environmental concern. When all of the variables were considered simultaneously in the multiple regression, however, the external institution variables all dropped out. The fact that school experiences were not

highly influential for these school-aged children seemed particularly surprising. This could be due to the fact that until the recent education reforms, environmental topics were not generally included in school curricula. The decision to include environmental topics was left to the discretion of the teacher. Thus, perhaps the absence of school experiences from the list of critical significant variables is an indication that there has been little coverage of environmental topics in the schools where the survey was administered.

The lack of correlation indicates that young people do not perceive school has much influence on their attitudes toward the environment. On two occasions in focus groups with non-joiner youth (boys), when I asked the group what they had learned about the environment in school, it took several minutes and additional probing before they recalled that they had studied nature in third grade. In both groups of boys the participants could not recall learning anything in more recent grades, however, when I met with non-joiner girls in the same schools, they described that environmental issues had been briefly mentioned in science classes for several years. I presume that the non-joiner boys had also taken science classes, although I can't be sure. What is notable is the fact that the environmental lessons being offered were not be recognized as environmental by the students (at least the boys), suggesting that new educational approaches are needed. Several times in the focus groups the joiner youth suggested that what was needed were more interesting and active lessons to get young people excited about the environment.

Other People

The other variable not found significant for boys or girls in the multiple regression analysis was the **influence of peers**. Based on results from an open-ended question which will be discussed in Chapter 5, I maintain that peer influence is a substantial factor affecting the attitudes of teens. Possibly this variable did not emerge in the stepwise multiple regression because of the way in which the question was operationalized. The question asked respondents to indicate what influence friends and acquaintances have had on their attitude toward the environment. In retrospect, this is simply too broad and undefined. I would expect confusion over whether this referred to the influence of close friends, versus the influence of classmates in general. Also, from the response options offered, there was no indication if the peer influence was perceived as positive or negative. Unfortunately, I only included a single item as a measure of this variable. I would recommend that additional items which address specific aspects of peer influence be included in future surveys to address this very important variable.

For girls only, **Family Influences** were selected by stepwise multiple regressions as being significant to the development of higher levels of environmental concern. Parents were identified as being a “major influence” by 45% of the girls, while grandparents were identified as a major influence by a quarter of the girls. There was a strong bivariate correlation which indicates that girls who recognized their parents as being very influential in the development of their attitude were also more likely to recognize that their grandparents were similarly influential ($r = .542$; $p < .000$). Among boys, parents were identified as being a “major influence” by 41% of the boys, while grandparents were noted by 28% as also being a major influence. Chi square tests

indicate that girls were not significantly more likely than boys to identify their parents as being very influential for their environmental attitude (Chi square = 4.68; $p = .32$; $df = 5$). Bivariate correlations indicated, however, that for boys there was not a significant correlation between family influence and levels of environmental concern.

One reason for this discrepancy could be the question wording, which only asked the youth to identify the amount of influence from various sources, including parents and grandparents. It did not ask respondents to specify whether parental influence was supportive of the environment or not. Thus, if a boy recognized that his parents are a major influence on his opinions yet he perceived that his parents are not concerned about the environment, his responses on this survey might indicate someone with strong parental influence, yet low environmental concern. It would have been better to include a question which clarified the parents' attitudes toward the environment.

I think it is a key finding that both girls and boys recognized that their families are a strong source of influence on their own attitudes. This would indicate that environmental education programs which educate the entire family could have success, because as the youth have revealed, parental attitudes influence the attitudes of children.

This was exemplified in the focus groups, when several boys mentioned experiences in which their parents had been influential to their interest in the environment. A 16-year old boy who is a member of a 4-H club in northeastern Poland shared this memory:

Annelise: Tell me, when did you first begin to think about nature?

Boy: When I was 9 years old, and I was in the forest picking mushrooms with my mother. And I saw a can of Coca-cola lying by a mushroom, and this made me think about ecology, maybe for the first time.

For this boy, the formative experience was spent in nature, with his mother. Family experiences are very influential to the formation of attitudes and values in both genders. The survey data provide support for this, as do the stories I heard in the focus groups.

The role of family influence also carries with it added challenges. Adults who spent most of their lives under the confines of communism are more likely to have strongly entrenched attitudes and opinions about behaviors regarding the environment. It is likely that these opinions will contradict some of the pro-environmental messages delivered in school programs or in other media. Thus, young people who are taught one thing at school about the environment, and yet witness another behavior at home, may find it difficult to sort out the conflicting concepts. An example of this has to do with the lack of waste management services in many parts of rural Poland. For years, the practice has been to burn the rubbish, or take it to the countryside and dump it. Neither of these practices were particularly harmful when most of the packaging was paper, but in recent years the amount of plastic products have increased, so burning rubbish releases toxins into the environment, or if left at a dumpsite the plastics will not decompose. Until new waste management services are put in place, there may be conflicts when children learn in school about the environmental problems associated with burning or dumping trash.

In a study from southern Poland, residents of a rural village were asked about their environmental behaviors (Swadzba, 1995). When asked what they would do if they saw a neighbor illegally hauling trash to the woods for dumping, 40% admitted that they would do nothing, preferring not to risk losing good neighborly relations. There could be similar hesitancy for young people to try to change the environmental opinions of their family members.

For youth who are already active in pro-environmental actions, they see these differences of opinion as opportunities to “convert” individuals – including family members – to a more ecological lifestyle. In a focus group with environmental club members in an eastern city, a 17-year old girl who is a vegetarian for ecological reasons shared this example:

I wanted to change the opinions of my family. At first, my father was saying that I was eating funny things....roots, sprouts...he imagined that soon my bones would be breaking and my teeth and hair would fall out. Now, when my mother is not home and I cook, he eats the things I cook, vegetarian or vegan meals, and sometimes he even says nice things about the food. He got used to it. I think we need to give an example that things might look different.

Personal Contact

Personal experiences in nature was another variable selected in multiple regression analyses as being a significant influence in the environmental concern for girls, but not for boys. In the focus groups I heard references from the boys about experiences in nature, and I have observed boys fishing, camping and participating in other outdoor experiences. I cannot explain why this variable did not emerge in the stepwise regression as significantly influencing their levels of concern. This would seem an area worthy of further investigation, particularly to explore which specific types of outdoor activities were recognized as being influential, and also the frequency of participation. One possible explanation is that if all the boys surveyed have nature experiences, this variable is not effective at discriminating differences attributable to nature experiences. A study of environmental consciousness among Australian teens found that since virtually all Australians spend time in the outdoors “tramping,” this was not a suitable variable to discern levels of environmental concern (Hampel et al., 1996).

In future studies I would recommend that the questions about nature experiences be much more specific, and include information about the frequency and the type of activities young people are engaged in outdoors.

In Poland, outdoor activities are a part of the culture. Hiking and camping are popular, most often in the mountains in the south of Poland, and the lake region in the northeast. According to my Polish acquaintances, owning a small garden plot is a cherished dream of many people, particularly city dwellers. The outskirts of all the major urban centers are ringed with fields of gardens, many with tiny but well-kept and often colorful garden sheds so the overall effect is reminiscent of a village of children's playhouses. City residents spend evenings and weekends tending the plots. In the summer months, Poles flock to the forests to gather wild blueberries and strawberries, in the fall the ritual is mushroom gathering.

I heard from many people that this is changing in Poland. Camping was very popular when Poles could not easily travel to other countries. With increasing wealth and opportunities for travel abroad, more and more Poles are taking their holidays in plush resorts. A geography teacher in Warsaw told me that for several years she has asked her students keep a journal which includes a map of their home communities, depicting the areas they visit during a week. Several years ago, the most common weekend activity mentioned by her students was hiking in the nearby forest. In the past few years she has seen a disturbing trend: students report that their families spend the weekends shopping at the newly built supermarket complexes, or at the modern shopping mall/arcade developments. She was stunned when students last year did not even include the local forest on their maps (J. Angiel, personal communication, March 6, 2000).

If it is true that Polish youth are spending less time in nature, this should be a warning to educators and parents that positive nature experiences must be fostered in order to develop an ethic of environmental concern.

The variable **Negative Environmental Factors** was selected as significantly contributing to environmental concern for boys by stepwise multiple regressions. In bivariate correlations, of the seven variables for boys which correlated significantly with environmental concern, Negative Environmental Factors had the strongest correlation ($r = +.36, p < .000$). Although this variable was indicated by multiple regression analyses only for boys, responses to individual questions suggest that these factors are important on some level for girls as well. The variable was measured with three questions, and when each of the three items are considered separately, girls more frequently than boys indicated that these issues had a major influence on their attitudes. "Seeing examples of environmental destruction" was identified as a major influence by 74% of the girls, and 51% of the boys. "Environmental catastrophes, such as Chernobyl," were identified as a major influence by 89% of the girls, and 74% of the boys. Overall, this item had the greatest proportion of respondents selecting it as a "major /very great" influence on their environmental attitude. "Witnessing or experiencing the negative effects of the environment on health" was identified as a major influence by 79% of the girls and 62% of the boys.

The lack of significant correlations indicates that how girls *perceive* the influence of these variables does not correlate with concern, but it does not mean that these variables themselves do not *influence* environmental concern. The girls may be interpreting the questions differently than the boys. For example, these negative impacts

might contribute to a sense of fear regarding the environment, or a sense of hopelessness. Further study would help clarify how young girls perceive negative environmental factors. I would recommend focus groups or individual interviews to better understand the relationship between negative environmental factors and perceived concern.

In the focus groups, much of the discussions in the joiner and non-joiner groups with girls and boys concerned fears for the future. Girls were much more likely to mention the link with future generations, and their concerns for protecting the environment to ensure the safety of future generations.

One of the most obvious examples of the potent link between fear and concern occurred very near to Poland. It is believed by many in the Polish environmental movement that the single event which has had the most influence on Polish attitudes toward the environment was the nuclear accident which occurred in April 1986 in Chernobyl, Ukraine (Glinski, 1994). It is also considered the single event which most dramatically undermined Soviet authority in the region (Andersson, 1999). Two months after the accident, in a speech before the Polish Congress, Premier Jaruzelski identified environmental protection as one of the serious challenges facing the nation (Hicks, 1996). Previous to this, the possibilities of environmental threats had been all but ignored by the government. Chernobyl brought environmental issues out of hiding, and public awareness increased as a result of greater press coverage and media attention in Poland and in other countries in the region. In 1988, two years after the accident at Chernobyl, over 600,000 Lithuanians (16% of Lithuania's population), signed a petition in opposition to the Ignalina nuclear power plant (Andersson, 1999). Clearly, public concern was no longer going to let the government ignore environmental threats. Fear is a powerful

motivator, and definitely a contributing factor to environmental concern.

One of the two variables selected as significantly contributing to levels of environmental concern for both girls and boys was the **Condition of Local Environment**. Although I anticipated that the young people living in Silesia, the region well-known for its environmental degradation, would have greater levels of concern, the respondents in this region actually had the lowest mean ECI scores compared with the other regions. Within all the regions, individuals who lived in localities that were perceived as polluted had higher levels of concern. It was notable that respondents living in the southwest of Poland (including Silesia) were more likely than respondents from other regions to identify the place they lived as “somewhat” or “definitely” polluted. Only 19% of respondents from the northeastern region, and 29% of those from the central region indicated that the area they lived in was considered polluted. In contrast, 41% of respondents from the southwest indicated that the area where they lived was polluted.

Since there was a correlation between perceiving that the area where one lived was polluted and environmental concern, why were the ECI scores lowest in the southwest, the region with the greatest proportion of respondents indicating they lived in polluted areas? There are several possibilities. One factor which could contribute to this discrepancy is the perception of one’s community *relative* to other locales. In the focus groups with non-joiners in the northeast and in Warsaw, when I asked the young people about environmental problems, I was told that pollution was a problem – in Silesia. For decades it has been widely known that the environmental conditions in the southwest are the worst in Poland, and frequently considered among the worst in the world. Thus, I would assume that fewer respondents in the central region or in the northeast would

perceive that the area where they are living is polluted, since there is a general perception that pollution exists in the southwest. In fact, 64% of respondents in the northeast and 54% of those in the central region indicated that the area where they lived was “not really” or “not at all” polluted. Perhaps the respondents in those regions who indicated that the areas where they live are polluted are more aware of the environmental conditions around them, and more interested in the state of the environment, which would be reported as heightened levels of environmental concern. Thus, living in a polluted area may not contribute to levels of concern at all, but rather persons with higher levels of concern may be more perceptive of the varied forms of environmental pollution in their area and thus more likely to describe the locale as polluted.

Another possible reason for the lower ECI scores in the southwest could be that the residents of Silesia are well aware of environmental devastation which has made their region notorious. They realize that they live in an area which is polluted, yet recently environmental conditions have improved. Perhaps this factor accounts for some of the reduced concern among respondents in the southwest, particularly for adolescents who don't have personal memories of the time when environmental conditions were far worse.

Finally, it is informative to note that how an individual perceives the situation, and on what scale, is a personal perception or opinion of the situation. This was evident in the answers to the question about the pollution of the locality. Students from the same school class, who presumably live very near to one another, selected varying responses. I do not have a standard measure of the “actual pollution” of the communities which took part in the survey. From the survey results, I am inclined to think that perception and awareness of environmental degradation exist on a multitude of scales. Entire regions

can be identified where forests have been lost to acidification. Similarly, if the forest near a person's school is cut down, that is also a very vivid example of environmental destruction, but on a localized scale.

Comprehension

Knowledge of Environmental Issues was indicated as a significant variable only for boys. This variable was measured by the number of correct answers in a 6-item knowledge index. Although there was no significant difference ($F=3.578$; $p<.059$) in the mean scores by gender, girls scored slightly higher (mean score = 3.02) than boys (mean score = 2.80). The relationship between knowledge and concern is not clear. As I outlined earlier in the chapter, studies which have tried to link knowledge with changes in attitudes or concern have had mixed results. Whether this link exists is perhaps less important than the real issue at stake: whether Polish youth have sufficient understanding of environmental issues to be able to make informed decisions.

A six-item index is not an adequate measure of knowledge, yet even with this small instrument there are interesting findings. On average, the respondents answered correctly only 3 out of 6 questions. In the focus groups with non-joiners, global warming was the most frequently mentioned environmental problem, yet only 14% of survey respondents could correctly identify some of the major causes of global warming. Although there was awareness of the issue as a problem, the survey results indicate that there was very low understanding of the specifics of global warming. Responses to other questions suggested a serious lack of understanding related to personal behaviors and responsibilities. For the question related to waste issues, 25% of the survey respondents thought that a plastic bottle would decompose in less than 5 years. Only 27% of

respondents knew that automobiles were a major source of the pollutants in acid rain.

The students displayed a poor understanding of some of the very real issues facing society today. These issues are complex, and “solutions” are not readily available. It is imperative to consider what is needed to prepare students with the understanding they will need to face these increasingly difficult questions in the future. It must be noted that the questions on the survey did not attempt to address issues of equity and cultural awareness, which also must be included in the curricula for students to be better prepared to face the social, biological and ethical aspects inherent in environmental issues.

This problem is not limited to Poland. In a study of U.S. high school students, Gambro reviewed the results from a national probability sample of 10th and 12th graders and concluded “most high school seniors possess an extremely elementary comprehension of environmental problems and lack the necessary understanding to go beyond the common recognition of an issue and use their knowledge to grasp the consequences of environmental problems or offer solutions for those problems” (Gambro and Switzky 1996, p.31). This presents a real challenge for educators all over the world.

The final origin of concern variable tested in the YECA survey , **Importance among National Issues**, was identified in multiple regression analyses to be significantly correlated with environmental concern for boys and girls. Overall, 42% of the boys and 41% of the girls selected destruction of the environment as one of the top problems facing Poland. It was identified significantly more frequently by young people living in the central and southwestern regions of the country (45% and 47% respondents respectively), as opposed to the northeastern region where only 31% of the young people identified the environment as a major problem (chi-square = 9.412; $p < .01$; $df = 5$). As

expected, those young people who identified the environment as one of the top three issues facing the country had significantly higher levels of environmental concern.

The variable of perceived relative importance is a type of proxy which indicates a higher level of concern, but it doesn't really provide insight into which variables are important for developing or changing concern. The other variables are much more informative. It would be interesting to investigate the channels by which environmental issues become more salient and urgent in the opinions of Polish youth.

Summary and Implications of Research

In this chapter, I examined the levels of environmental concern in Polish youth and found that the majority of young people are concerned for the environment. The focus group discussions revealed clear differences in the environmental attitudes of youth who are not involved in environmental or youth organizations, and those youth who are involved. Among uninvolved youth there is the widespread perception that the majority of their peers do not care about the environment. Many of them have interpreted this as a reason for their own non-involvement, and by their comments they indicated that they hadn't thought much about the environment. In contrast, youth who are active in environmental organizations demonstrated that they have strong personal feelings for the environment, and a concern which drives their involvement in spite of resistance by the general public. They shared stories of the origins of their interest and concern, including time spent in nature, the sense of loss from witnessing degradation, the influences of family and friends, and motivation of fear from environmental threats.

Multiple regression analyses of the ten variables proposed to contribute to

environmental concern as measured by the Environmental Concern Index revealed six factors which significantly affect the level of environmental concern in Polish youth.

These factors are: Importance among National Issues, Condition of the Local Environment, Family Influences, Personal Experiences in Nature, Negative Environmental Factors, and Knowledge of Environmental Issues.

The variables indicate areas where school curricula and extra-curricular programming can be focused to develop experiences which could contribute to increased understanding and heightened concern. A recommendation related to school system reform would be to restructure curricula to include education about the environment. To increase the importance of environmental issues among and in conjunction with other national issues facing the country, environmental issues need to be addressed not simply as science topics but as fully integrated with other disciplines. Young people need to understand that environmental issues are social issues, incorporating equity, politics, economics and global responsibility.

Another recommendation for formal and non-formal education systems is to provide programs which involve the entire family, and offer increased contact with nature and positive experiences in nature. There is a need to encourage an increased understanding of environmental issues, specifically the kinds of personal behaviors and responsibilities needed to develop a social norm which is directed to demonstrating more care for the environment. It is likely that as young people become more concerned about the environment, many of them will demand more knowledge and information about the environmental situation, so educators need to be prepared to provide them with the skills they will need to face the controversial environmental issues ahead.

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CHAPTER 4.

PARTICIPATION IN ENVIRONMENTAL ACTIONS BY POLISH YOUTH

"Dzieci i ryby głosu nie mają"

- *Old Polish Saying: "Children and fish have no voices"*

Addressing environmental problems through active civic participation has been a prominent goal of environmental education since the mid-1970's. The Belgrade Charter, adopted by participants at an international gathering in 1975, remains one of the most widely-accepted definitions of the goal of environmental education: "to develop a world population that is aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations, and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones" (UNESCO, 1977).

To fully understand what is needed to create such an environmentally-concerned citizenry, it is necessary to explore what are the root causes which motivate a person to engage in action. Similarly, it is important to consider the factors which might inhibit a person from participating. In this study, I explored with Polish teenagers the factors they perceived to be influential in motivating or inhibiting their participation in environmental and community actions. On several occasions, the youth shared the Polish saying quoted above, as a means of illustrating what was to them a very definite hindrance to their involvement. Their opinions on this and other factors, and the results of the survey research on this topic are presented below.

Theoretical Foundations

The causal forces or the intentions that precipitate an action or behavioral response are integral components of motivational theories. The earliest theories to dominate studies of motivation related behaviors to the accomplishment of satisfying physiological drives – sex, hunger, thirst, aggression, and the avoidance of pain. These are the “drive theories” of Freud, Hull and a number of other empirical psychologists (Dacey & Travers, 1991). The operant theory, most often associated with B.F. Skinner, recognized that not all behaviors could be attributed to physiological drives. Skinner claimed that behaviors were the result of past reinforcements, both positive and negative (Skinner, 1953). Rotter (1966) added that the causal elements included expectations of future reinforcements as well as past reinforcements.

Social learning theory shifted the emphasis away from reinforcement-induced behavior, and postulated that much of behavior is learned by observation and modeling (Bandura, 1977a). Children learn behavior by watching others, and putting into practice what they see (Bandura, 1964).

Yet separate from the root causes of behavior, be they drive-initiated, the result of positive or negative reinforcements, or behavioral patterns modeled from observation, motivation is concerned with not only the initiation but also with the persistence of behaviors. Thus it is important to consider which forces contribute to the repetition of certain behavior patterns. One powerful cognitively-based source of motivation involves the extent to which an individual perceives they have control of events and of their ability to affect the outcome in a desired manner. Rotter (1966) distinguished two belief systems which operate on a continuum he labeled “locus of control.” On one end of this

continuum, the belief that forces other than the individual, including luck, fate, and powerful others such as God, parents or the government exert control over the ability to act is labeled “external control.” On the other end, the belief that the individual can exercise some control over events and circumstances is labeled “internal control.” Individuals are neither completely external nor completely internal, rather these terms describe an individual’s most common tendencies and expectations for efficacy. A person with a predominantly external locus of control is likely to conclude that circumstances are beyond their control, while a person with internal locus of control would conclude that they are capable of influencing the outcomes of their decisions.

In a review of the literature, Peyton and Miller (1980) recognized several commonalities which have implications for participation in environmental or social actions. They concluded that individuals with internal control more frequently participate in action-taking, and they are better able to effectively recall and use information sources. They are less likely to be influenced or manipulated by powerful others, and they are more able to delay gratification in order to attain long-term gains. The authors also found that an individual’s locus of control is susceptible to change.

The theories focusing on *intrinsic motivation*, including “self-efficacy theory” and the “self-determination theory” attempt to explain why the ability to exert control in a situation is such a notable motivator. The self-efficacy theory places the psychological aspect of locus of control within cognitive processes, by stating that behavior change will be most affected by increasing an individual’s perception of their ability to successfully accomplish their goal (Bandura, 1977b). In experimental settings, Bandura found that perceived self-efficacy was the greatest predictor of behavior. Basically, people are more

inclined to take part in a behavior or action if they feel competent that they can succeed. The level of efficacy expected varies by individual, task and experience.

Intrinsic motivation is based on the individual's innate need for *competence*, defined as a sense of efficacy, and *self-determination*, defined as a need for personal control or a sense of freedom in choosing a behavior (Deci & Ryan, 1985). The role of an individual's sense of control as an integral factor to motivation is conceptualized in the "self-determination theory" (Deci, 1980).

The self-determination theory helps explain an important distinction between a **behavior**, which can be motivated by physiological drives or externally controlled (e.g., fear of punishment), and an **action**, which in addition to these control mechanisms has the potential to be deliberately controlled. Deci identified three types of behavioral response: 1) non self-determining, including coercion; 2) automatized or automatic, e.g., habits; and 3) self-determined and involving the human capacity for deciding how to behave (Deci, 1980, p. 17).

Emmons utilized Deci's classification system to develop a model of positive environmental action based on a study of high school girls in Belize (Emmons, 1994; Emmons, 1997). She pointed out that most previous research on environmentally-responsible behaviors have focused on Deci's final two categories (i.e. habitual behaviors and self-determined behaviors). Environmentally-responsible behavior may be the result in either case, but the intention which motivated the action remains unclear. According to Emmons, "behavior is a much broader concept than action in that it might be voluntary or involuntary, automatic or non-automatic; moreover, behavior includes basic individual responses that may or may not be deliberate efforts toward a certain goal" (1997, p. 35).

I agree with Emmons that positive environmental action should only be classified under Deci's third type of behavioral response, as these are self-determined, involving intentional decisions for participation. As such, these types of action were the focus of the present study. As described in Chapter 2, I consider actions to be activities that are voluntarily and purposefully conducted, involving a conscious choice to devote discretionary time to organization and implementation.

Although the theories presented above were not originally developed to explain adolescent behavior, I found elements which relate directly to explaining youth involvement in environmental actions. The most compelling feature of the self-determination theory is the authors' contention that self-determination is actually *necessary* for the development of outwardly expressed motivation:

Self-determination is a quality of human functioning that involves the experience of choice, in other words, the experience of an internal perceived locus of causality. It is integral to intrinsically motivated behavior and is also in evidence in some extrinsically motivated behaviors. Stated differently, self-determination is the capacity to choose and to have those choices, rather than reinforcement contingencies, drives or any other forces or pressures, be the determinants of one's actions. But self-determination is more than a capacity, it is also a need.

(Deci & Ryan, 1985; emphasis original, p. 38)

This theory provides a bridge with Erikson's eight life stages of psychological development. Each stage is distinguished by a dichotomy which characterizes the emotional crisis an individual must face in order to advance in development. Adolescence is marked by identity crisis, as youth struggle to develop a sense of identity. Individuality is paramount for the young person in establishing themselves as no longer a child, and peer affiliation becomes increasingly important (Steinberg & Silverberg, 1986).

Erikson proposed that within the development of adolescent identity there are two complementary and essential aspects (Erikson, 1968). These are the development of *personal identity*, which involves forming a clear sense of one's self based on an assessment of talents and weaknesses, and *ego identity*, which is clarification of one's self in relation to other people as well as a social-historical context. According to Erikson, identity formation is grounded in three principles: (1) identity is based on *industry*, also known as "personal agency" defined as the ability to act as an intelligent agent and to design action to achieve specific goals; (2) identity advances via social relatedness, through cooperative feedback and understanding; and (3) the identity process is guided by ethical considerations.

Youniss and Yates (1997) eloquently summarize how Erikson's theories of psychological development provide support for the argument that participation can be considered a developmental necessity for youth. They specify that action projects which are planned as a form of community service involving encouragement by adults and structured reflection offer the most developmental benefit:

We propose that Erikson's position on identity provides a way to understand how service makes a long-term impact on youth participants. When youth are given opportunities to use their skills and redress social problems, they can experience themselves as having agency and as being responsible for society's well-being. When they participate as a cohort and when participation is encouraged by respected adults, youth begin to reflect on the political and moral ideologies used to understand society. It is this process of reflection, which takes place publicly with peers and adults, as well as privately, that allows youth to construct identities that are integrated with ideological stances and political moral outlooks.

(p. 36)

Developing this sense of agency in youth is becoming more critical in the face of worsening environmental and social conditions. A study of over 3,200 11th grade

students in New York state revealed a strong correlation between environmental awareness and concern, and pessimism for the future quality of life (Hausbeck et al., 1992). The authors concluded that as young people become more aware of the state of the environment, this can contribute to feelings of being overwhelmed. They suggest that citizenship learning is needed which includes discussions of the socioeconomic and political consequences of environmental degradation on a local and global level.

Measurement of Youth Participation in Actions

Given the importance of participation and involvement for positive youth development, both on individual and societal levels, I sought to assess participation in environmental and social actions by Polish youth and the variables which can motivate or inhibit participation. In the following pages I describe these variables and explain how they were operationalized in the Youth Environmental Concern and Action survey. A detailed description of study methods can be found in Chapter 2. From examples of actions which emerged in discussions with joiner youth in the focus groups, I selected nine different action types, representative of four of the five environmental action types first classified by Hungerford, Peyton and Wilke (1980): ^{life} direct ecomanagement, action aimed at consumerism, action aimed at persuasion, and political action. These nine items make up the Environmental Action Index (EAI). For each question, the respondent was asked to identify whether they had participated in the action in the previous two years, and if so, the level of their leadership involvement.

Coercion (whether stated or assumed) by authority figures such as teachers, school administrators, or parents can strongly influence a young person's decision to

participate. Thus, although action participation should ideally be voluntary, I recognize that in Poland as elsewhere, some environmental and community actions are mandatory events organized by schools (e.g., litter clean-up efforts for Earth Day). Rather than exclude these experiences from the study, I included response categories on the survey for the respondent to identify whether participation was due to a school requirement.

The Environmental Action Index is a tally of nine items, with higher values representative of greater participation and greater levels of leadership. An individual who took part in an activity organized by his/her school as a required activity would score “1” for that action. If the individual had participated in the same action as the main organizer, he/she would score “5” for that action.

I compared the levels of participation with a number of demographic and experiential variables, such as gender, size of community, and educational level of parents. Women were found to take part in more environmental behaviors in a study of American adults (Steel, 1996), and a study of Australian youth found that girls took part in more pro-environmental behaviors than boys (Hampel et al., 1996). The Australian study found a positive correlation between the mother’s level of education and level of environmental concern for boys, and the current study found positive correlations between environmental concern for girls whose parents had higher levels of education.

Contributions of Study: Motivation Moderators

In Chapter 2, I introduced the proposed Motivation-Action cycle and described “Motivation Moderators,” a suite of variables which I suggest act to motivate or inhibit participation. I described one portion of the Motivation-Action cycle - the precursors to

environmental concern – in Chapter 3. In this chapter I focus on the portion of the Motivation-Action cycle which involves the Motivation Moderators. I have reproduced these elements of the Motivation-Action Cycle in Figure 4.1 and depicted the Motivation Moderators as a type of “wall” or barrier which stands between an individual’s concern for the environment and their actual participation in actions. I conceive of the moderators as variables which each exist on a continuum of personal perceptions, which range from an enhancing moderator to an inhibiting moderator. For example, a person’s knowledge of action strategies would range from the enhancing moderator of a high level of action strategy knowledge, whereas a negligible level of action strategy knowledge would be considered an inhibiting moderator. The motivation enhancers tested in the Youth Environmental Concern and Action survey are displayed with their measurement variables in Figure 4.2. In the pages to follow, for the sake of consistency I describe each of the moderators in light of the motivation enhancers.

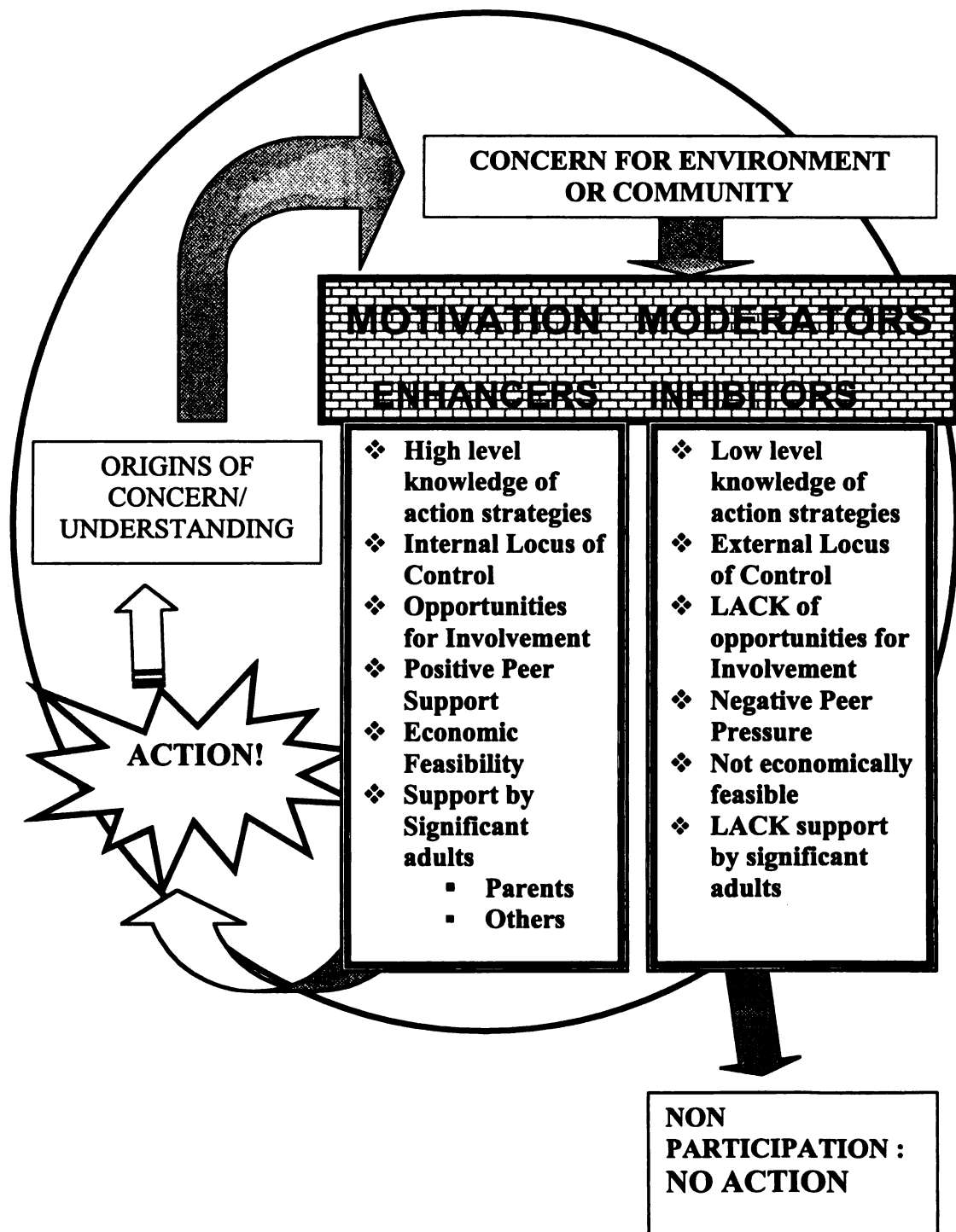


FIGURE 4.1 Proposed general conceptualization of Motivation-Action Cycle of Youth Participation: focus on the variables proposed to moderate motivation.

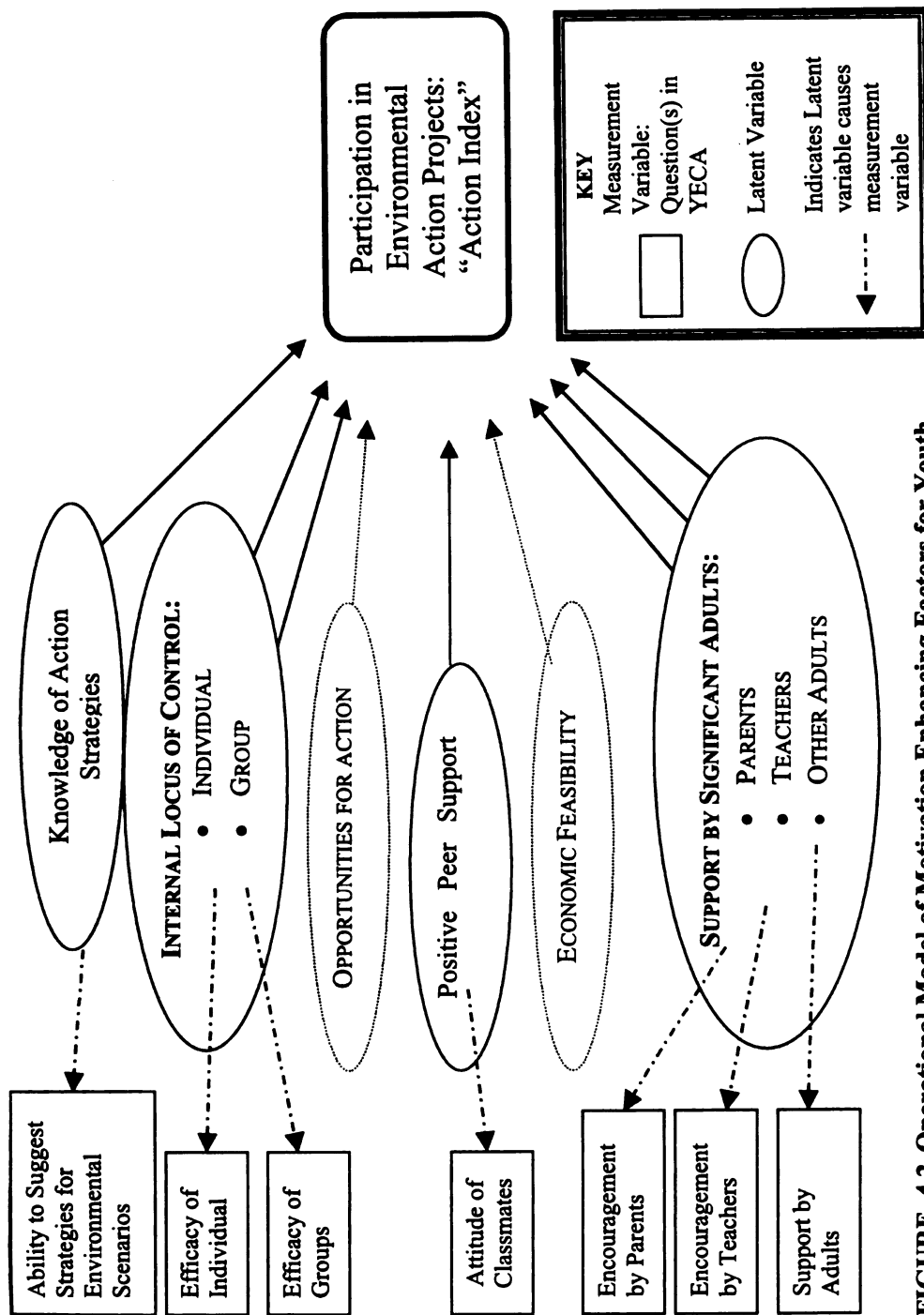


FIGURE 4.2 Operational Model of Motivation Enhancing Factors for Youth

Knowledge of Action Strategies

Knowledge and/or skill in using environmental action strategies have been identified in previous studies as strong predictors of responsible environmental behavior (Hines et al., 1986) and citizenship behavior (Hungerford & Volk, 1990). In a study of eight variables which influence environmental behavior of adult members of Sierra Club and Elder Hostels, Sia found that an individual's perceived skill in using strategies for environmental action explained almost 35% of the variance in predicting environmental behavior (Sia, 1984). Ramsey, Hungerford and Tomera (1981) found that eighth-grade students who received training in environmental actions exhibited a greater knowledge of environmental actions, and reported participating in more environmental action behaviors than students who received only awareness raising instruction. Three years after Ramsey's initial investigation, with apparently no subsequent intervening instruction in environmental actions, students from the original experimental group still were involved in "more environmentally appropriate behaviors than their counterparts" (Hungerford & Volk, 1990 p.14). Similarly, Jorden, Hungerford, and Tomera (1986) reported that high school students who participated in environmental education workshops which included instruction about issues *and* action strategies took part in a greater number of environmental behaviors than students receiving instruction in just issues.

Subsequent researchers have tested for the importance of this variable in predicting behavior in various populations (e.g., Smith-Sebasto & Fortner, 1994; Marcinkowski & Rehrig, 1995). In most studies, respondents were asked to select a scaled response to assess their knowledge in action strategies. The questions in Smith-Sebasto's "Index of Environmental Action Knowledge and Skill," are typical of the usual

format of question: "To what extent do you believe you are knowledgeable about civic action as an environmental-protection action strategy?" (Smith-Sebasto & Fortner, 1994).

I decided that questions worded in this manner might be confusing for adolescents, and so chose an entirely different question format to measure this construct. I included three *open-ended* questions which described environmental situations drawn from real-life examples in Poland, and asked the respondents to describe what they personally could do in each case. After the responses were translated, I developed response category codes. To assure reliability, an expert in environmental education read the translated responses and also developed a coding scheme for response categories. We were in complete agreement for establishing four response categories to express the range of personal involvement and responsibility suggested in the respondents' written answers. I personally coded all responses using these four categories, and assigned each response a value ranging from 0 for responses indicating no involvement, to 3 for responses in which the strategy depicted a high level of personal involvement. The response codes for the three questions were summed to create one value for each respondent, the Action Strategy Index with a range of 0 – 9. Cases with more than one blank response were excluded from calculations. For cases in which the respondent answered two of the three questions, the missing value was coded as "0" (the modal response for all three questions), and the case included in calculations. The three question scenarios and examples of responses for each of the four categories for personal involvement are shown in Table 4.1.

TABLE 4.1 Questions to assess Respondents' knowledge of action strategies. NOTE: Cells contain representative examples of responses written by middle school students. QUESTION FROM Youth Environmental Concern & Action Survey:

"There are many ways people can be involved in helping to solve environmental problems in their communities. Below are some examples of situations you may or not be familiar with. Read each example, and then briefly describe what YOU would do in this situation. *Be honest! If you think you would do nothing, or have no interest in this – write that.*"

Response Category: Level of Personal Engagement	Q.24. Next to your school is a small pond that is owned by the city. It is polluted and dirty, and you're fairly certain that not many fish or frogs can live in it. What could YOU do?	Q.25. A rare species of bird has been discovered living in the region where you live. You know that many people would be interested in this if they knew something about it. What could YOU do?	Q.26. A new road is being planned to go through a nearby forest. Some people say the road is necessary and must go through the forest, and other people say this is not the case. What could YOU do?
0 : no involvement, no action	"there's nothing I can do" "nothing" "one person can't do anything"	"I don't know what to do" "nothing – I'm not interested in birds"	"I could do nothing because adults don't listen to what young people think" "as one person – nothing"
1: low level engagement; contacting others to do something	"ask principal to do something" "call city hall, tell them to do something" "ask an adult to help"	"ask a teacher about the bird" "call the Bird society and ask them to do something"	"ask my dad to do something" "write a letter to the authorities"
2: moderate level of engagement; participation in action organized by others	"help clean the pond" (no mention of who organizes) "meet with city council and suggest we do something together"	"find information about the bird at the library or internet" "quietly observe the bird, take photos and learn about it"	"join a group opposed to the road" "participate in a protest" "get signatures on a petition"
3: High level of personal involvement/ engagement	"get my friends together and organize a clean-up" "start a petition to the city"	"write an article about the bird for the paper" "organize a meeting or field trip to see the bird"	"organize a demonstration" "tie myself to a tree" "conduct a survey of opinions"

Internal Locus of Control

An individual's perception of their ability to affect change is an important component of personality with direct implications for participating in action. Persons with an internal locus of control are more likely to engage in action-taking (Peyton & Miller, 1980). Both Hines et al. (1986) and Hungerford and Volk (1990) include locus of control in their models of behavior.

Focusing on adolescents, an age group for which identity of self and identity within groups are of paramount importance, I decided that it was important to evaluate two different aspects of locus of control. I drafted questions to evaluate individual locus of control – the degree to which an individual believed that they could personally effect change, and group locus of control - the degree to which an individual believed that groups of people were capable of causing change. Previous studies had differentiated between these two constructs (Sia, 1984). Further, since Poland has so recently emerged from a communist past during which much individual responsibility was denied, I believed that it might be too early to expect the development of a generation with a recognition of their own personal abilities to cause change. Thus, I included the group locus of control questions to explore if young people would identify with group efficacy. The survey included two questions related to individual locus of control, and three for group locus of control (see below). All five questions have the same five Likert-scale response categories.

Questions from YECA:

Individual Locus of Control:

Q17a. I believe that **one person**, by their own actions can improve the condition of the environment in their community.

Q17e. I believe by **my own actions** I can improve the condition of the environment in their community.

Group Locus of Control:

Q17b. I believe that **people working together** can improve the condition of the environment in their community

Q17c. I believe that **adults in community or environmental groups** can improve the condition of the environment in their community.

Q17d. I believe that **teenagers in youth groups** can improve the condition of the environment in their community.

Answer categories for all: "a great degree"; "a moderate degree"; "only a small degree"; "not at all"; "I don't know"

Positive Peer Support

The variable of peer support has not been mentioned in previous models. I postulated that peer support can be an important variable influencing youth participation in environmental action. The influence of peers emerged in the focus group discussions, both in descriptions of the positive support from friends who share similar opinions about the environment, as well as feelings of embarrassment caused by classmates with different views about the environment. Like all of the motivation moderators, I consider this factor to be a continuum, from (positive) peer support to (negative) peer pressure. It was included as a single item on the survey.

Questions from YECA:

Q23b. I think most of my classmates think that it is a waste of time to do things for the environment.

(strongly agree, agree, disagree, strongly disagree, difficult to say)

Support by Significant Adults

Like peer support, support by significant adults has not been mentioned in previous models. Since teenagers in Poland and elsewhere are not completely autonomous, adults play important roles in their lives, from exerting control to establishing expectations. I anticipated this from my experiences working in Poland, and as will be seen in the results from the focus groups, it was very clear that adult support (or lack of) had much to do with youth perceptions. The acceptance or rejection by adults was mentioned by the youth frequently as encouraging or inhibiting their action. I included separate questions to isolate differences in perceptions of teenagers for the adult roles of parent, teacher, and other adults.

Questions from YECA

- Q23a. My parents encourage me to do things that help the environment.
- Q23e. My teachers encourage us to do things to help the environment.
- Q23f. Most of the adults I know think that there is no point in doing things for the environment.
- Q23g. Adults where I live are willing to cooperate with teenagers on environmental actions.

(strongly agree, agree, disagree, strongly disagree, difficult to say)

Opportunities for Involvement and Economic Feasibility

These constructs have not been included in previous models. Both arose from my experiences working in Poland. Additionally, in a national survey of the environmental attitudes and behavior of American adults, researchers found that lack of opportunity was the most frequently mentioned reason for non-participation in various environmental behaviors (Steel, 1996). In the present study, the presence or lack of opportunities for involvement was mentioned frequently in the focus groups, generally in statements

decrying the lack of opportunity. The topic was addressed in a number of the open-ended questions in the survey, and these will be discussed in Chapter 5. I did not include items on the survey about opportunities for involvement in a format which would allow this variable to be tested in the model of variables which influence participation in actions. Based on what the youth told me in writing on the surveys, and verbally in the focus groups, I strongly believe that this construct is very important for teenagers. I would recommend including questions about this on future surveys with youth.

I also did not operationalize the construct of economic feasibility for inclusion in the survey, however, I included it in the proposed cycle to explore the possibility that participation in environmental actions could be limited by financial means. An example of this in Poland relates to water delivery systems. Most Poles in urban settings live in large apartment complexes. The system that was developed after WWII involves fee calculation for water (and heat) based upon square footage of the apartment as related to the entire building. Individual families are not charged for the amount of water used, but rather a fee determined by the housing authority. If a family decides to conserve and use less water, there is no economic incentive since they will be charged the same amount for monthly use. The only alternative is for the family to purchase an apartment water meter, at a cost which is prohibitively expensive for many people. This type of economic decision is beyond the scope of control of most young people.

Another example that is more relevant to teenagers would be if the financial situation of the family necessitated that a teenager work after school, this would limit that teen's ability to take part in environmental actions. However, according to recent Polish labor statistics, less than 10% of persons under the age of 20 are employed (GUS, 2000c).

This does not account for unreported labor that youth are undoubtedly involved in, such as helping family-run businesses or assisting with childcare. Based upon my experience in Poland, I felt that there was not a compelling need to include economic feasibility as a variable possibly influencing action participation, so it was not included in the survey.

Results

Focus Groups

The results, drawn from focus groups and a national survey of youth, are presented below. As in Chapter 3, I will begin with the results from the focus groups, and then present statistical analyses of survey data, including summary statistics, bivariate correlations and multi-variate regressions.

A complete description of the selection of group participants and how I conducted the focus groups is provided in Chapter Two. I met with youth who participate in environmental or social organizations (hereafter “joiner youth”), as well as youth who do not participate in environmental or social organizations (hereafter “non-joiner youth”). I asked the young people to explain their general concerns for the future, their opinions of the condition of the environment, their perceptions of the role of young people in addressing environmental problems, and the kinds of environmental actions in which young people in Poland are involved.

In addition, when I met with youth active in organizations, I asked for their opinions about what would encourage or inhibit youth participation in Poland. I will begin by describing some of the themes which emerged in discussions with non-joiner youth, and then turn to the themes that arose from discussions with joiner youth.

Focus Groups with Youth not Involved with Organizations: Non-joiners

The focus groups with non-joiner youth were conducted to gather data on the commonly held opinions of teenagers in Poland. In these focus groups, I would initiate the discussion by asking broad questions to identify what were the greatest concerns for young people. I moved the discussion to environmental topics only after someone in the group had mentioned something related to the environment. Concern for the environment emerged frequently in these discussions, although it was largely limited to vague statements that suggested a fear for environmental disasters, as described in Chapter 3. It appeared difficult for many of the young people to move beyond these perceptions to consider what actions they personally could do for the environment.

From the very first focus groups with non-joiner youth, it became clear that many of the young people I met equate “environmental actions” with trash, including picking up litter and segregating trash for recycling. This theme emerged in every focus group with non-joiners. When I asked a group of 15-year old boys in the focus group at a Warsaw Middle school to describe the kinds of actions they could engage in, it took several minutes before they could think of anything. Eventually, they identified a couple of options, but they seemed hesitant and definitely lacking in enthusiasm: “*We can pick up trash*”; “*We can not litter*”, and after some moments, “*We can segregate our trash.*” They seemed unable to think of ideas beyond litter-related issues.

On several occasions, when I asked non-joiner youth to describe actions people could do for the environment, their answers shared prospects for what *should* be done, such as: “*There should be containers for glass, paper*”; “*Everybody should take care to use the proper containers - schools, too.*” Their responses frequently placed the onus of

responsibility on an un-named other to provide the containers or encourage waste segregation. This was one of the common themes to emerge from the focus groups with non-joiner youth. They were quick to remark that environmental issues *should* be everyone's concern. Yet it seemed difficult – or at times impossible - for them to identify specifically how they could be involved or personally responsible.

The actions that were suggested invariably focused on waste issues. The 15-year old girls from a middle school in Warsaw echoed the remarks I heard from non-joiner youth around the country: *"We go out and clean up litter from the surrounding area, but it is not enough"; "Everybody should be informed about segregation of waste."* Once again, these youth were focused on what *should* be done instead of what actions *could* be done. In an effort to turn their attention to ecological actions, I told them about a group of Polish teenagers who had organized bike paths in their community. By their responses, the girls expressed their doubts: *"Who would do that? In our class, I think nobody would agree to that. Most of the people would not agree because they do not care"* ;and *"Maybe such groups exist, but I think this is a small minority."*

Related to waste issues, in several of the focus groups with non-joiner youth, the young people suggested the need to increase the number of large-scale litter clean-up events. *"I think we should organize more actions such as cleaning up."* –13-year old girl from a village outside Warsaw; *"We clean up twice a year, we could do it more."* 13-yr. old boy, same village. Even though the discussions returned frequently to large litter clean-up events, the youth admitted that such events were not completely effective. They explained that many of their classmates would refuse to participate, on the grounds that such efforts *"wouldn't make a difference."*

This feeling of ineffectiveness was the defining theme in all the discussions with non-joiner youth. I met separately with boys and girls, yet in all the discussions there was a notable undercurrent in their comments which hinted at a sense of futility. For some, this was caused by a sense of problems being beyond the control of the individual, such as a 15-year old boy in Warsaw who explained why he thought it was senseless to segregate trash: *“Even if we segregate, then will come one big garbage truck to take it away all in one container, and that will be all.”* His statement echoes the opinions of many in Warsaw, undoubtedly influenced by a television appearance by the vice-mayor of the city in which he commented that trash segregation was useless because all of the materials ended up in the same dumpsite (Baturu et al., 1997).

More often the youth expressed that they felt it was pointless to be involved in such actions because too many people simply don’t care. A 13-year old girl in a large industrial city described it this way:

[Young people] think that they do not need this – that these type of actions don’t really help. Why should I do something if it is too little? Because later somebody will come and litter and they will not care about protecting the earth.

The youth also expressed frustration from having seen their efforts be effective for only short periods. A 15-year old boy in Warsaw said that litter events were futile: *“We clean up the trash on one day, and next week there is again a lot of waste.”* A 14-year old girl in an industrial city complained, *“We collected litter around our school and it was nothing because older people came and in a few hours it was the same as before.”*

The net result of all of these accumulating frustrations was a sense of helplessness among the non-joiner youth I met. Simply stated, the youth not affiliated with environmental or social groups were very likely to conclude that they were “unable” to

do anything. The youth seemed resigned to the fact that their opinions did not matter because they perceived adults did not listen to them.

15-year old boy, Warsaw : *“At the moment we cannot do much. We have limited chances; we can come up with ideas which will probably be turned down anyway. In the future, we can wait until we will be adults and we will start making decisions. For now, we can only dream.”*

Annelise: *Dream about what?*

Same boy: *“that anybody will want to listen to us”*

Perhaps most compelling were the remarks that indicated the young people did not believe things could change. In the meeting with boys at a Warsaw middle school, I told them about cities I had heard of which had youth members on the city council, but the boys seemed to doubt that this was effective:

Annelise: *I heard that there are towns in Poland where there are young people in the City Council, three, four people.*

Boy 1: *Maybe there are, maybe they serve coffee.*

Boy2: *The major's son is accepted and that is it.*

Boy3: *They will play philosophers, play for a while and they will chase them away.*

This sense of being undervalued by adults has profound impacts on the personal development of adolescents which are beyond the scope of this study. The issue arose independent of my questioning in every focus group with non-joiner youth, so I must conclude that it is obviously salient for the young people, and therefore pertinent to any study of youth attitudes and behaviors.

Pertaining to the focus of this study, the remarks about not being listened to were being offered as an explanation for why young people do not get involved in

environmental and community action projects. The sixteen-year old boys with whom I talked in a rural community in northern Poland could not think of any possibilities for youth involvement, but they had much to say about the lack of cooperation with adults. Their comments illustrate a perception that apparently contributes to stifling their actions.

Boy 1: *"Adults lack confidence in young people. They think we just drink and smoke...they don't know what we think...they don't understand that we have ideas."*

Boy 2: *"Some groups have tried to get adults to help, but in general, adults don't listen to young people."*

Boy 3: *"Adults need to believe in young people."*

The girls I spoke with in focus groups with non-joiner youth shared this same sense of resignation and hopelessness. They expressed a firm belief that they were limited by their age:

Annelise: *What about the future of ecology? What is your role in that?*

15-year old girl, Warsaw : *None.*

Annelise: *Wait – you said none. Why do you say that?*

Same girl: *We can try to do something, but adults do not give us a chance. We cannot speak up for ourselves. Adults do not want to listen to us.*

One of the resounding themes from the non-joiner youth was that they seemed convinced that they were too young to be effective. This is consistent with the results from a study with 15-17 year old Australian youth which also used focus groups to explore what teenagers thought about the environment (Hillcoat et al., 1995). The young people in that study expressed a sense of powerlessness because they felt they were too young to be effective agents of change.

At a private middle school in a village near Warsaw, I spoke with a group of middle school students (aged 13-14). The community is comprised of a mix of affluent families, many of whom commute to work in Warsaw, and poorer families from the surrounding countryside. The students were not involved in any youth organizations. During an ice-breaker activity for the focus group, I asked the students to describe the kinds of things they would like to change about their community, first in writing, and then in an open discussion. Five of the eight girls in the group expressed the desire to clean up a dirty pond in town. Later in the discussion, I reminded them of the pond, and asked what they could do about it. From their responses I understood that they perceived the problem as too large for them to tackle. They insisted that such a project would take special equipment, and that to clean the pond would do no good since the river flowing into it is polluted and a sewage treatment plant is needed.

I continued by asking what would be the reactions of the Town Council if a group of young people offered to help in a pond restoration project. The girls seemed incredulous that such a meeting could take place, and expressed their doubts:

Girl 1: *"[the town council would say] We will talk about this later, go away – we have other things to take care of"*

Girl 2: *"I do not know if they will care to listen to children. They do not treat us seriously."*

Similar reactions were shared in other focus groups with non-joiner youth. The young people seemed convinced that adults would not listen to them. Girls in a community in the rural agricultural region explained how some of their classmates had actually gone to City Hall to suggest a program, and the adults there told them quickly to leave and not *"bother them."*

On a related note, this perception of being largely ignored by adults explains why many of the young people I met in the focus groups seemed amazed that an American adult wanted to listen to their opinions. Several times the young people told me that they wished that they could have “*more meetings like this one*” to talk with adults.

Focus Groups with Involved Youth: Joiners

As described in Chapter Two, there is a legal requirement in Poland which necessitates that non-governmental organizations be officially registered, a procedure which is limited to persons over the age of 18. Consequently, many young people first become involved in official organizations when they are of college age. In two of the groups I met for focus groups, the young people were in their late teens. They are at an age with far more independence than the non-joiner youth with whom I spoke, and similarly distinct from the 14-year olds who responded to the survey. However, despite the age difference, I considered it important to meet with these joiner youth for a greater understanding of what motivated them to their present level of involvement.

In notable contrast to the sense of resignation expressed by the non-joiner youth, the youth I met who are active in organizations expressed that they felt compelled to help the environmental situation. The ice-breaker activities with joiner youth included the question “Why are you personally involved in actions for the environment?” Responses frequently mentioned a deep concern for the state of the environment, and a sense of obligation, as in the words of this 18-year old girl from a large city in eastern Poland:

Because I think that everyone is responsible for what is happening to the earth, and we cannot be indifferent towards this fact. The earth is not owned by man, and this is why every person is obliged to defend the earth against the destruction caused by civilization.

Another repeatedly mentioned reason for involvement was the decision to not accept the present environmental situation, such as the 18-year old boy from a large industrial city in central Poland who said simply *"I just couldn't be passive."* In all the focus groups with joiner youth, the idea of not wanting to be passive was strongly voiced.

For many of the young people, the rejection of passivity is a chance to outwardly express their rejection of the political past. Even though the youth I met have very little personal memories of living under a communist government, their statements reveal an awareness of how much the past continues to affect current Polish society. A boy from an industrial city in central Poland who is active in a youth club, offered the following statement to explain why more teenagers do not get involved. Although he was only 17 years old when the first democratic elections took place in 1989, he seemed keenly aware of the lingering impacts of a regime which promoted social passivity:

During years of communism we got used to things being imposed on us. We were accustomed to the sense that we cannot do anything to change things, that we should listen to what the government says. Now we have democracy for ten years and we are not accustomed to it completely yet, and that is why people are not prepared to take active roles.

It is important to keep in mind that during the years of the communist-led regime, it was considered dangerous to be outspoken. Standing out from the crowd was considered suspicious, while voicing opposition to established practices could result in imprisonment or worse. Thus, being passive was seen as a way of surviving. There was a common saying from that era which was informally called the "11th Commandment" in reference to the Ten Commandments in this deeply Catholic society: *"Nie wychylaj sie!"* (translation: *"Don't stick out!"*)

I was reminded of the influence of the communist legacy on many occasions, in

discussions with young people, teachers and administrators. A principal of a middle school in a village near Warsaw provided the clearest explanation I heard. He was in his late thirties and seemed eager to incorporate new teaching methods and ideas in his school. When I asked him about youth involvement in the community, his response illustrated how a sense of personal responsibility is still developing in Poland:

You must remember that our experience with democracy is very new – for many years we were accustomed to the authorities being “them”, as in it’s us against them. It’s not our fault the lake is dirty...they did that, or usually, they did not do something they should have. So we have little faith in government. Most people haven’t realized that since we now elect our officials and local government, it is no longer them and their responsibility, but it is our responsibility. It is going to take some time before people truly understand their responsibility.

Developing that sense of personal responsibility is key to enlisting youth involvement. In the context of the political and social transformations taking place in Poland, it is therefore not unusual when youth are hesitant to take action or assume leadership roles in their efforts to improve the communities. As the principal stated, many adults haven’t yet made that connection.

When I asked youth active in organizations to describe the types of actions they are involved in, two types of actions dominated. Several groups mentioned **educational actions**, such as organizing ecology competitions for children, publishing a vegetarian cookbook, and conducting public opinion surveys on environmental issues. **Persuasive actions** were the second most frequently mentioned type of action. These included public information campaigns such as distributing fliers about energy conservation, and organizing protests or peaceful demonstrations to express a viewpoint, from establishing bike lanes in a city to protesting for the expansion of a national park. None of the groups I met with described actions which would be considered radically extreme, yet they

spoke of the importance of protests and demonstrations as a way of publicizing opinions.

Although Americans may take for granted the constitutional right of free speech, for Poles, the ability to publicly express opinions is a recent development. As a teacher of geography and environmental education in a large city in central Poland explained:

During communism, you couldn't even say that anything was wrong with the environment, for everything was supposed to be taken care of...but now things are changing, and people's thoughts on the matter are also changing. People are experiencing the opportunity to protest, "I don't want to live next to trash...I don't want to drink contaminated water." This is very important for us in Poland. People are becoming aware that you can protest.

With the transition to democracy, more authority for everything from environmental regulation to education and health care has been transferred to local government authorities at the provincial and city level. This means that the decision-makers are no longer all in distant Warsaw, or Moscow as they had been during the era of real socialism. Elected officials are much more accessible. The joiner youth I spoke with described protests as a method of getting their issues on the agendas of local authorities.

As one 18-year old girl in central Poland said:

Because of demonstrations, things get done. Say that there is a situation, and the local authorities are aware of this, and they say 'oh yes, we will talk about this', and they don't do anything, just wave their hands and say "maybe sometime soon", and this just goes on and on. But if there is a demonstration and people protest, then there is a chance for people to talk openly, and then things get done.

An example of a protest occurred in 1999 when a group of Polish and German activists attempted to stop the development of a transcontinental highway through a nature preserve in Poland. The group built tree houses and occupied the preserve on St. Anna's mountain to bring attention to their pleas. The protestors were eventually driven off, and the road built through the preserve as planned, so I thought that the young people

with whom I spoke would be disillusioned about the potential of public demonstrations. I was surprised that in two of the focus groups with joiner youth, the young people explained how the action had proven that protests are a way to get things changed in Poland. An 18-year old boy in an ecological club in eastern Poland explained:

Small groups have to use drastic ways to reach the media. When about 60 people climbed St. Anna's Mountain, they started a discussion which questioned the sense of building highways. People began talking that maybe it would be cheaper to use the existing railways instead, so this was good.

In another ecological club in an industrial city in central Poland, an 18-year old boy admitted to having been concerned about highway development, but he didn't join an ecological organization until he heard about the protests on St. Anna's Mountain. He said: *"that was the first time I realized that it is possible to do something."*

This resilience and willingness to *do something* in the face of what might seem to be a failure was a common theme I heard in discussions with young people engaged in organizations. This contrasts distinctly with the non-joiner youth who were convinced that environmental problems were too complex, and as teenagers they were too young to be able to accomplish anything. While the enormity of the environmental problems seemed to effectively stop non-joiner youth from taking part, that same enormity of scale was a motivator for the joiner youth. The young people active in environmental organizations explained how they didn't want to contribute to more problems, but they wanted to be part of the solution.

When describing what the solution was, the joiner youth were able to describe a wide variety of actions and personal responsibility regarding environmental problems. They were quick to criticize the panacea proffered by the large-scale litter clean-up

events, which they saw as actually contributing to irresponsibility as described by this 18-year old boy who is a member of an ecological organization in a large industrial city:

The problem of waste is exploited by the media, such as the campaign, "Clean up the World". Very often participation in this event frees people from feeling responsible – "I go and clean up the world and then I can litter because I cleaned up last year."

Obviously, this 18-year old is perceiving the situation in a way that is much more abstract and contextual than the younger non-joiner youth I spoke with who expressed their enjoyment of the litter clean up activities. It is notable that the youngest joiner youth I spoke with, 13 and 14-year olds from a middle school in central Poland who are active in ecological actions in their community, admitted that they enjoy these litter events, but unlike their non-joiner counterparts, they were quick to point out the need for additional types of actions. These young joiner youth explained that they would like to see more environmental lessons at school, particularly from teachers *"who can make young people interested in the environment, but not force them."* By their remarks they expressed concern for educating other generations and they also saw themselves as having a role in this, as described by this 13-year old girl:

I think that young people like us, who have ecology lessons should educate our parents who did not have lessons like that in their school days...Basically, we should show what we learn at school to younger and older people.

Due to their greater developmental maturity and experience levels, the older joiner youth described much more complex actions, often directed at lifestyle changes. About half of the joiner youth I met in environmental organizations were vegetarians committed to a meatless diet for ecological reasons. Many of them were concerned over the growing use of personal automobiles, and mentioned actions to keep tram and bus

lines operating in cities, and actions to encourage the use of bicycles. Many of the young people cited a personal concern over the increasing commercialism they were witnessing. In the years since the politics changed, they have seen shops become more and more filled with imported goods – and many Poles are rushing to embrace the newly available materialistic lifestyle.

The youth I spoke with in environmental groups expressed that they were motivated by the need to contribute to helping others change their lifestyle. This could be accomplished, they explained, by making other people more aware of the environmental situation and what individuals could do. Many of the young people described having impacts on the people closest to them by virtue of their lifestyles, as this 17-year old girl from a large city in eastern Poland described:

We need to talk about the things we are interested in. If I talk all the time about not eating meat, and attending meetings and segregating waste and three thousand other things, sooner or later people start to pay attention. And then they start to do these things too. My family is an example, and so is my friend – she no longer eats meat.

A consistent theme to emerge from the discussions with joiner youth active in environmental organizations was that for them, caring for the environment was not something a person did only occasionally, but it was a series of daily choices which culminated in living a more environmentally-friendly lifestyle. As an 18-year old boy from an industrial city in central Poland explained: *“When somebody picks up litter only once a year, ecology does not exist for them in reality.”*

The younger joiner students perhaps saw the environmental situation more simplistically than their elder colleagues, but they shared the opinion that caring for the environment was for them an unquestionable priority:

13-year old boy, large industrial city: *"Protecting the environment is important, because without nature we cannot live."*

14-year old girl, large industrial city: *"If people don't stop being materialistic and thinking only of themselves, the world will never be healthy."*

Comparison of Non-joiners and Joiners: Summary

In summary, the young people who participated in the focus groups were all aware of the environmental issues in Poland on some level. However, the non-joiner youth possessed only a very superficial grasp of general environmental topics and they were unable to ascribe any personal responsibility to environmental projects. Their experiences with youth action almost exclusively involved litter-clean up events. Their comments expressed the beliefs that they couldn't participate because they were too young, environmental problems were too complicated. A very strong theme to emerge was the sense among non-joiner youth that adults did not value their opinions.

In contrast, the young people I met in organizations were concerned with the deeper causes of environmental degradation that are linked to consumer behaviors and lifestyle choices. Many of the joiner youth have made personal commitments to live much more pro-ecological lifestyles (such as vegetarianism) in spite of the fact that these decisions are not socially popular. Most distinctly, the involved youth shared the opinion that it was possible for them to accomplish something positive for the environment and they were motivated by a desire to not be passive.

The first statement below is from a 15-year old boy from a Middle School in Warsaw. Like many of the youth I met in focus groups with non-joiner youth, he seemed pessimistic about the ability of young people to accomplish anything. It is representative of many such statements I heard in focus groups with non-joiner youth. The second

statement is from a 18-year old boy who is active in an ecology club in an industrial city in central Poland. Although he briefly mentions the same limitations noted by the first speaker, his tone and overall message are very different. Rather than dwelling on what young people *cannot* do, he emphasizes what they *can* do. I include these quotes to illustrate this fundamental difference between the groups of non-joiner and joiner youth.

"We cannot do a lot. When we are older and others leave the government we will be able to do something. For now we can only put pressure on other people. That's all we can do. I suppose we can pick up trash, but practically speaking we can do nothing." –15-yr.old boy, Middle School, Warsaw.

"I understand that when we try to do something we have limited potential. I think we should concentrate on educating the society because many people do not realize what is happening. Besides – even if somebody does not feel like an ecologist but if they do something – comes to our meetings, joins in a bike rally, segregates their trash, decides to take a shower instead of a bath to save water – I think it is a kind of success, to instill such habits." – 18-yr. old boy, ecology club, Lodz.

Results

Survey

I conducted a survey with a larger more generalizable sample in order to explore participation in environmental and community actions from a different angle. Survey respondents were selected from a modified stratified random sample as described in Chapter 2. First year middle school students from 18 communities throughout Poland took part in the survey (N = 453). Ninety-four percent of respondents were aged 14 (range 11 – 16 years), and 53% of respondents were female.

I measured participation in environmental and community actions by a nine-item Environmental Action Index (EAI). The EAI consists of nine different types of actions,

including direct eco-management (e.g., litter clean-up events), consumer action (boycotts), persuasion actions (demonstrations), political actions (petitions), educational (data collection) and social actions (action type not specified, but directed at disadvantaged audiences such as orphans or elderly). Respondents indicated whether they had participated in each type of action over the previous two years, and what had been their level of involvement. All nine questions had seven response categories including no participation, participation as school requirement, participation which included helping to organize the action, and participation as the main organizer.

Participation by Total Sample

Of all middle school students surveyed, 86% indicated that they had participated in a litter clean-up event during the past two years (Table 4.2). Just over half of all middle school students had participated in a social action to aid the elderly, sick or orphaned in their communities. Approximately one-fifth to one-third of the respondents participated in each of the remaining seven action types. The political action of writing a letter to a legislator or government official was the action in which the fewest number of respondents participated, with just 19% respondents reporting that they had done this.

Litter events are the most frequent environmental action for youth in Poland. There is widespread participation in two annual events: “Clean Up the World” in September, and a similar action for Earth Day in April. For both, many schools take a field day, with tens of thousands of students out of school to pick up litter. These events frequently receive support from local government and businesses, usually donations of trash bags and rubber gloves, and food for a picnic at the close of the day.

TABLE 4.2 Proportion of middle school students who took part in different environmental and social actions. Avg. age = 14 years. N = 453

	% respondents who participated	Frequency
Participated in litter clean-up	86.0	382
Participated in social action	50.6	224
Wrote a research report or article	40.0	177
Prepared an educational activity	33.5	148
Participated in environmental monitoring or data collection	32.6	144
Signed a petition	29.9	132
Participated in a protest or demonstration to change policy	23.1	102
Participated in boycott	21.0	93
Wrote a letter to government	19.0	84

Litter events are not only popular, these activities are often the *only* form of actions many young people have participated in. Of the students who reported participating in a litter clean-up (N= 382), fully 23% (N = 89) reported they did not participate in any other environmental or social action. Almost half of the respondents (49.7%) took part in fewer than three different actions over the two year period.

Participation by Community Size:

Middle school students from villages with less than 1,000 residents, to large cities with over 100,000 residents took part in the survey. Comparison of means revealed that there was no significant difference in the mean number of actions participated in by size of community, however, participation in some types of actions varied by community size (Table 4.3). The proportions of respondents who indicated that they had been involved in

a leadership capacity in actions (persons who helped organize or participated as the main organizer) are also shown in Table 4.3. The numbers of individuals participating as a helper or a main organizer of an action were too low to permit calculation of significant differences.

Contrary to what might be expected, for four of the nine action types respondents from the smallest communities were significantly more likely than respondents from large cities to have taken part. For example, 88% of respondents from communities with less than 5,000 people took part in litter clean-up events, compared with 80% of respondents from cities with over 100,000 people (chi square = 4.566; $p < .05$; $df = 1$). Other actions in which youth from small communities were more likely to have participated included data collection to monitor environmental conditions (chi square = 4.320; $p < .05$; $df = 1$); boycotts against products or companies (chi square = 8.605; $p < .01$; $df = 1$); and protests or demonstrations (chi square = 4.742; $p < .05$; $df = 1$).

TABLE 4.3 Participation in actions by middle school students in different community sizes. N = 453

SIZES: N = 455

POPULATION SIZE	N	% TOTAL Participation	% Respondents for each level of involvement			
			Required by School	Not required, organized by others	Helped Organize	MAIN Organizer
Participated in litter clean-up*						
<5,000	144	88.4	65.5	15.8	7.2	0
5,000 – 20,000	71	91.0	65.7	19.4	3.0	3.0
20,000 – 100,000	69	91.4	75.4	14.5	7.2	0
>100,000	169	79.6	56.3	12.6	10.8	0
Participated in social action						
<5,000	144	52.1	29.3	15.7	7.1	0
5,000 – 20,000	71	58.3	29.8	22.4	3.0	3.0
20,000 – 100,000	69	42.0	26.1	14.5	1.4	0
>100,000	169	49.7	20.4	16.2	9.6	3.6
Wrote a research report or article						
<5,000	144	41.8	26.6	7.2	6.5	1.4
5,000 – 20,000	71	38.5	27.7	6.2	3.1	1.5
20,000 – 100,000	69	29.0	20.3	2.9	2.9	2.9
>100,000	169	44.3	21.0	13.8	6.6	3.0
Participated in monitoring or data collection*						
<5,000	144	40.1	19.7	7.3	8.8	4.4
5,000 – 20,000	71	37.9	27.3	4.5	4.5	1.5
20,000 – 100,000	69	23.2	5.7	10.1	5.8	1.4
>100,000	169	28.6	14.9	6.0	5.4	2.4
Prepared an educational activity						
<5,000	144	35.5	23.9	7.2	2.9	1.4
5,000 – 20,000	71	24.6	16.9	4.6	1.5	1.5
20,000 – 100,000	69	31.9	24.6	4.3	1.4	1.4
>100,000	169	36.5	18.0	11.4	4.2	3.0

Table 4.3 (cont'd).

POPULATION SIZE	N	% Respondents for each level of involvement				
		% TOTAL Participation	Required by School	Not required, organized by others	Helped Organize	MAIN Organizer
Signed a petition						
<5,000	144	29.5	12.2	7.9	7.2	7.2
5,000 – 20,000	71	25.4	13.4	6.0	6.0	0
20,000 – 100,000	69	30.5	15.9	14.5	0	0
>100,000	169	31.8	13.2	11.4	4.8	2.4
Participated in protest or demonstration to change policy*						
<5,000	144	29.7	19.6	5.1	5.1	0
5,000 – 20,000	71	27.3	16.7	6.1	1.5	3.0
20,000 – 100,000	69	16.0	5.8	7.2	0	2.9
>100,000	169	19.1	7.2	6.0	5.4	0.6
Participated in boycott*						
<5,000	144	29.5	17.2	5.8	5.8	0.7
5,000 – 20,000	71	19.4	10.5	6.0	6.0	3.0
20,000 – 100,000	69	18.9	5.7	10.1	2.9	0
>100,000	169	15.6	7.2	2.4	5.4	0.6
Wrote a letter to government						
<5,000	144	21.8	10.2	4.3	6.5	0.7
5,000 – 20,000	71	25.4	13.4	4.5	6.0	1.5
20,000 – 100,000	69	13.1	7.2	5.8	0	0
>100,000	169	16.8	7.8	4.2	4.2	0.6

*Significantly greater participation by youth in smaller communities, $p < .05$

Participation by Gender

The number of actions respondents took part in over two years is shown in Figure 4.3. On average, boys ($N=213$) indicated participating in 3.56 actions, which was significantly more actions than girls ($N=240$) with an average of 3.03 actions ($F = 4.739$; $p < .05$). Most respondents took part in one or two actions. For both boys and girls, the modal response for the number of actions participated in was “one.”

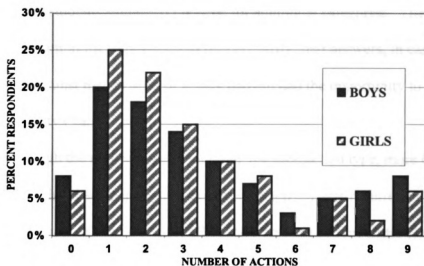


FIGURE 4.3 Participation by gender. Number of environmental and social actions respondents took part in over two years.

On quarter of the girls and one fifth of the boys responded that they participated in just one action during two years. This was most frequently a litter clean-up event. When litter clean-up events were excluded from the counts, 27% of the boys and 27% of the girls indicated that they had participated in no other actions over the two year period.

Boys were significantly more likely to report that they had participated in actions involving data collections (chi square = 8.586; $p < .01$; $df = 1$), protests or demonstrations

(chi square = 12.059; $p < .01$; $df = 1$), boycotts (chi square = 3.938; $p < .05$; $df = 1$) and letter writing to government officials (chi square = 15.792; $p < .000$; $df = 1$). The results of participation in specific action types by gender, including proportions of respondents who were involved in a leadership role in actions are shown in Table 4.4. The numbers of youth participating in a leadership role were too low to permit calculation of significant differences. Two response categories were added during the pilot-test of the survey after middle school students suggested the need for additional categories. These categories provided the option for respondents to further clarify their answers, in case they had participated against their wishes or if they had not had the opportunity to participate in their community (Table 4.5).

Although the numbers were not large, for each action type, more boys than girls indicated that they had “participated because the activity was required by school, but I did NOT want to.” Conversely, for all but two types of actions (litter clean-up and writing a research report about the environment), girls were significantly more likely than boys to respond “I haven’t participated, but if I had the opportunity to participate, I probably would.” In six of the nine actions, more than one quarter of all female respondents selected this option.

TABLE 4.4 Level of involvement of middle school students in nine action types by gender. N = 453. * significant difference, $p < .05$

GENDER	N	% TOTAL Participation	% Respondents for each level of involvement			
			Required by School	Not required, organized by others	Helped Organize	MAIN Organizer
Participated in litter clean-up						
FEMALE	240	85.7	61.7	14.3	9.2	0.4
MALE	213	86.3	63.8	15.7	6.4	0.5
Participated in social action						
FEMALE	240	52.1	24.4	16.8	8.8	2.1
MALE	213	48.8	26.8	16.6	3.9	1.5
Wrote a research report or article						
FEMALE	240	37.3	20.4	8.5	5.9	2.5
MALE	213	43.6	27.5	9.3	4.9	2.0
Participated in monitoring or data collection*						
FEMALE	240	26.7	15.7	4.2	5.5	1.3
MALE	213	39.7*	18.1	9.8	7.4	4.4
Prepared an educational activity						
FEMALE	240	30.9	17.8	7.6	2.5	3.0
MALE	213	36.9	24.1	8.4	3.4	1.0
Signed a petition						
FEMALE	240	26.7	12.6	8.4	5.0	0.8
MALE	213	33.5	14.3	11.8	4.9	2.5
Participated in protest or demonstration to change policy*						
FEMALE	240	16.8	7.6	5.1	3.4	0.8
MALE	213	30.4*	17.6	6.9	4.4	1.5
Participated in boycott*						
FEMALE	240	17.7	8.8	4.2	4.6	0.0
MALE	213	25.0	12.7	6.4	4.9	1.0
Wrote a letter to government*						
FEMALE	240	12.1	5.0	2.9	3.8	0.4
MALE	213	27.1*	14.2	6.4	5.4	1.0

TABLE 4.5 Middle School Students who took part in an action unwillingly as a school requirement, and those who expressed interest in future participation.: N=453.

*Significant difference between genders, $p < .01$

GENDER	N	% RESPONDENTS: PARTICIPATED BECAUSE REQUIRED BY MY SCHOOL, BUT DID NOT WANT TO	% RESPONDENTS: DIDN'T PARTICIPATE, IF HAD OPPORTUNITY PROBABLY WOULD
Participated in litter clean-up			
FEMALE	240	4.6	6.7
MALE	213	11.8	3.9
Participated in social action*			
FEMALE	240	3.4	23.2*
MALE	213	6.8	12.7
Wrote a research report or article			
FEMALE	240	3.0	22.9
MALE	213	7.4	15.7
Participated in monitoring or data collection*			
FEMALE	240	1.3	29.8*
MALE	213	5.4	17.6
Prepared an educational activity*			
FEMALE	240	2.5	28.0*
MALE	213	3.4	16.3
Signed a petition*			
FEMALE	240	1.3	35.6*
MALE	213	3.0	21.2
Participated in protest or demonstration to change policy*			
FEMALE	240	1.3	32.1*
MALE	213	3.9	15.7
Participated in boycott*			
FEMALE	240	1.7	29.8*
MALE	213	4.9	17.6
Wrote a letter to government*			
FEMALE	240	0	28.2*
MALE	213	3.9	16.7

Participation by Club Involvement

The survey contained a series of questions for respondents to identify their involvement in various youth organizations, including national organizations such as Scouts and 4-H, as well as informal school ecology clubs. From the total sample of respondents, (N = 453) 57.2% of the youth indicated that they belonged to at least one listed youth organization and were designated “joiners” (n=259). There were 194 “non-joiners” who indicated that they did not belong to any organization.

Joiners were significantly more likely to participate in a greater number of actions than non-joiners ($F = 25.797$; $p < .000$). Joiners on average participated in 3.8 actions, compared with non-joiners who participated in an average 2.6 actions. Joiners were significantly more likely than non-joiners to participate in eight of the nine actions (Table 4.6). For ease of interpretation, the involvement categories displayed in Table 4.6 have been collapsed as follows: the column “Participated, not as leader” includes all respondents who indicated that they participated as part of a school requirement, or in an activity organized outside of school; the column “Helper or organizer” includes all respondents who indicated that they participated in that activity either as an assistant to the main organizer or as the main organizer. The proportions of respondents involved in a leadership role were too low to permit calculation of significant differences.

For youth clubs in general, 13% of boys and 6% of girls indicated that they are club leaders, and this is statistically significant ($\text{Chi-square} = 5.396$; $p < .05$; $df = 1$). For clubs with an ecology theme, there were equal numbers of boys and girls serving as leaders, but the numbers were too low to permit calculations (total of twelve leaders).

TABLE 4.6 Levels of involvement: comparison of non-joiners (n = 194) and joiners (n = 259). Chi square tests compare proportions of total participation of non-joiners versus joiners. * significant difference, $p < .05$; ** significant difference, $p < .000$

	Did not participate		Participated, not as leader		Helper or organizer		Chi square Significance df = 1
	#	%	#	%	#	%	
Participated in litter clean-up *							
NON-JOINER	34	18.3%	142	76.3%	10	5.4%	5.070
JOINER	28	10.9%	203	78.7%	27	10.5%	p < .05
Participated in social action *							
NON-JOINER	104	56.2%	70	37.8%	11	5.9%	6.133
JOINER	115	44.6%	117	45.3%	26	10.1%	p < .05
Wrote a research report or article **							
NON-JOINER	141	76.2%	38	20.5%	6	3.2%	34.169
JOINER	125	48.4%	105	40.7%	28	10.9%	p < .000
Participated in monitoring or data collection *							
NON-JOINER	137	74.1%	35	18.9%	13	7.0%	6.190
JOINER	161	62.6%	69	26.8%	27	10.5%	p < .05
Prepared an educational activity **							
NON-JOINER	141	76.2%	40	21.6%	4	2.2%	13.178
JOINER	153	59.5%	86	33.5%	18	7.0%	p < .000
Signed a petition *							
NON-JOINER	139	75.1%	35	18.9%	11	5.9%	4.166
JOINER	171	66.5%	68	26.5%	18	7.0%	p < .05
Participated in a protest or demonstration to change policy *							
NON-JOINER	152	82.2%	25	13.5%	8	4.3%	5.431
JOINER	188	73.2%	55	21.4%	14	5.4%	p < .05
Participated in a boycott							
NON-JOINER	153	82.7%	22	11.9%	10	5.4%	3.081
JOINER	196	76.3%	48	18.7%	13	5.1%	ns
Wrote a letter to government *							
NON-JOINER	160	86.5%	16	8.6%	9	4.9%	6.106
JOINER	198	77.0%	45	17.5%	14	5.4%	p < .05

ns = not statistically significant

Knowledge of Action Strategies

Open-ended responses from respondents who answered at least two of the three action strategy questions (n=398) were coded and summed to create the Action Strategy Index. Code values for each question ranged from 0 –3, thus the maximum Action Strategy Index score was nine. The mean Action Strategy Index score was 3.17. Joiners were significantly more likely to score higher on the Action Strategy Index ($F = 6.034$; $p < .05$). Girls scored significantly higher than boys ($F = 9.011$; $p < .01$).

Even after excluding cases with blank responses, almost 18% of all respondents had an Action Strategy Index score of 0 for all three questions. This means that for all three questions the respondent wrote in an answer which indicated no involvement or action, such as “there’s nothing I can do” or “I don’t know what to do.”

Other responses coded in this category included references to the belief that the respondents couldn’t do anything due to their age, e.g., “because I am too young” or “because young people have no voice in such things.” For the action question concerning the proposed road through a forest, 9.0% of the boys, and 15.5% of the girls wrote an answer reflecting that they felt ineffective due to their age.

For each of the action strategy questions, boys more often wrote in an answer of no involvement or no action (Figures 4.4; 4.5; 4.6). Responses by girls suggested statistically greater levels of personal involvement than responses by boys in all three of the action strategy scenarios: question about the dirty pond (Chi-square = 25.612; $p < .000$; $df = 3$); the rare bird (Chi-square=13.430; $p < .01$; $df = 3$); and the question about the road through the forest (Chi square = 17.263; $p < .01$; $df = 3$).

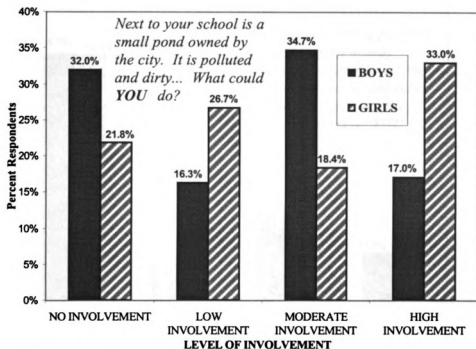


FIGURE 4.4 Level of proposed involvement for polluted pond, by gender; N = 398 Middle School Students.

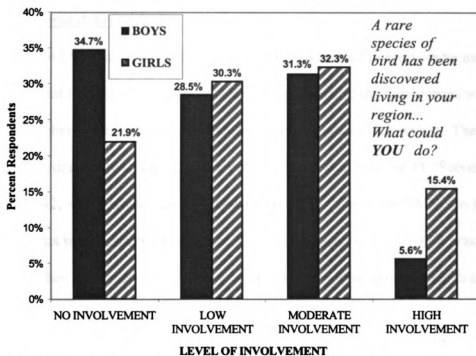


FIGURE 4.5 Level of proposed involvement for rare bird, by gender. N = 398 Middle School Students.

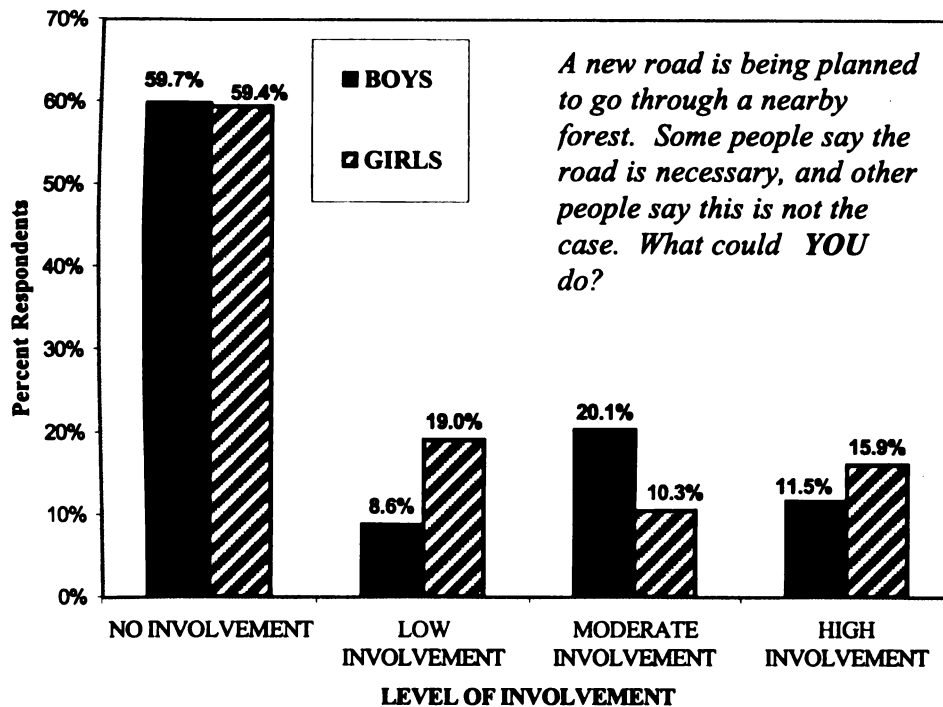


FIGURE 4.6 Level of proposed involvement for road, by gender.
N = 398 Middle School Students.

Environmental Action Index

The Environmental Action Index (EAI) was created to measure an individual's involvement in environmental and social actions. Each of the nine actions was scored 0 – 5, with higher points indicating greater level of leadership involvement. The scores from the nine actions were summed, with a maximum possible score of 45. Scores ranged from 0 – 42, with a strong positive skew (Figure 4.7). The mean EAI score for all respondents who answered at least six of the nine action items (n = 375) was 8.2.

When simple counts of actions were compared, boys participated in more actions than girls on average. The Environmental Action Index incorporates levels of personal involvement, to include respondents' leadership contributions. There is no significant difference in the mean EAI scores of boys and girls ($F = 2.769, p = .097$). Thus, although

girls may not participate in as many actions as boys, the EAI confirms that girls participate with greater levels of involvement and leadership.

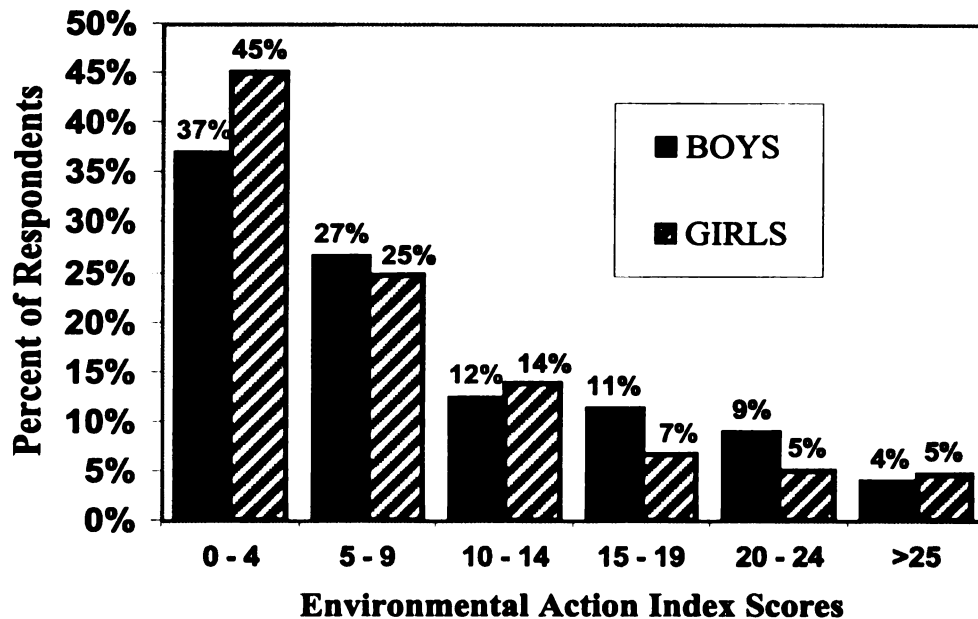


FIGURE 4.7 Environmental Action Index scores by gender:
Boys (n = 203); Girls (n = 238)

In addition to gender, other demographic variables examined were size of community of residence, education level of parents, and membership in a club (whether the individual was a “joiner”). Of these factors, only membership in a club had significant influence on the environmental action index score. Even when controlling for gender and size of community, belonging to a club had a significant influence on EAI scores ($\beta = .207$; $t=4.406$; $p<.000$). Other differences attributable to gender are discussed later in the multiple regressions. Neither mother’s or fathers’ education level correlated significantly with the young people’s EAI scores (Mother’s level of education, $r = .041$; $p = .399$; father’s level of education, $r = -.006$; $p = .895$).

Environmental Action Index scores by community size and club membership are shown in Figure 4.8. In each pairing, the range of EAI scores for non-joiners are displayed first, followed by the EAI scores for joiners from that size community. Joiners on average had higher action index scores than non-joiners. These differences were significant for respondents in rural communities of less than 5,000 population ($F = 8.664$; $p < .01$), respondents in small towns ($F = 6.061$; $p < .05$), and respondents in big cities with populations greater than 100,000 people ($F = 5.375$; $p < .05$).

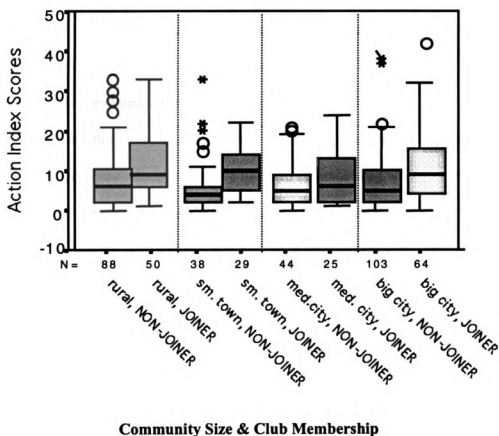


FIGURE 4.8 Environmental Action Index Scores by Community Size and Club Membership

The boxplots provide a way of displaying the medians (the horizontal line) and the spread of values in each category. The edges of the boxes mark the 25th and 75th percentiles, thus the central 50% of data points for each category fall within the range of the box. For each community size category, a greater proportion of joiners than non-joiners had higher EAI scores.

Bivariate Correlations

To determine which of the proposed Motivation Modifiers correlate with levels of participation in environmental and social actions, I computed bivariate correlations between each of the seven Motivation Enhancers and the Environmental Action Index. These analyses revealed several interesting findings (Table 4.7).

Because this study was exploratory in nature, I was seeking to identify from a suite of factors those which were more likely to be associated with greater level of participation in environmental and community action projects. Thus it was important to examine the data not only as the entire sample of middle school students (N=453), but also to subdivide the dataset in order to determine the differences associated with individuals who do or do not belong to clubs, as well as any differences to be found between male and female respondents.

When the entire sample of middle school students was examined, four of the seven motivation enhancers were positively correlated with action participation but only parent support was significantly correlated ($r = .14$; $p < .01$).

TABLE 4. 7 Bivariate correlations between Motivation Enhancers and Environmental Action Index , compared between the total sample of middle school students, joiners and non-joiners, males and females.

	<i>ALL MIDDLE SCHOOL STUDENTS N = 453</i>	ALL MIDDLE SCHOOL STUDENTS		ALL MIDDLE SCHOOL STUDENTS	
		JOINERS n = 242	NON-JOINERS n = 172	MALE n = 185	FEMALE n = 229
Knowledge of Action Strategies	r = +.09 ns ^a	r = +.14 p = .05*	r = -.03 ns	r = +.06 ns	r = +.15 p = .05*
Individual Locus of Control	r = +.06 ns	r = +.14 p = .05	r = -.08 p = ns	r = +.14 p = ns	r = +.003 p = ns
Group Locus of Control	r = -.04 p = ns	r = -.04 p = ns	r = -.08 p = ns	r = -.11 p = ns	r = +.06 p = ns
Peer Support	r = -.01 p = ns	r = +.06 p = ns	r = -.12 p = ns	r = -.04 p = ns	r = +.03 p = ns
Parent Support	r = +.14** p = .01	r = +.17 p = .01	r = +.05 p = ns	r = +.23** p = .01	r = +.06 p = ns
Teacher Support	r = -.03 p = ns	r = -.01 p = ns	r = -.07 p = .355	r = -.08 p = .256	r = +.04 p = ns
Other Adult Support	r = +.08 p = ns	r = +.11 p = ns	r = +.02 p = ns	r = +.14 p = ns	r = +.04 p = ns

* correlation is significant at the 0.05 level (2-tailed)

** correlation is significant at the 0.01 level (2-tailed)

^ans – correlation not statistically significant

For students of either gender who are joiners (members of at least one club), five of the seven factors were positively correlated with action participation, including significant correlations for knowledge of action strategies (Pearson's $r = .14$; $p < .05$), individual internal locus of control ($r = .14$; $p < .05$), and parent support ($r = .17$; $p < .01$). There were no motivation moderators found to be significantly correlated with participation in environmental action for non-joiners. Only two of the moderators were

positively correlated to increased action participation for non-joiners, parent support and other adult support, the remaining five variables were negatively correlated with action participation although none of the relationships were statistically significant. For females all seven motivation enhancers were positively correlated with action participation, however, only knowledge of action strategies was significantly correlated with increased scores on the EAI for females ($r = .15$; $p < .05$). Considering all seven motivation moderators, only parent support and other adult support were positively correlated with action participation for all subgroups (male/female; joiner/non-joiner), although none of the motivation moderators were significantly correlated with action participation for all subgroups.

After examining the statistics above, it was apparent that the seven proposed Motivation Moderators were unlikely to explain much of the variance in the Environmental Action Index score. Additionally, with such notable differences between joiners and non-joiners, and males and females, I was concerned about the possibility of interactions between demographic factors and the proposed independent variables. Two-way analysis of variance verified that there were interaction effects associated with club membership and two variables: individual locus of control (ANOVA test for between-subjects effects: $F = 5.842$, $p < .05$) and peer support ($F = 5.339$; $p < .05$). The interactions indicated that by the manner in which these variables were tested in this sample, club membership was inextricably linked to perceptions of individual locus of control and peer support, making it statistically impossible to discern the impacts of these variables individually on action participation. To account for these interaction effects, I created interaction variables by multiplying each respondent's score for "joiner" by their

score for “individual locus of control, “ and likewise “joiner” multiplied by “peer support.” These two new variables were included in the multiple regression analysis with the original seven independent variables.

Multiple Regression Analyses

As a preliminary step in the multiple regression analyses, I verified the normality of the sample by plotting standardized residuals and checking for outliers with Mahalanobis distances (Norusis, 1999). This is done in order to establish that the data are a sample from a normal distribution, which is a criterion for many statistical analyses. The sample met assumptions of normality. In order to better meet the assumptions of multiple linear regression, I applied an arcsine transformation to the dependent variable Environmental Action Index (EAI) to improve the normality of the distribution of residuals. Other assumptions (linear relationships between independent variables and dependent variable, and constant variance) were also confirmed (Norusis, 1999).

To distinguish differences associated with gender, I divided the data set by gender and computed separate multiple regressions. In Table 4.8 the results of multiple regressions on the entire sample of middle school students, as well as sub-samples of boys and girls are compared. When the entire sample of middle school students (N=414, after excluding cases with missing values) was analyzed using multiple linear regression, only knowledge of action strategies emerged as significantly contributing to the EAI score ($\beta = .136$; $t = 2.534$; $p < .01$). The seven motivation enhancers with the two interaction effects account for a total of 11.8% of the variance in the dependent variable of participation in environmental actions.

TABLE 4.8 Multiple regressions for seven Motivation Moderators plus two interaction variables, and the Environmental Action Index. Columns display regressions for the entire sample, and separate regressions for boys and girls calculated with two different multiple regression methods: all variables entered, and stepwise variable selection. All β values are standardized.

	All Variables Entered			Stepwise Variable Selection		
	ENTIRE SAMPLE N = 414	BOYS n = 185	GIRLS n = 229	ENTIRE SAMPLE N = 414	BOYS n = 185	GIRLS n = 229
Knowledge of Action Strategies	$\beta = .136$ $t = 2.785$ $p < .01^{**}$	$\beta = .129$ $t = 1.770$ ns ^a	$\beta = .161$ $t = 2.470$ $p < .05^*$	$\beta = .120$ $t = 2.534$ $p < .05^*$		$\beta = .173$ $t = 2.740$ $p < .01^{**}$
Individual Locus of Control	$\beta = .015$ $t = .218$ ns	$\beta = .150$ $t = 1.301$ ns	$\beta = -.071$ $t = -.815$ ns			
Group Locus of Control	$\beta = -.089$ $t = -1.749$ ns	$\beta = -.174$ $t = -2.267$ $p < .05^*$	$\beta = .000$ $t = -.003$ ns			
Peer Support	$\beta = -.079$ $t = -1.183$ ns	$\beta = -.146$ $t = 1.405$ ns	$\beta = -.031$ $t = -.351$ $p < .05^*$			
Parent Support	$\beta = .083$ $t = 1.712$ ns	$\beta = .190$ $t = 2.594$ $p < .05^*$	$\beta = .016$ $t = .239$ ns		$\beta = .200$ $t = 2.733$ $p < .01^{**}$	
Teacher Support	$\beta = -.038$ $t = -.792$ ns	$\beta = -.162$ $t = -2.227$ $p < .05^*$	$\beta = .072$ $t = 1.124$ ns		$\beta = -.164$ $t = -2.284$ $p < .05^*$	
Other Adult Support	$\beta = .077$ $t = 1.557$ ns	$\beta = .150$ $t = 2.024$ $p < .05$	$\beta = .051$ $t = .759$ ns			
Joiner X Individual Locus of Control Interaction	$\beta = .160$ $t = 1.478$ ns	$\beta = .029$ $t = .159$ ns	$\beta = .196$ $t = 1.428$ ns	$\beta = .264$ $t = 5.583$ $p < .000^{**}$	$\beta = .236$ $t = 3.282$ $p = .01^{**}$	$\beta = .265$ $t = 4.202$ $p < .000^*$
Joiner X Peer Support Interaction	$\beta = .141$ $t = 1.328$ ns	$\beta = .192$ $t = 1.122$ ns	$\beta = .130$ $t = .946$ ns			
R Squared	0.118	0.178	0.135	0.089	0.120	0.109

* correlation is significant at the 0.05 level

** correlation is significant at the 0.01 level

^ans – correlation not statistically significant

In order to isolate just the variables contributing significantly to the dependent variable, I employed stepwise multiple regression. When the seven original independent variables and two interaction variables were entered into stepwise regression, only two variables emerged as significantly affecting the action participation score: knowledge of action strategies ($\beta = .120$; $t = 2.534$; $p < .05$) and the interaction of club membership with a person's individual locus of control ($\beta = .264$; $t = 5.583$; $p < .000$).

When the sample is subdivided into boys and girls, different variables are shown to contribute to the action participation score. For boys ($n = 185$), stepwise multiple regression selected three factors which significantly contribute to the respondent's EAI score: parental support ($\beta = .200$; $t = 2.733$; $p < .01$); teacher support ($\beta = -.164$; $t = -2.284$; $p < .05$) and the interaction of club membership with a person's individual locus of control ($\beta = .236$; $t = 3.282$; $p < .01$). The negative value for teacher support suggests that there is an inverse effect of teacher support on action participation by boys. Thus, boys who responded that they feel their teachers most definitely encourage pro-environmental behavior actually had significantly *lower* action index scores. The total variance in action participation explained by the seven original independent variables and two interaction variables for boys was 12.0%.

For girls ($n = 229$), stepwise multiple regression resulted in two variables with significant influence on the respondent's action participation score: knowledge of action strategies ($\beta = .173$; $t = 2.740$; $p < .01$) and the interaction of club membership with a person's individual locus of control ($\beta = .265$; $t = 4.202$; $p < .000$). The overall variance explained for girls was 10.9%.

Discussion

This study reveals that at the present time, participation in environmental and community actions by Polish youth is clearly dominated by a few highly publicized litter clean-up events. There are mixed opinions among the young people in regards to these large-scale litter events. Many of the written comments on the survey described how much the respondents enjoyed the event. A 14-year old boy from small city in rural setting wrote: *"We cleaned up the lake and the forest. It was fun."* A 14-year old girl from a small city in coal mining region wrote: *"With my classmates we gathered trash around the school, and then had a bonfire. 'Clean up the World' is a fine action."*

In focus group discussions, however, a different story emerged. As mentioned earlier, in focus groups with non-joiner youth, litter clean-up events were often the only type of event the young people could think of in response to my question, "What types of actions can young people do for the environment?" Many of the participants expressed how much they enjoyed the litter events, but it was apparent that for some of the young people this was due as much or more to the fact that these events typically meant a free day out of school. One 15-year old boy in Warsaw suggested hopefully that there should be more of the large-scale litter events, *"I think weekly...maybe during math lessons."*

Compared with young people in other nations, Polish youth are more frequently involved in litter events. In a study of youth environmental attitudes and behavior in nine Asian-Pacific nations, respondents were asked to indicate actions taken in the previous 12 months, including participation in a litter clean-up event. Responses ranged from a low of 14% among Japanese teens, to a high of 63% of Balinese teens who indicated they had participated in a litter clean up (Yencken et al., 2000). Among Polish youth in the

present study, 86% indicated that they had taken part in a litter event.

It is difficult to predict if concern and participation in litter issues will evolve to wider involvement in other forms of environmental action in Poland. In the United States, the early stages of the modern environmental movement began with increasing awareness and participation in anti-litter campaigns. Schnaiberg and Gould (1994) related the surge of environmental concern in the United States in the mid-1960s to increased litter production, as post-World War II America experienced booms in generation and consumption of consumer goods. Much of the focus in the early days of the American environmental movement was on litter prevention and wilderness protection. Only after highly visible environmental problems were tackled did public attention turn toward the less visible problems, and it wasn't until the late 1980s - almost twenty years after the first Earth Day - that issues of environmental justice entered the environmental movement in the United States. Similar in some ways to the post-war growth in the United States, Poland has experienced massive changes in production and consumption of consumer goods since 1989, and this has been accompanied by an acceleration in waste production. If the evolution of the environmental movement in Poland follows a path similar to the one in the United States, the focus on litter clean up events could simply be an early phase.

One of the most interesting findings to emerge regarding the Environmental Action Index is related to gender differences. Boys on average took part in a greater number of actions, but girls took part at higher levels of leadership. When this was accounted for in the action index, there was no significant difference in action participation between genders. Girls participate in fewer actions, yet at higher levels of

leadership which accounts for an overall higher score per action. I would suspect that if girls were participating in the same *number* of actions as the boys, their total participation as measured by the Environmental Action Index would actually be greater than the boys. This fact was readily acknowledged during one of the focus group meetings with youth involved in an environmental club. Before the participants arrived, I had the opportunity to chat with the youth leaders of the group. At one point I asked if girls or boys were more active in the organization. The reply, from a 19-year old boy was thoughtful: *“That’s difficult to tell...more boys come to the meetings, but the girls do more.”*

These findings are consistent with the results of the Action Strategy Index. Girls more frequently wrote strategies which involved higher levels of personal commitment and responsibility than boys. Boys were more often the leaders of various organizations, but the data suggest that many girls who are not leaders in their clubs or schools are actually *doing* more than their male counterparts.

I compared two different methods of multiple regressions to identify the variables which contribute to increased participation in environmental actions. There are a variety of methods that can be employed in multiple regressions, and it is recommended to explore different methods in order to identify the most parsimonious selection of variables which will provide an acceptable level of prediction (Norusis, 1999). After conducting computations with these various methods, I found that the variables which I proposed explain only between 9 and 18% of the variance of the action participation index. This suggests there are numerous unnamed variables which contribute to – or inhibit – an individual’s participation.

I firmly believe that some of the variables which did not emerge from the multiple

regression analyses do indeed contribute to a person's decision to participate in environmental actions. I conclude this because the data from the focus groups suggests that the variables of opportunities for action and peer support are in fact very important to a young person's decision to participate in actions, but I have not devised survey items to adequately measure these variables. This is an admitted limitation of the study, and suggests the need for future studies to investigate these constructs to greater detail.

From the survey results, using stepwise multiple regression, a total of three variables were identified as significantly and positively contributing to an individual's level of environmental action participation. These are knowledge of action strategies, parental support, and the combined effects of club membership and individual locos of control. One variable, teacher support, emerged as significantly correlated to action participation in a negative direction. I will discuss the "Motivation Enhancers" in the order that they appear in the operational figure (Figure. 4.1), drawing upon results of the focus groups and the survey.

Knowledge of Action Strategies

In the total sample of middle school students, survey results indicate that knowledge of action strategies significantly affects action participation. In bivariate correlations knowledge of action strategies correlated positively with levels of action participation for both genders, although the correlation was significant for girls only ($r = +.15$; $p < .05$). These findings are consistent with previous studies (McConney & McConney, 1995; Ramsey & Hungerford, 1989; Sia, 1984). The results of these studies, and the present study, suggest that increasing a person's knowledge of action strategies is

key to increasing the likelihood of their participation in environmental actions.

The focus group data adds weight to this recommendation. The youth I met from organizations and groups with a history of participation in actions were able to suggest many creative ideas for environmental and community actions. In contrast, the non-joiner youth who were unable to imagine any possibilities for their participation beyond litter-related events demonstrated that they lacked knowledge of the *possibilities for action*. It appears that many Polish youth define environmental actions as trash clean-up, a feature which undoubtedly contributes to feelings of malaise or disinterest regarding participation in environmental actions. Without a wider viewpoint or a vision of what other actions and strategies can be undertaken, it is not surprising that many Polish youth lack enthusiasm for involvement in actions.

The fact that litter events are virtually the only “environmental” actions organized by schools lends a de facto authenticity to the interpretation that picking up litter as the way to demonstrate care for the environment. Additionally, litter is a highly visible problem in Poland. In rural areas in particular, there is a shortage of garbage dump sites, and existing facilities charge a dumping fee. Consequently, in recent years there has been an increase of illegal dumping of trash in forests and fields in what the Poles refer to as “wild dumpsites.” There is also more litter in urban areas, due in part to the lack of trash containers in public areas and an increase in non-biodegradable packaging which is associated with the increased availability of imported goods.

The survey included an open-ended question which asked respondents to list the three most important environmental problems in the place they live. Considering all community sizes together, from villages with less than 5,000 residents to cities with over

100,000 residents, “litter/illegal dumpsites” was the single most frequent response. Over 40% of all respondents wrote about this environmental problem. The fact that this many respondents supplied this answer for an open-ended question attests to the seriousness of the issue. If litter actions are the *only* environmental and community events young people are acquainted with, however, sustaining their involvement and interest is not likely.

Internal Locus of Control

As expected from studies reviewed in the literature, an internal individual locus of control was positively correlated with action participation. Unexpectedly, the results indicate that there was a negative correlation between participation in actions and perceptions of group effectiveness. Although the correlation was not significant, individuals who expressed that groups were capable of higher levels of influence in their communities had *lower* action participation scores. I had anticipated that particularly for young people, who are very concerned with group affiliation, a perception of a group’s effectiveness would be positively correlated with action participation.

Yet on further consideration, this unexpected result is actually very instructive. Eighty-eight percent of respondents indicated that they believed teenagers working together were capable of improving the environmental conditions where they lived to a moderate or great degree. When asked the same question about their personal effectiveness, only 27% of respondents thought that they personally could improve the environment to a moderate or great degree. Clearly, the youth surveyed have much greater confidence in the abilities of a group of people to bring about change than in their

own effectiveness.

I believe that the inverse relationship between group effectiveness and action participation highlights one of the inhibitors to action that is widely perceived by Polish youth. When asked in an open-ended question to explain their level of involvement, one of the most common reasons cited by the youth for not being actively involved was the lack of organizations or clubs in their communities. The young people have faith in the ability of groups to cause change, but they feel limited by the fact that there are few or no organizations in their communities devoted to the environment. Similar opinions were expressed in the focus groups. The results from the open-ended question described above will be discussed in greater detail in Chapter 5.

Opportunities for Action

There were no questions on the survey which would permit inclusion of this factor in bivariate correlations or multiple regression analyses. Inferences drawn from the open-ended questions (to be discussed in Chapter 5), and statements made during the focus groups suggest that Polish youth feel that the lack of opportunities for their involvement is a very great hindrance to their participation. The non-joiner youth I met in focus groups seemed convinced of their inability to take part in actions, on the basis that there were no such actions organized. When I asked these young people whether they could organize such actions themselves, they expressed that they didn't think that would be possible.

The nine questions in the EAI offered the response option "I haven't participated, but if I had the opportunity to participate, I probably would." This answer category was

not intended to serve as a measure of behavior intentions, and because of the survey's design I believe that any values recorded for this category are likely to be underestimates. The answer option was listed last out of seven response options. The first option category listed was "I have not participated", thus I think it likely that some of the respondents selected the first category without reading the entire list of options. Even considering this limitation, at least one quarter of the girls selected this option for six of the nine actions.

The large number of girls expressing a desire to participate suggests that girls would be likely to participate in the future if actions were made available. Alternatively, these figures could imply that girls are more likely to *express a willingness* to participate. Since the surveys were completed anonymously, there should have been little reason for the girls to exaggerate their desire to participate. In several cases, girls crossed out "I probably would" as the option, and wrote in "I definitely would participate." According to the survey data, fewer girls than boys currently take part in eight of the nine actions (the exception is social actions). For various reasons, many girls appear to perceive that they do not currently have opportunities available for their participation.

If this is the perception, and if increased participation by youth is desired, then something must be done to remove the barriers to their participation. The environmental justice movement provides numerous examples of the increasing participation by women in the environmental movement. Women are filling the key organizational and activist roles in many of the grass roots organizations pursuing environmental justice (Di Chiro, 1998; Hofrichter, 1993; Krauss, 1993). Although I did not hear of Polish environmental groups which consider themselves actors in the environmental justice arena as it is

generally defined in the United States, in essence many of the organizations are involved in issues of environmental justice. These include clean up of hazardous waste dumps, the promotion of safe drinking water and toxic-free foods, access to environmental information, and closure of polluting industries.

In a survey of American university students, researchers concluded that women are more likely than men to make the connections between environmental conditions and the consequences for personal well-being, social welfare, and the health of the biosphere (Stern et al., 1993). It is for precisely this reason that girls in Poland and everywhere should be encouraged to take active roles in environmental stewardship.

The survey results also showed that for four of the nine actions listed, youth in smaller communities were significantly more likely than youth in cities to take part. Considering the smallest communities surveyed (populations < 5,000) and the largest (populations > 100,000), overall participation rates by rural youth surpassed city youth in six of the nine action types. This finding was a pleasant surprise to the rural youth group I met with for a follow-up focus group for feedback on the survey results. Like many of the young people I talked with in rural settings, these rural girls had assumed that city dwellers would be more active since they have more opportunities.

While it is true that youth in cities have more alternative activities to choose from, such as movie theaters and shopping arcades, this doesn't mean that they have more opportunities for involvement. The urban youth I met in focus groups were very vocal about their lack of opportunities. It is likely, however, that the lack of alternative diversions for rural youth contributes to their greater participation when actions are organized, and suggests that there is a definite need for programming to engage rural

youth. This is one of the reasons that the Polish Children and Youth Foundation (PCYF), a non-profit organization based in Warsaw, devotes so much time and funding to support programs for rural youth. Founded in 1992, the Foundation develops and supports programs to foster the positive development of children and youth throughout Poland. According to Anna Brzezick, Program Director, young people in rural areas are especially enthusiastic to engage in new programs and activities for youth. The Foundation supplies grants to youth organizations, and over the years a sizeable proportion of their most successful grant projects have been organized by youth in rural settings. The Foundation finds it difficult to reach rural youth for a number of reasons, including lack of reliable communication systems (e.g., very few telephones in rural areas) and high levels of poverty (personal communication, Feb. 10, 2000).

Positive Peer Support

Like “Opportunities for Involvement”, peer support is another factor which has not been included in previous models of environmental behavior. I postulate that like all of the proposed motivation enhancers, peer support exists as a continuum. Positive peer support can be considered a motivation enhancer, while negative peer pressure can be considered a motivation inhibitor.

Peer support or peer pressure are forms of social influence. Positive peer influence, defined as having close friends who model responsible behavior, has been named as one of the forty developmental assets for adolescents (Benson, 1997). Extensive surveys with 6th – 12th grade students in the United states have demonstrated consistent inverse relationships between the number of positive assets an individual

claims and the number of risky behaviors in which that individual has engaged (e.g., alcohol abuse, sexual activity, violence). Of the over 250,000 American youth surveyed by the Search Institute, only 30% could claim to have positive peer support (Benson, 1997). Conversely, negative peer pressure has been shown to be influential for encouraging youth to engage in risky behaviors. Clearly, peer influence is an important facet of adolescent life.

Studies of peer influence related to environmental behavior are limited. Research in the United States has demonstrated how social opinion can influence recycling participation (Vining & Ebreo, 1992). A small study by a Polish researcher of the ecological consciousness of residents of a village in Silesia offers very interesting insights into the influence of social pressure (Swadzba, 1995). Participants were asked what they would do if they saw a neighbor hauling garbage to dump in the forest at one of the “wild dumpsites” described earlier in the text. Less than 5% of the respondents answered that they would go to the neighbor and confront him, while 40% said they would do nothing, or not confront the neighbor directly, preferring instead to maintain neighborly relations. In the author’s opinion, these types of behaviors which ignore or avoid the threats caused by the residents themselves, are “the greatest barrier which makes it impossible to improve the state of the natural environment” (Swadzba, 1995, p.92). These social pressures are perhaps more strongly perceived in smaller communities, where people have been neighbors for generations. Since the majority of Poles tend to live within the same communities and neighborhoods for generations, even residents of large cities have a strong desire to not offend their neighbors.

In the present survey, an attempt was made to link peer influence to participation

in environmental actions. One question addressing peer support/pressure was worded for inclusion in bivariate correlations and multiple regression analyses. Respondents were asked to select a response ranging from “strongly disagree” to “strongly agree” to the following statement: “I think most of my classmates think that it is a waste of time to do things for the environment.”

In retrospect, I believe that this question is a weak measure of the influence of peer support/pressure. The negative wording of the statement probably made the statement confusing to some respondents, and there is no clear link between a person’s perception of their classmates’ opinions and their participation in actions. In future surveys I would recommend different wording and multiple items to test for the significance of this construct. It would be useful to consider including items which measure the perception of peer influence, such as “The opinions of my classmates matter a great deal, a little bit, not at all to what I think about the environment.” With the present survey, I will draw inferences from the focus groups, and return to this construct in the evaluation of open-ended questions in Chapter 5.

In the focus groups with non-joiner youth, this topic emerged as the young people associated embarrassment with doing things for the environment. With the heavy emphasis on litter activities that was discussed earlier, it was no surprise that the young people also thought about litter when I asked them to explain what factors might inhibit people from being more involved in the environment. Girls in particular seemed to express the greatest concern for the litter situation, and also the greatest awareness of the social stigma associated with picking up litter. None of the boys in the focus groups admitted to feeling embarrassed, yet on several occasions girls described how social

pressure inhibited their classmates from participating in actions in their communities. As a 16-year old girl in eastern Poland described it, *“People are not ashamed to litter, but they are ashamed to collect garbage because somebody can see them.”*

I find it very informative that the non-joiner youth focused on the negative constraints of peer pressure, while the joiner youth brought up the positive benefits which they experience from peer support. Several times in discussions with joiner youth, they explained to me how their belief systems made them feel like outcasts from society. They told of being called *“crazy”* because they ride bicycles, and how many Poles consider vegetarians to be a sect *“like a religious cult or something.”*

The joiner youth were somehow able to risk ridicule and move beyond the sense of embarrassment that was apparently hindering many of their classmates from taking action. Since this study was not longitudinal, I cannot determine if these individuals were strong-willed, independent people who didn't care what their colleagues thought of them before they joined the organizations, or if being in the organization helped them to face embarrassment. I believe that it is likely a combination of these factors, in that certain personality types might be drawn to belong to organizations for various reasons, and through affiliation certain personality characteristics are strengthened.

For these young people, finding support among a group of people who share their values is very important. They spoke of how being in the group provided them with a sense of belonging and inspiration. A 19-year old boy in an eastern city explained:

Doing something with a group of people is for me a substitute for community, because real communities do not exist anymore. In times past the neighborhood was a peaceful group of people who worked together, and everybody knew each other. Now the bonds, the relationships are broken, and I have found something like community here in our group.

In addition to finding strength within their social network, the involved youth were keenly aware of how many of their contemporaries were held back by fear of embarrassment. They expressed how they found it easier to work within groups. A 15-year old girl active in a 4-H club in a rural community shared a personal example of how peer pressure stopped a friend from being involved:

Once I convinced my friend Lukas to go with me, and we picked up trash in the park. But then other boys from our class came and said to him "you're a fool, you're picking litter with girls," He feels bad and is embarrassed. They are ashamed to collect garbage because somebody can see them. However, when school is cancelled for the day and the entire school goes to collect trash then they don't feel ashamed because it is everybody. In a group it is easier.

Support by Significant Adults

Since most of the past studies on precursors to environmental behavior have been directed at adults, it is not surprising that the role of significant adults has not been considered before. It is instructive that even in the reduced model of the precursors to environmental action which emerged from stepwise multiple regression analyses, parental support was one of the factors significantly influencing action participation for boys. For girls, although not statistically significant, support by parents, as well as teachers and other adults were all individually positively correlated with action participation. This fact was illustrated most clearly in the focus groups.

Involved youth frequently mentioned a parent or teacher as being influential to their personal decision to be active in environmental actions. When I asked the girls in the rural community near the Russian border to describe who was influential in their decision to be active within their community, all of them mentioned their mothers and an

active teacher at their school. These young people clearly felt valued by significant adults in their lives, and they perceived this as encouragement for their involvement.

A 15-year old girl who is active in a 4-H club in rural northern Poland, shared an example of how she was able to convince her mother to buy drinks in recyclable bottles. Although the girl was convinced that the economic reasoning won over her parents, what impressed me was the first line of her statement:

My parents often talk to me, and they respect my opinions. It's only if we want to convince them, such as with the bottles, that we have to point out the economical reasons. "Mother, if you buy one glass bottle and you will exchange it, it will be cheaper than to buy plastic ones." And then, it gets to them because she calculates it and she knows she will save this much money. Practical things appeal to parents.

This girl obviously felt comfortable talking with her parents, and was assured that her parents listened to her and valued her opinions. In contrast, non-joiner youth frequently stressed how they felt undervalued and ignored by adults. If adults do not value their opinions, youth are likely to be hesitant to offer suggestions. Rejection is difficult to receive at any age, but for young adolescents rejection can stifle further activity. Many teenagers do not possess a strong sense of self-confidence, thus the rejection of their ideas can be enough to effectively silence them.

On the survey, an open-ended question after the nine action items asked respondents to describe any additional actions they had participated in during the previous two years. Only about 25% of respondents answered this question, including one 14-year old girl from a large city who listed an impressive catalogue of actions ranging from writing a letter to the director of McDonald's to protest their products, donating clothing for poor children, recycling batteries, and participating in school

actions against smoking. Her accomplishments were truly astounding, and suggested a very committed individual. Yet she went on to write: *“My ecology teacher and parents are the reasons I got involved. Now when I don't have ecology classes at school I don't feel like doing something by myself.”* (Respondent #2806). She recognized that it was the significant adults in her life who were instrumental in her involvement. Unfortunately, her response indicates that she seemed to believe that without continued support she could not continue to be active.

I cannot explain why this formerly active and engaged girl should feel incapable of continuing her involvement independent of teacher support. Her situation clearly illustrates to me the need for consistent encouragement from significant adults. Over a decade ago, Hungerford and Volk concluded that “learners need to be reinforced for positive environmental behavior over time...There is simply no research to validate how much is needed. However, it is evidently imperative that learners get in-depth educational experiences over a substantial amount of time” (Hungerford & Volk, 1990, p.14).

Youth are at a stage in life where support offered one year and then denied in subsequent years can seem to some to be a form of betrayal. At the very least, it might take the stronger willed among them more time to regroup and continue developing the skills they had achieved. For many young people, an early betrayal or failure can be significant enough to cause them to stop trying. In my experience in Poland, I met many wonderful teachers who were excited about working with young people, and valued their contributions to the classroom and the community. Unfortunately, I also met teachers who have been teaching for years, and seem to have habituated a sense of strict authority over the youth in their classrooms.

I vividly recall an early meeting of the ecology club I helped establish as a Peace Corps volunteer. In addition to eight teenagers, there were two teachers in attendance, one of whom was young and enthusiastic about forming a club. The other teacher had been at the same school for over twenty years. By her mannerisms at this meeting and in other encounters I had with her over the two years I lived in that community, she indicated that she preferred the days under communist-rule. While the group was brainstorming for project ideas, this second teacher sat on the edge of the group with her arms folded. She shot down every idea that was mentioned with remarks such as “That would never work”, or “and how would you finance that? Are you a king?”, or simply a disdainful “Hmmmph.” It didn’t take long for the group to fall silent, and the young people who had been enthusiastic moments before began looking at their feet or out the window. Because this teacher was very influential at this school, for future meetings the club met at another school and the young people were able to successfully tackle a wide variety of projects and activities. This early meeting remains instructive in the absolute deflation of energy I witnessed at the hand (or “harrumphs”) of one adult.

In the current study, teacher support was negatively correlated with increased action levels for boys. The construct of teacher support was measured by a single item: “My teachers encourage us to do things to help the environment.” One possible explanation for the negative correlation is that there are just not very many teachers in Poland who *do* encourage young people to do things to help the environment. If youth have daily contacts with teachers like the one described above, it is not surprising that they do not feel a sense of encouragement or support. Alternatively, if teachers do not feel that they have been adequately trained or if they perceive that school administration

does not support them teaching about the environment, this will also impact their decisions to include environmental lessons in the classroom. These are issues that curricula reform will need to address.

The generation coming of age in Poland is at a unique juncture in history. On one hand, they are facing freedoms and possibilities which were denied under communist rule. Yet, as the “transition” generation, they are strongly influenced by the recollections and ingrained habits of the adults around them – parents and teachers – who were themselves strongly influenced by living under the constraints of the communist doctrine. The importance of the influence of adults on the behavioral and attitudinal formation of youth cannot be overlooked. Bandura’s social learning theory stresses that children and young people learn by watching, and often adopting, the behaviors of adults around them (Bandura, 1964).

There are a great many well-intentioned adults in Poland who are themselves engaging in a new ways of responsible citizenship. It is important to remember that the transition from a communist-led government happened just over a decade ago. Thus, for the adult population in Poland, the majority of their lives were lived under communist rule. Their experiences and expectations of government and of the individual roles people can play within community development are therefore very different from the expectations of the younger generation. In some ways, it is analogous to Plato’s mythic cave dwellers. For the adults who have been conditioned to seeing things one way, the ideas and expectations introduced by young people who would like to change things are met with skepticism and too-often, by denial.

In the next Chapter I will bring together the elements of participation discussed in

this chapter with the elements of concern discussed in Chapter 3, and suggest how these are aspects of a cycle of Motivation and Action. Additional data from open-ended questions in the survey will be presented to illustrate the perspectives of Polish young people. I will weave these results together and conclude with recommendations for future research and program development.

CHAPTER 5.

EXPLORING THE VARIABLES WHICH MODIFY MOTIVATION TO PARTICIPATE IN ENVIRONMENTAL ACTIONS

In helping the environment I am discouraged by the lack of interest in the issue by my peers, and I can do nothing by myself. But I would like to help, as I cannot accept the state of the environment in Poland and all over the world.

- 14-year old boy, large industrial city in central Poland

The boy above is one of many young people who participated in this study and shared their opinions about the conundrum they find themselves in regarding the environment. As I described in Chapter 3, the majority of survey respondents expressed concern for the environment. “Destruction of the environment” was the third most frequently selected important issue facing Poland by all survey respondents. The life experiences which were shown to significantly correlate with level of concern were living within polluted regions, witnessing or experiencing negative environmental influences (including witnessing or experiencing pollution, health impacts and fears), knowledge of environmental issues, family influences and personal experiences in nature.

Yet, as I presented in Chapter 4, this concern has largely not been translated into participation in environmental and community actions. Nearly 60% of boys and 70% of girls surveyed took part in three or less actions during a two year period. For most of the young people surveyed, their experiences with positive environmental action were limited to bi-annual litter clean-up events.

This chapter will examine what Polish youth perceive of as inhibiting or enhancing their ability to participate in actions. I draw upon data from the focus groups and additional questions from the survey to explore some of the explanations for the concern-action gap among Polish youth. The chapter concludes with programmatic recommendations based upon the barriers mentioned most frequently by the youth.

Theoretical Foundations

In earlier chapters I reviewed how a great deal of the research and program developments in environmental education have been driven by the belief that increasing an individual's knowledge of an issue leads to attitudinal changes which are manifested as behavioral change. This is founded on the assumption that a person's attitude predisposes them to behave in a certain manner (Ajzen & Fishbein, 1977). The results of studies investigating the attitude-behavior link have been mixed. Research has repeatedly shown that although people profess a high level of environmental concern, they do not necessarily engage in environmental behaviors (Grunig, 1983; Scott & Willits, 1994; van Liere & Dunlap, 1983). A survey involving over 3,000 Pennsylvania residents found that although many possessed a high degree of environmental concern, the majority engaged in few environmentally responsible behaviors (Scott & Willits, 1994). Similarly, in an international study of 24 countries measured high levels of environmental concern, although in each country there were small proportions of people who actually participated in actions dedicated to address environmental issues (Dunlap et al., 1993).

The discord between concern and behavior also shows up repeatedly in public opinion surveys. A Time/CNN telephone poll in March 2001 showed that 75% of

American adults surveyed (N=1,025) consider global warming a “very serious” or “fairly serious” problem, but less than half (48%) would be willing to pay an extra 25 cents per gallon of gas to reduce pollution and global warming (Kluger, 2001). That same survey revealed that 55% of Americans would be unwilling to support actions to reduce global warming if it meant unemployment would increase. It appears it is much easier for many people to *say* they are concerned about the environment, than to *do* something about it.

A number of studies have established a link between attitude and behavior, although the degree of correlation varies with the measure and the study. Stern, Dietz and Guagnano found that the predictive value of a person’s environmental attitude, as measured by the New Environmental Paradigm (NEP), varied depending on the behavioral intention measure used (Stern et al., 1995). For example, the authors found that scores on the NEP index were more strongly correlated with a willingness to write a letter to Congress regarding the environment than with a willingness to pay higher gasoline taxes. Using a subset of six items from the New Environmental Paradigm scale as a measure of environmental attitude, Steel (1996) reported on the correlations between environmental attitude and self-reported participation in 18 environmentally-related personal behaviors such as recycling, composting, and carpooling and 11 environmentally-related political behaviors such as signing petitions, writing letters to government officials, and acts of civil disobedience. For 13 of the 18 personal environmental behaviors, “lack of opportunity” was the most frequently cited reason for non-participation. He found that persons who supported the elements of the New Environmental Paradigm were more likely to engage in more environmental actions, and the correlation was statistically significant for the personal behavior index and the

political behavior index.

The amount of personal effort and time required had a great deal to do with participation rates in political behaviors: 52% of respondents indicated that they had signed a petition in the past year, but just 0.5% had taken part in civil disobedience. There appeared to be inverse relationships between participation rates and the amount of time required. Another study confirmed that as the level of difficulty for an environmental behavior increased, more motivation was required to encourage persons to participate (Green-Demers, Pelletier, & Menard, 1997).

Related to time commitments, studies on recycling behaviors have demonstrated that participation in recycling increased as accessibility to recycling facilities improved (DeYoung, 1986, 1993; Vining & Ebreo, 1992). When lack of opportunity or lack of access is perceived as a barrier to action, it is difficult to establish a relationship between concern and action. Persons who express high levels of environmental concern may not be able to act according to their intentions. Guagnano, Stern and Dietz (1995) suggest that due to interactions between personal perceptions (such as social desirability) and social constraints (such as availability and infrastructure), as a behavior becomes too easy or difficult, variations in attitude will no longer be predictive for behavior. Thus, as certain behaviors become very easy – such as an office paper recycling policy involving conveniently placed collection bins - changes in attitude will not be recognized in behavioral changes. Due to different perceptions and constraints, other behaviors which are very difficult , unavailable or unrealistic are similarly not likely to be linked to changes in attitude.

Studies have identified some predictors of behavior to be “general” behavioral

predictors, in that they have been shown to correlate with a variety of behaviors. A sense of efficacy and the belief in one's ability to carry out a behavior has been shown to be predictive of general environmental behavior (Axelrod & Lehman, 1993; Hines et al., 1986; Sia, Hungerford, & Tomera, 1986). These ideas are expressed more fully in theories related to humanism, or a "person-based psychology" (Geller, 1995). This field describes personality traits which contribute to a propensity to actively care for something, such as the environment, including the constructs of self-esteem, a sense of belonging, and a feeling of empowerment. According to Geller, these personality characteristics can be influenced by a variety of strategies which effect the individual's perceived ability for involvement. Although Geller's work is based on studies of employee involvement in workplace safety, the constructs he identified are particularly pertinent to adolescent development issues.

Other behaviors are predicted best by specific measures. Azjen and Fishbein (1977) recommended that behavioral antecedents (beliefs, attitudes, norms) should be measured at the same level of specificity as the behavior of interest. Seguin, Pelletier and Hunsley (1998) found that specific perception of health risks attributable to environmental causes was a strong predictor of environmental activism. Ramsey et al. (1981) studied the effectiveness of classroom instruction in specific environmental actions among eighth grade students. They found that students given instruction in environmental actions exhibited a greater knowledge of environmental actions than did students who were schooled only in knowledge of environmental issues. Additionally, students who had received the action training reported significantly more environmental action behaviors than control groups, both immediately following the instruction period

and also two months later. In a follow-up investigation three years after the initial study, students who had been part of the experimental group which had received classroom instruction in environmental actions were found to be “involved in more environmentally appropriate behaviors than their counterparts” (Hungerford & Volk, 1990, p.14).

The above studies have all considered how concern leads to participation in certain behaviors. Another way of considering the connection between concern and action is to examine the barriers which are perceived to block involvement. Studies in psychology have investigated the development of prosocial behavior, which is defined as actions “intended to aid or benefit another person or group of people without the actor’s anticipation of external rewards” (Mussen, 1977, p. 3-4). Recall that actions are a subset of behaviors, thus participation in an action to benefit the environment or community would be considered a form of prosocial behavior. A review of studies of prosocial behavior in children identified five elements that are necessary for a child to engage in behaviors that demonstrate caring (Mussen, 1977). The child must first perceive that a need for assistance exists, then he or she must be able to interpret what needs to be done, and recognize that the person or situation can be helped. Before this recognition is translated into demonstrable prosocial behavior, however, the child must also perceive that they are capable of doing what is needed, and they must be confident that the cost or risk involved is not prohibitive. Deficiencies in any of these criteria, particularly the final two, can function as a barrier to participation in prosocial behavior..

Two studies with youth in Australia examined perceptions of barriers to involvement regarding environmental issues (Connel, Fien, Lee, Sykes, and Yencken, 1999; Hillcoat et al., 1995). Both of these studies used focus groups with teenagers to

explore what the young people thought about the environment. The first research team conducted focus groups with 15 – 17 year olds (Hillcoat et al., 1995). The teens expressed the opinion that general laziness and lack of motivation of people were major causes of environmental problems, and these were also the explanations the teens gave for why people were not involved in actions to help the environment. The youth explained that many young people lack a sense of empowerment. Their comments suggested that this is due both to a lack of knowledge and to the perception that environmental issues are the responsibility of adults. Connell et al. (1999) also conducted focus groups with high school students, and asked them their perspectives on the environment. The young people expressed concern about environmental problems where they lived, as well as a sense of frustration that nothing was being done by the government to take care of these problems. The comments shared by the young people indicate that they lacked the motivation to become personally engaged, and instead expressed a sense of ambivalence or resignation that ‘people will never change.’

In summary, previous research has demonstrated that there are correlations between levels of environmental concern and participation in environmental behaviors and actions, but the mixed results indicate that the path from environmental concern to participation in action is not a simple one. Many variables help provide the bridge - some are structural, such as ease of access and availability, while others are personality traits such as self-esteem and locus of control. Additionally, numerous variables act as barriers – again, some are structural, such as lack of opportunity, while others are personality traits, such as a lack of empowerment and perceptions of lack of responsibility.

This is the first study to examine the chasm between concern for the environment

and participation in environmental actions among Polish youth. In previous chapters I have presented information on variables which contribute to environmental concern and participation in action for Polish teens. In this chapter, I bring together the results of levels of concern and action, and present additional data from the survey, including the results from an open-ended question. Quotes from the focus groups are included as supportive data. Since I analyzed the data using a novel technique, I will briefly review the methods used.

Methods

Characterizing the Most Active Participants

As was reported in Chapter 4, there was a low level of action participation among respondents. The scores on the Environmental Action Index (EAI) ranged from 0 – 42 and the distribution was strongly positively skewed with a mean score for all participants of 8.49. Most respondents indicated that they had taken part in just two or three actions for the environment in the past two years. In order to make additional comparisons and draw conclusions about respondents based on their EAI scores, I created a subsample of the respondents who had demonstrated high levels of participation, and a second subsample of respondents who reported the lowest level of participation in the sample. This technique is similar to the one employed by researchers in a study of environmental activism in Canada, in which a subsample of “activists” was identified based on the subjects’ responses to a six-item Activism Scale (Seguin et al., 1998). In the present study, I used participants’ EAI scores as the measure to isolate the top quartile of respondents (those scoring over 11) and labeled these “High Actives” (n=114).

Similarly, I isolated the respondents in the lower quartile (those scoring less than 4), and labeled these “Low Actives” (n=114). The middle quartiles I have labeled “Moderates” (n = 225). For statistical comparisons, I also identified individuals who scored in the top quartile of all respondents on the Environmental Concern Index, and those who scored in the lowest quartile.

Identifying Motivation Enhancers and Inhibitors

Question 19 of the YECA survey asked respondents to characterize their involvement in actions to help the environment.

Questions from YECA: Q.19. Which of the statements below BEST describes your opinion? SELECT ONE. (1) I think I'm very involved in actions to help the environment. <i>Briefly write why YOU are involved. What motivates YOU?</i> (2) I'm not really involved in actions to help the environment, but I would LIKE to be more involved. <i>Briefly write about what would make it easier for YOU to be involved?</i> (3) I'm really not interested in affairs of the natural environment. <i>Briefly explain why:</i>
--

The question was sequenced in the survey before any other questions about participation in specific actions (e.g., the nine-item action index) so that there would be less chance of response bias due to question recall. Respondents selected the response category which best matched their perceived level of involvement in actions to help the environment, and explained their selection in writing in the space provided. I didn't want respondents to become overwhelmed by the survey, so in order that the task not appear too intimidating, just five lines were included for written comments. Additionally, when

I introduced myself and presented the survey at each school I explained that some of the questions asked for the students to write down their opinions. I stressed that these were the most important questions, since this would be the chance for the students to express their own thoughts. Of the total surveys ($N = 453$), 340 had written responses while 91 respondents simply marked one of the response options, but neglected to fill in their comments.

A professional translator translated the written responses into English. Another American environmental educator and I each created a list of codes from the translated responses, and from these lists we developed a master list of 36 distinct codes. Using this coding scheme, I personally coded all surveys. The question did not specify how many reasons respondents needed to provide in their answer, thus of all surveys which included written comments ($n = 340$), 56% of the responses contained just one concept for coding. Just over a third of responses (36%) contained two separate concepts, and 8% contained three or more concepts. The number of written responses did not differ significantly for the different response options (“very active,” “not very active,” or “not interested”). Therefore, to retain the greatest amount of data from the surveys, up to three codes were recorded per respondent.

After initial coding, the original coding scheme (36 codes) was re-examined and codes were grouped into broader categories based on conceptual similarities. For example, in the initial coding scheme, three separate codes were distinguished which related to an individual’s lack of interest: Code 29: “I don’t find the activities /nature interesting”; Code 30: “I’m lazy/ not interested”; and Code 31: “I have other interests.” In the final coding scheme, these three codes were collapsed to the code “Lack of interest

in nature/Lack affinity for nature.” Appendix D contains the list of original codes and the final coding categories. Since there were respondents who noted several comments which represented different aspects within the same concept code, I have summarized the results by the proportion of respondents who mentioned each code and not by the total number of mentions.

In Chapter 2, I introduced the proposed Motivation-Action Cycle of Youth Participation and described a series of variables I have called “Motivation Moderators.” These twelve variables exist in pairs which each include a Motivation Enhancer which can help facilitate participation, and a Motivation Inhibitor which can be perceived as a barrier to participation. One of the previously stated limitations of this study was the fact that several of these variables believed to influence a person’s motivation for participation (either positively or negatively) were included in the survey as single items, or not included at all. As examples, the influences of negative peer pressure were included as a single item, and there were no survey items which addressed “Opportunities for involvement.” Fortunately, the responses from Question 19 offered another way of exploring the variables which Polish youth perceive as either enhancing or inhibiting their motivation for involvement in environmental actions.

When the 36 codes which emerged from the written responses were condensed into coding categories to represent broader concepts as described above, eight pairs of variables were represented. This included all six of the originally proposed motivation modifiers, with the addition of two new variables. In five of the categories, there were written responses which represented both ends of the moderator continua. For example, there were comments describing how youth organizations were credited with motivating

involvement, and other comments describing how the *lack* of youth organizations was perceived as inhibiting action. The remaining three categories contained written responses which represented only one end of the continuum concept (either an enhancing or inhibiting variable). For example, there were comments indicating that respondents were motivated to take part in actions to help the environment because of negative environmental influences (e.g., the condition of the environment around them), but there were no responses which described how negative environmental influences were perceived as a factor to inhibit participation.

Once the code categories had been identified, it was a simple procedure to tally the frequency of responses in each category. In the results section below, I present these tallies graphically by action quartile, and then use text quotes from the actual question responses to illustrate examples of the written comments of each category.

Considerations for Data Interpretation

There are several considerations regarding the data from Question 19. First, analysis is limited to those participants who took the added time to write in an answer. Of 453 students participating in the survey, 75% ($n = 340$) wrote an answer to this open-ended question. I suspect that this high response rate had to do with the novelty of the activity, and the fact that I administered the surveys to classrooms in person. I would not expect response rates to be as high in a mail survey, unless the sample population was purposively selected and held a high degree of interest in the survey topic.

The second consideration has to do with the fact that respondents were given a choice of three questions to respond to on Question 19. I will explain why I believe it

was appropriate to combine the responses. The first option asked respondents who believed they were active participants to explain *why* they felt motivated. Fifty-six percent of persons in the High Active quartile chose this option ($n = 64$), which was statistically more than persons in the other quartiles ($\chi^2 = 33.117$; $p < .000$; $df = 8$), however, it was also chosen by 30% of the Moderately Active ($n = 67$) and 19% of the Low Actives ($n = 22$). The second option addressed the barriers which need to be removed to encourage more involvement. Overall, this was the most commonly selected option, being chosen by over 60% of the boys and 66% the girls. It was the question selected by 41% of High Actives, 67% of the Moderately Actives, and 72% of the Low Actives. The third option, which asked respondents to explain their lack of interest in the environment was chosen by less than 5% of respondents overall, including two respondents whose EAI scores put them in the High Actives quartile.

Thus, the great majority of respondents were writing their comments to either reflect what motivated their involvement or what barriers they perceived as inhibiting their ability to be involved. Although the question wording was slightly different, the two options address the two ends of the continua between enhancing variables and inhibiting variables. As described above, the responses written for all three question options have been summarized not by how respondents assessed their level of involvement, but by their scores on the nine-item Environmental Action Index.

This brings up another limitation, which is the fact that the EAI relies on self-report of participation in actions. Even with this caveat, I believe that the EAI scores are a much more accurate measure of an individual's level of involvement than simple self-assessment, which is more subjective. Almost 20% of the respondents who scored in the

lowest action quartile had declared themselves to be “very active” in their self-assessment. In addition, by presenting the data in this format, there is more information about the variables perceived to inhibit involvement. Only 5% of respondents declared themselves to be “not interested” in the environment by their option choice for Question 19 (n=16) and consequently there are too few responses too adequately describe this category. By presenting comments grouped by EAI quartile, however, the category of Low Actives includes 95 respondents.

Results

Characteristics of the Most Active Participants

Respondents were characterized as “High Active” or “Low Active” based upon their scores on the Environmental Action Index (EAI). Thirty percent of the boys and 21% of the girls were in the top quartile and this difference was statistically significant (chi-square = 6.354; $p < .05$; $df = 1$). The results are presented in Table 5.1.

Respondents who were members of a club or youth organization (joiners) were much more likely to score in the High Actives quartile (33% of joiners, compared with 15% of non-joiners). There was no significant difference in proportions of High Actives attributable to size of community or perceptions of local pollution.

The data displayed in Table 5.1 also indicate that for this study, there is no link between levels of environmental concern as measured by the Environmental Concern Index (ECI), and participation in environmental actions.

TABLE 5.1 Characteristics of the Action Quartiles: Characteristics of Low, Moderate and High Actives, as defined by respondents' scores on the Environmental Action Index. N = 453.

CATEGORY & STATISTICAL SIGNIFICANCE		LOW ACTIVES: LOW QUARTILE	MODERATES: MIDDLE QUARTILES	HIGH ACTIVES : TOP QUARTILE	TOTAL
GENDER $\chi^2 = 6.354$ $p < .05$	BOYS (n = 214)	22.0%	47.7%	30.4%	100%
	GIRLS (n = 239)	28.0%	51.5%	20.5%	100%
MEMBER ANY CLUB $\chi^2 = 23.693$ $p < .000$	JOINER (n = 259)	18.9%	48.3%	32.8%	100%
	NON-JOINER (n = 194)	33.5%	51.5%	14.9%	100%
MEMBER, ECO CLUB $\chi^2 = 17.902$ $p < .000$	JOINER (n = 96)	12.5%	47.9%	39.6%	100%
	NON-JOINER (n = 357)	28.6%	50.1%	21.3%	100%
COM- MUNITY SIZE <i>Not statistically different</i>	< 5,000 (n = 144)	20.1%	52.8%	27.1%	100%
	5 – 20,000 (n = 71)	23.9%	49.3%	26.8%	100%
	20– 100,000 (n = 69)	30.4%	52.2%	17.4%	100%
	>100,000 (n = 169)	27.8%	46.2%	26.0%	100%
LOCAL POLLUTION <i>Not statistically different</i>	"not polluted" (n=238)	28.2%	46.2%	25.6%	100%
	"hard to say" (n =76)	21.1%	57.9%	21.1%	100%
	"somewhat/ definitely" (n = 135)	23.0%	50.4%	26.7%	100%
Environ- mental Concern Index <i>Not statistically different</i>	Selected pro- environmental answer for all 5 items (n = 180)	27.2%	52.8%	20.0%	100%
	Did NOT select pro- environmental answer for all items (n = 268)	23.5%	48.1%	28.4%	100%

The ECI contained 5 items, and 41% of respondents (n=180) selected pro-environmental answers for all five of the questions. These individuals all had ECI scores of least 20, and were thus presumably the persons with the greatest environmental concern. Of these top-scoring ECI respondents, only 20% had Environmental Action Index scores in the top quartile, compared with 30% of respondents with lower environmental concern scores. The highest Environmental Concern Index scores were significantly *negatively* correlated with action index scores in the top quartile ($r = -.105$; $p < .05$), indicating that persons with *lower* ECI scores were more likely to score higher on the action score. There was no correlation between an individual's Environmental Concern Index score and their Environmental Action Index score ($r = .001$; $p = .976$).

As further evidence of the disjoint between concern and action participation, there were only 39 respondents (8.6% of the total) with action scores in the top **action** quartile, who also had concern scores in the top **concern** quartile. Had there been greater correlation between concern and action there would have been more individuals within the highest concern quartile who were also in the highest action quartile.

Other notable features about the respondents in the High Actives compared to the other respondents are specific to gender. Boys in the top quartile ($n = 65$) had a significantly higher internal locus of control ($F = 4.700$; $p < .05$), and were more likely to report strong parental support ($F = 11.397$; $p < .01$) than boys who were in lower action quartiles. Girls in the top quartile ($n = 49$) had significantly higher knowledge of action strategies than girls in the moderate and low quartiles of action ($F = 4.458$; $p < .05$). Although as reported above, there is no statistically significant link between levels of concern and levels of action, in all quartiles girls had a higher mean concern index than

boys, and this difference was significant for Low Actives ($F = 8.286$; $p < .01$) and moderates ($F = 13.579$; $p < .000$), but not for the High Actives.

There was strong indication that youth in Poland would like to be more active in actions to help the environment. Question 19 began with a multiple choice option which asked respondents to assess their current level of involvement in environmental actions. Of the three options, the majority of respondents selected the statement: "I'm not really involved in actions to help the environment, but I would like to be more involved." There was a distinct pattern in the responses suggesting teens have a desire for more involvement. Of respondents whose present level of participation placed them in the lowest action quartile, 71.4% indicated that they would like to be more involved (Table 5.2). Two thirds of respondents in the middle action quartiles indicated they would like to be more involved, as did the majority of respondents in the highest action quartile. The data indicate that this self-assessment measure was significantly correlated with scores on the Environmental Action Index ($r = .271$; $p < .000$).

There was no statistical difference between the action quartiles in the selection of most important problems facing Poland (Table 5.2). The top problem selected by respondents in all quartiles was unemployment, followed by violence and environmental destruction. Television was clearly the main source of environmental information for the majority of respondents in all quartiles. For the most active and the moderately active youth, "ecological organizations" ranked as the second most popular source of information, followed by "school" and "direct contact with nature." Respondents in the lowest quartile selected "direct contact with nature" as their second most popular choice for environmental information, followed by "ecological organizations" and "school."

TABLE 5.2 Comparing the Quartiles: Responses selected by respondents by action quartile to assess personal levels of involvement, opinions on the most important problems facing Poland, and the most important sources for information about the environment. Numbers indicate proportion of respondents *within that quartile* who selected each response.

Response Categories	LOW ACTIVES: LOW QUARTILE N = 114	MODERATES: MIDDLE QUARTILES N = 225	HIGH ACTIVES: TOP QUARTILE N = 114
ASSESSMENT OF INVOLVEMENT:			
“Not active, not interested”	8.9%	4.2%	1.9%
“Not very active, would like to be”	71.4%	66.5%	51.4%
“Very active and interested in environment”	19.6%	29.2%	46.7%
MOST IMPORTANT PROBLEMS:			
Most frequent mention (%)	Unemployment 51.8%	Unemployment 57.6%	Unemployment 54.4%
2 nd most frequent mention (%)	Violence 50.9%	Violence 55.8%	Violence 49.1%
3 rd most frequent mention (%)	Environmental 41.2%	Environmental 39.7%	Environmental 44.7%
MOST IMPORTANT SOURCE FOR ENVIRONMENTAL INFORMATION:			
Most frequent mention ^a (% respondents)	Television 80.5%	Television 76.8%	Television 72.3%
2 nd most frequent mention (% respondents)	Direct Contact 27.4%	Ecological Orgs. 27.7%	Ecological Orgs. 27.7%
3 rd most frequent mention (% respondents)	Ecological Orgs. 24.8%	School 22.3%	School 24.1%
4 th most frequent mention (% respondents)	School 18.6%	Direct Contact 20.5%	Direct Contact 22.3%

^a Respondents were asked to select their two most important sources of environmental information from a list of ten options. Numbers do not tally 100%. Other information sources on the list were radio, newspapers, magazines, family, friends, the internet, and other (a write-in category).

In summary, the most active respondents were more likely to be boys who were members of clubs with strong parental support and the belief in their own self-efficacy. Girls who were among the most active participants, were characterized by being members of clubs with a strong knowledge of action strategies.

Motivation Enhancers and Inhibitors

What exactly did Polish youth identify as motivating or inhibiting their participation? In this section I include examples of written comments from the survey. Often the comments contained references to more than one enhancing or inhibiting concept, therefore up to three concepts were coded for analysis. In no case did a response include mentions of both enhancing and inhibiting motivators. Rather, each response addressed either the reasons the individual felt motivated to participate, or the reasons the individual felt constrained and was not participating.

Motivation Enhancers

Among the Motivation Enhancers, three concepts were clearly the most common reasons given by adolescents as motivating their involvement in actions for the environment: “Affinity for/Interest in Nature”, “Opportunities for Involvement; Institutional and Organizational Support,” and “Negative Environmental Influences”. The concepts of affinity for nature and negative environmental influences were not included in the original model, however, the prevalence of written remarks attests to how Polish adolescents perceive of these variables as being strong motivators for their involvement.

Affinity for/Interest in Nature

One fifth of all respondents who wrote an answer mentioned an “Affinity for/Interest in Nature” as being pivotal to their involvement. The statements described how the respondent “liked” or “cared for” plants and animals, and also included remarks which indicated the respondent enjoyed learning about nature watching nature programs on television or by reading. Twenty-seven percent of respondents who had participated as an organizer or helper of an action, as well as 27% of all persons whose EAI score ranked in the top quartile of action scores wrote a response that was coded in this category. A 14-year old girl from a small city in central Poland wrote:

I like nature and animals. My parents explained it to me and I'm interested in it.

Case # 1202

Among respondents who were classified as Moderates, comments coded in this category were the most frequently mentioned motivation enhancers. Nineteen percent of respondents in the Moderate Actives quartiles described an interest for the environment, such as this 14-year old boy from a large city in north-central Poland:

I am interested in environmental protection and care about it. I hate it when people recklessly pollute the environment. However, only the actions of many people could help the environment.

Case #1903

This concept was the most frequently mentioned motivation enhancer for respondents in the Low Actives quartile. Almost 10% of respondents in the Low Actives quartile described how much they cared for nature. A 14-year old boy from a village in southwestern Poland attributes his interest in nature to a concern for animals. He wrote:

I am sorry because many animals are dying in the world, and for all the polluted environment.

Case # 2402

Opportunities for Involvement; Institutional and Organizational Support

The second most common theme in the comments from all respondents related to “Opportunities for Involvement; Institutional and Organizational Support.” This category included all mentions of support from teachers and schools (including mentions of lessons focused on the environment), local government support, and the availability of non-governmental organizations. Seventeen percent of all respondents who wrote an answer specifically mentioned these concepts as being a key motivator. Among respondents in the High Actives category, remarks in this category were the most frequent motivation enhancer mentioned (27% of respondents). The example below is from a 14-year old girl in a large city in north-central Poland. In response to the question “What motivates you?” she wrote:

Mostly the knowledge I got during biology classes. I found out that environmental protection is one of the major goals of humankind. I want my kids and grandkids to live in a safe environment.

Case # 1314

Often the remarks cited clubs and organizations as providing motivation to help the environment, such as this 14- year old girl from a small city in southwestern Poland:

I am motivated because I joined Scouts. I learned a lot about nature there. I know that polluting the environment can cause extinction of people, and not only animals.

Case #2609

Negative Environmental Influences

These last two examples above also mention a concern for future generations, which is included in the code category of “Negative Environmental Influences.” In

addition to mentions of future generations, this category includes mentions of dissatisfaction over seeing nature destroyed, concerns for health issues and any mentions of fear or worry attributed to environmental consequences. This was one of the categories not originally identified as a Motivation Enhancer. I had included a similar category as one of the origins of concern and understanding, but I had not considered that perceptions of environmental destruction could also enhance motivation. Many of the written comments, however, expressed a distinct link between negative environmental issues and action, as this 14-year old boy from a northern industrial city wrote:

I watch a lot of TV, and I saw a lot. I am afraid of what may happen to us in 50 years. That's why I got involved in actions supporting environmental protection.

Case #1319

One of the most sobering responses included in this category was from a 14-year old boy in a small town in the heart of the mining district in southern Poland. It read simply:

My previous sickness caused that I am active.

Case # 2304

This boy was one of the more active respondents. On the survey he reported that he is a member of an ecology club at his school, and he participated in five of the nine different action types. In addition, for the final optional question on the action index, an open-ended question which asked respondents to describe any additional actions they had participated in, he wrote “*together with my friends we organized the cleaning of a meadow in our city.*” He was one of the few respondents (8.6% of total sample) who scored in the top quartile of scores on the Environmental Concern Index **and** the top quartile of scores for Environmental Action Index.

Other categories of motivation enhancers were mentioned much less frequently. These include comments coded into the categories of **“Positive Family Support”** (e.g., “my parents helped explain that the environment is the most important”), **“Positive Peer Support”** (e.g., “my friend told me about the League for Nature Protection”) and **“Internal Locus of Control”** (e.g., “I want to help solve environmental problems, not cause them”).

There were no written comments related to two of the Motivation Enhancers from the original proposed model: “High Level Knowledge of Action Strategies” and “Economic Feasibility.”

Motivation Inhibitors

Among variables identified as Motivation Inhibitors, there were three code categories which dominated the comments. These were “Lack of Opportunities for Involvement; Lack of Institutional and Organizational Support,” “Negative Peer Pressure,” and “Lack of Interest in Nature.”

Lack of Opportunities for Involvement; Lack of Institutional and Organizational Support

The most common category for all respondents were comments in the category “Lack of Opportunities for Involvement; Lack of Institutional and Organizational Support.” This included any mention or complaint about the lack of clubs and organizations, or the lack of school or institutional support. Within this category I also coded remarks such as “I have no time” and “too much school work,” when these remarks were mentioned by respondents as time demands which precluded involvement

in other activities. A girl in a large city in central Poland explained why she wasn't more involved in actions for the environment this way:

Lack of time. I spend a lot of time studying. If such an organization were started at school, I would like to belong to it.

Case # 1315.

A boy from a small town wrote:

My laziness stops me. An ecology organization in my area would make it easier.

Case #1712

Together, these factors were mentioned with high frequency. Over half of the respondents in the Low Actives quartile, and 44% of the respondents in the Moderate quartiles mentioned these inhibiting factors.

Negative Peer Pressure

After lack of opportunities, the next most frequently mentioned inhibitors were in the category of "Negative Peer Pressure." The opinions of others can be a powerful motivator or inhibitor, particularly for teenagers. The influences of negative peer pressure were noted by 18% of the girls and 15% of the boys, a difference which is not statistically significant. A girl living in a large industrial city in Upper Silesia wrote:

I am stopped [from doing actions for the environment] as whenever I tell somebody about that, they start laughing at me. It would help if more people get involved.

Case # 2211

A boy from a small city in southern Poland put it this way:

My peers stop me. They think that such actions are only for nerds and it shouldn't be like this!!!! Also – lack of involvement by other people. Not many people care for forests or polluted rivers.

Case #2602

Comments about negative peer pressure were more likely to be made by individuals whose EAI score was in the Moderately Active quartiles : 14% of the Low Actives and 13% of the High Actives commented on negative peer pressure, compared with 20% of the Moderately Active, although the differences were not statistically significant.

Lack of Interest in Nature

The third most frequently mentioned reason for not participating in environmental events was a lack of interest in nature, or interests in other activities. Twelve percent of all respondents commented on this in their written remarks. Boys were significantly more likely than girls to write a comment in this category (chi-square = 19.253, $p < .000$; $df = 1$). A boy from a small village stated simply:

I don't feel like getting involved.

Case #2407

Other comments indicated that the young people had other interests, such as this 14-year old boy in the mining region who admitted:

"What stops me is playing playstation on the computer, basketball and soccer. Cutting out electricity would definitely make it easier."

Case #2222

The remaining code categories were recorded with less frequency. Seven percent of all respondents wrote remarks which indicated the belief that one person could not be effective. These comments were coded as representing "**External Locus of Control.**"

A 15-year old boy from the center of the industrial region in southern Poland wrote:

I don't know where there are eco organizations, and people are not interested, and I can't do anything by myself.

Case #2230

A girl from a school in Warsaw wrote a response which I coded as representative of both Negative Peer Pressure and External Locus of Control:

My action won't change anything. I am getting tired of seeing others – fools and vandals from my class – destroy everything.

Case # 3322

The perception of the “**Lack of Adult Support**,” was also represented in the written statements. Although this topic emerged frequently in focus group discussions with non-joiner youth, it appeared in only 4% of the written comments. A 14-year old girl from a large city in the mining district noted:

If kids had more significance in those actions it would be better. But we don't have any say. Everybody treats us as kids.

Case #2504

There were just two respondents who wrote remarks which referred of the “**Lack of Economic Feasibility**” and both stated that youth should be rewarded or paid for participating in environmental actions.

Comparisons by Action Quartile

As described in the methods section, responses to the open-ended portion of question 19 were coded and quantified. Response rates are presented graphically by action quartile in Figures 5.1 – 5.7. In each figure, the data representing the Motivation Inhibitor is presented as a “brick barrier” paired with the corresponding Motivation Enhancer from the opposite end of the continuum of Motivation Moderators. The exceptions are Figure 5.1 which displays only the proportion of respondents who included a comment about their lack of knowledge of action strategies (a motivation inhibitor) and Figure 5.7 which displays the proportion of respondents who wrote about

negative environmental influences (a motivation enhancer). There were no written comments which described the enhancing influences of knowledge of action strategies, nor the inhibiting influences of negative environmental influences. Since less than 1% of the respondents mentioned economic factors, this is also not displayed by a graph.

In some of the figures below, the proportion of respondents with written comments coded to that category is very low ($< 5.0\%$). Despite these low numbers, I am presenting the data in this manner because there is a distinct pattern to be observed. In the comments of the High Actives, there were more responses representative of Motivation Enhancers. Just as striking, there are notably greater proportions of comments representative of Motivation Inhibitors in the comments of respondents in the middle and lowest action quartiles. More than a quarter of all respondents in the High Actives mentioned “Opportunities for Involvement/Institutional Support” as motivating their involvement (Figure 5.3), while 20% mentioned their affinity for nature (Figure 5.6). Forty-four percent of the Moderates and 52% of the Low Actives wrote comments which specifically mentioned the “LACK of opportunities for Involvement/LACK of Institutional Support” as a definite inhibitor (Figure 5.3). By presenting the results graphically it can be seen that in five of the seven Motivation Moderator pairings there are decreasing proportions of Motivation Inhibitors recorded among comments of respondents in the High Actives, and corresponding higher proportions of comments indicating Motivation Enhancers. This trend is not present in the comments reflecting Peer Pressure/Peer Support; and Adult Support/Lack of Adult Support. In both of these categories, the most frequent mentions of Motivation Inhibitors occurred not in the lowest active respondents, but in the comments from the moderately active respondents.

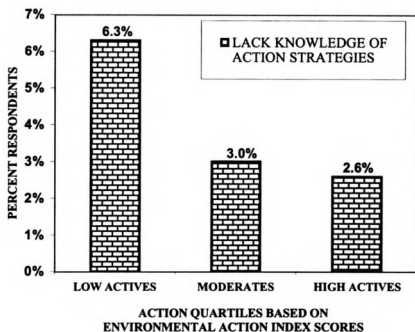


FIGURE 5.1 Proportion of comments expressing a lack of knowledge strategies as a factor inhibiting involvement of Polish youth (n = 340).

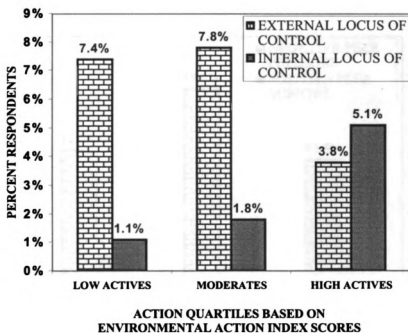


FIGURE 5.2 Proportion of comments expressing internal locus of control as enhancing motivation for involvement, and/or external locus of control as inhibiting involvement of Polish youth (n = 340).

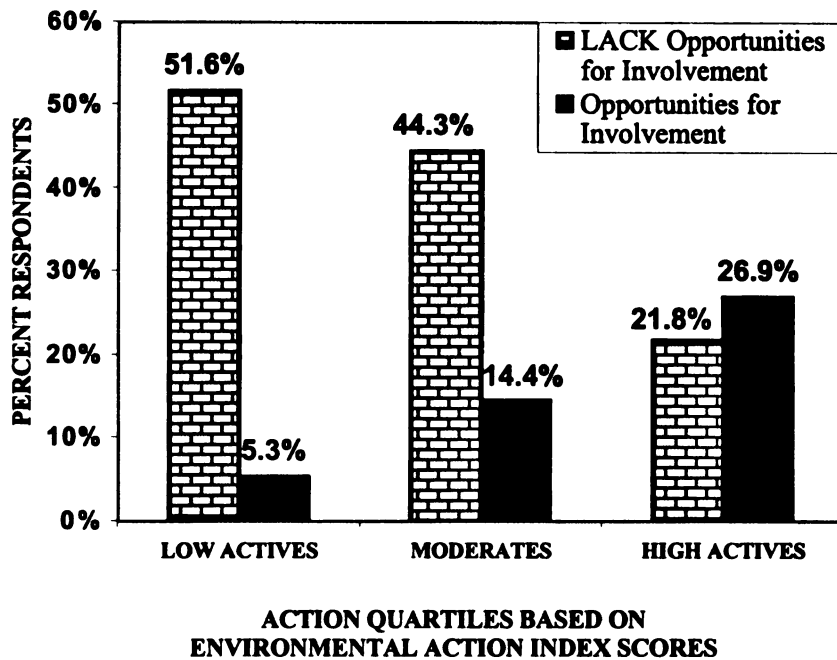


FIGURE 5.3 Proportion of comments expressing a lack of opportunities for involvement as a factor inhibiting involvement, and/or availability of opportunities as enhancing involvement of Polish youth (n = 340).

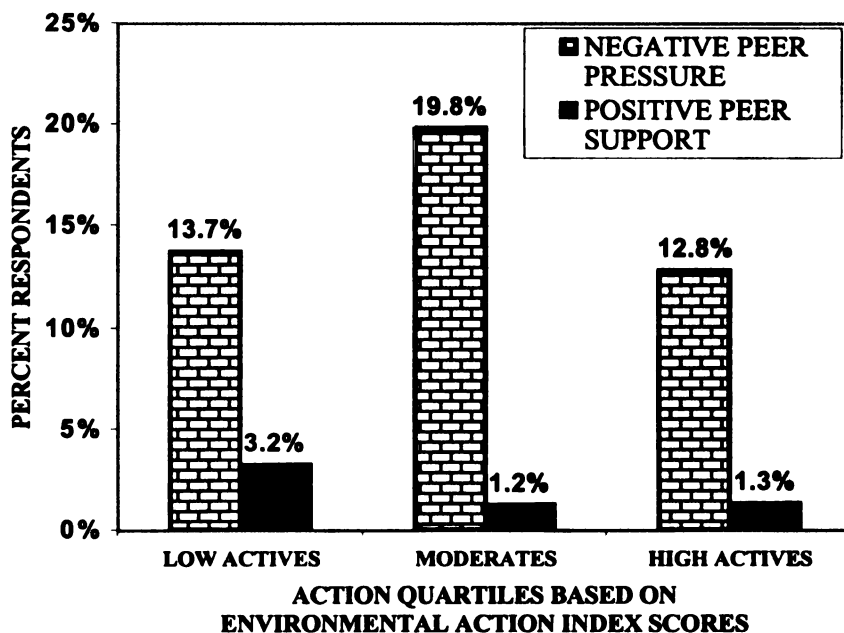


FIGURE 5.4 Proportion of comments expressing negative peer pressure as a factor inhibiting involvement, and/or positive peer support as enhancing involvement of Polish youth (n = 340).

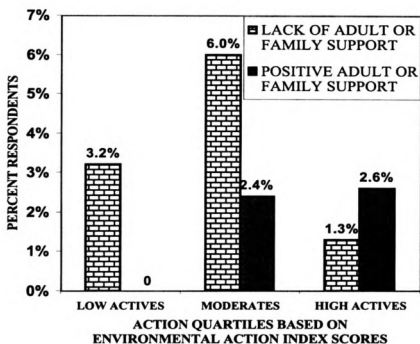


FIGURE 5.5 Proportion of comments expressing lack of adult/family support as a factor inhibiting involvement, and/or positive adult/family support as enhancing involvement of Polish youth (n = 340).

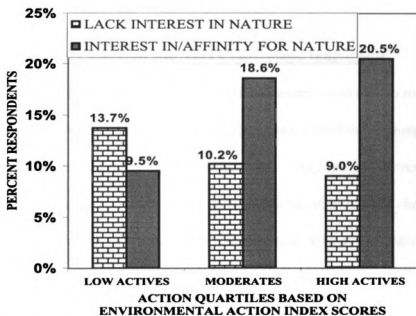


FIGURE 5.6 Proportion of comments expressing lack of interest in nature as a factor inhibiting involvement, and/or interest in or affinity for nature as enhancing involvement of Polish youth (n = 340).

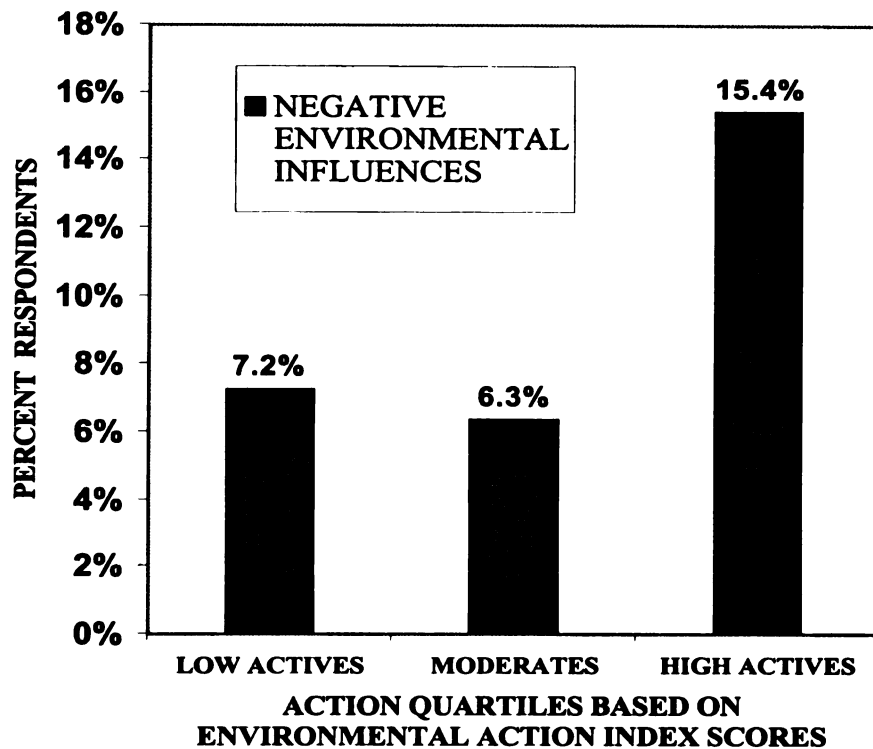


FIGURE 5.7 Proportion of comments expressing negative environmental influences as enhancing involvement of Polish youth (n = 340).

Comparisons of Very Engaged and Very Constrained Individuals

To further clarify which variables Polish adolescents perceive to motivate or inhibit their participation in actions for the environment, I used the responses from the EAI to identify additional subgroups for comparison. I determined that respondents who had participated as a main organizer or an assistant to the organizer for one or more of the nine actions in the EAI would be considered highly motivated and engaged individuals (n = 117). Because this subgroup contained people who had demonstrated their involvement by taking on the added responsibilities of leadership and organization, I reasoned that the variables they identified as motivating their involvement would be of interest. Similarly, I determined that it would be insightful to review the comments from

those respondents who indicated that they felt constrained and unable to participate in environmental actions. On the survey, one of the response categories for the Environmental Action Index was “I have NOT participated in this action, but if I had the opportunity I probably would participate.” I created a subgroup of individuals who selected this option for at least four of the nine items in the EAI ($n = 114$) as comparisons for the highly motivated organizers identified above. I chose this criteria because the majority of respondents (86%) had participated in a litter clean-up event, thus I established a subset for persons who answered that they would like to participate in at least half of the remaining eight actions. The frequencies of written comments from each category of motivation enhancers and inhibitors are shown in Table 5.3.

As the results in Table 5.3 clearly demonstrate, opportunities for involvement and affinity for nature are the most commonly reported motivation enhancers for respondents who were organizers of actions. Among persons who indicated that they were unable to participate, two variables were mentioned with far greater frequency than any others. One quarter of respondents wrote comments which indicated a perception of negative peer pressure, and 70% wrote about constraints due to the lack of opportunities and/or institutional support. Even among those respondents who had participated as organizers, 35% described how they felt constrained or limited by the lack of opportunities and/or institutional support, and over one fifth commented on aspects of negative peer pressure. This suggests that these Motivation Inhibitors are experienced by many of the survey respondents, from those who are very active to those who feel constrained and unable to participate.

TABLE 5.3 Comparison of the prevalence of comments coded as Motivation Enhancers and Inhibitors for Respondents who participated in helper/leadership role, and Respondents who indicated desire to participate if opportunities were available.

CATEGORY	Respondents who Helped Organize or were Main Organizer for one or more actions	Respondents who selected option: "I did not participate but if I had opportunity, I would" for 4 or more actions
N	84	100
Missing*	33	14
MOTIVATION ENHANCERS		
Negative Environmental Influences	14.3%	13.0%
Affinity for/Interest in Nature	27.4%	13.0%
Positive Family Support	3.6%	-
Positive Peer Support	1.2%	2.0%
Opportunities for Involvement/Institutional and Organizational Support	26.2%	12.0%
Internal Locus of Control	4.8%	2.0%
MOTIVATION INHIBITORS		
LACK of interest in Nature	8.3%	5.0%
LACK adult support	2.4%	4.0%
No economic feasibility	-	1.0%
NEGATIVE Peer Pressure	21.4%	25.0%
LACK Opportunities for Involvement; LACK of Institutional and Organizational Support	34.5%	70.0%
External Locus of Control	6.0%	7.0%
LACK knowledge of action strategies; LACK understanding about environmental situation	1.2%	5.0%

* Missing cases refer to cases in which the respondent's answers to Environmental Action Index questions place them in this category, but this person failed to provide a written response to the open-ended question from which the statements are drawn.

Discussion

By their written comments to an open-ended question, survey respondents revealed that there are identifiable classes of variables which are perceived by Polish youth to either facilitate or inhibit their participation in environmental actions. The comments written by the youth cluster into conceptual categories which approximate the originally proposed motivation enhancers and inhibitors (Chapter 2, Figure 2), with several adaptations.

The original motivation enhancers and inhibitors were conceived as variables which can enhance or inhibit the abilities of Polish youth to engage in action. I believe there is sufficient data in the form of written comments from the survey to include two additional motivation enhancers and one additional motivation inhibitor to the list of Motivation Modifiers in the Motivation-Action Cycle of Youth Participation. Survey comments by over 10% of respondents indicated that **negative environmental influences** inspired their participation in environmental actions. Twenty percent of all respondents identified an **affinity or interest in nature** as another variable which enhanced motivation. Conversely, the **lack of an affinity or interest in nature** emerged as an inhibitor to motivation among survey respondents. The revised model, including these additions inspired by survey comments, is depicted in Figure 5.8.

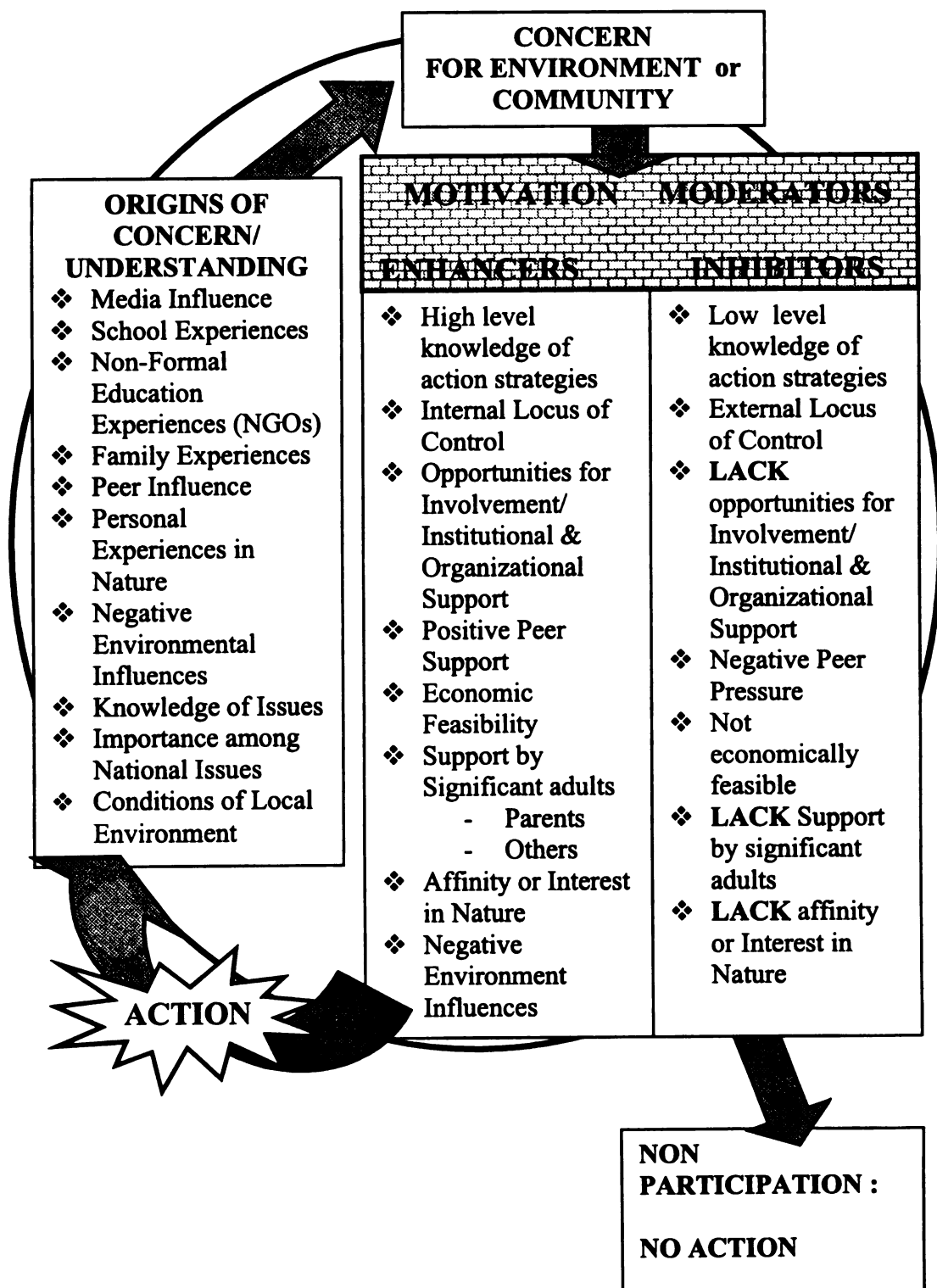
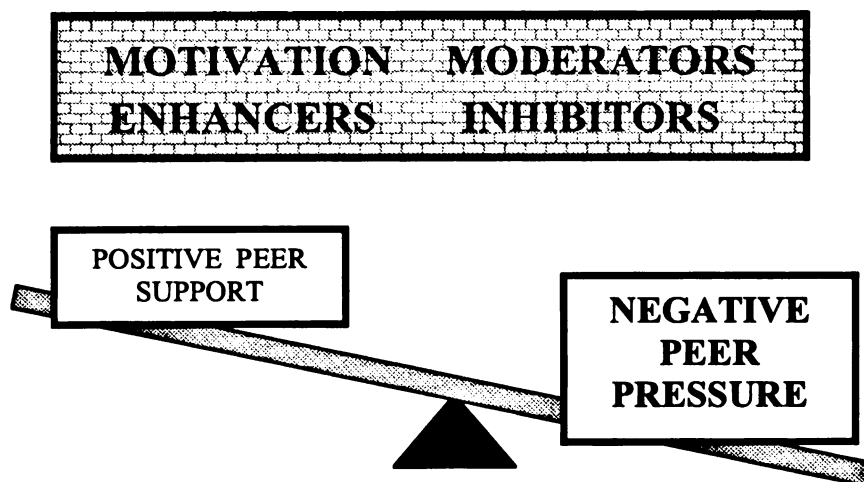


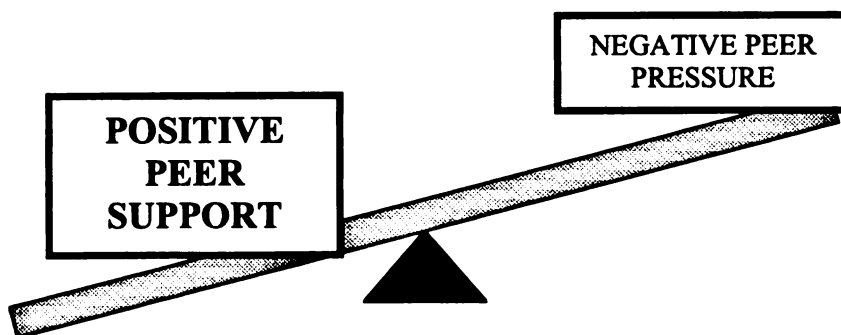
FIGURE 5.8 Revised Conceptualization of Motivation-Action Cycle of Youth Participation.

Determining the Motivation Moderators

Conceptually, I picture the suite of Motivation Moderators like a series of teeter-totters, each with a fulcrum point somewhere between “Motivation Enhancers” and “Motivation Inhibitors” (Figure 5.9).



A. Negative peer pressure perceived as greater than positive peer support, so peer influence functions to inhibit participation.



B. Positive peer support perceived as greater than negative peer pressure, so peer influence functions to enhance participation.

FIGURE 5.9 Conceptual presentation of Motivation Modifiers as balances tipped towards enhancing or inhibiting participation.

Recall that I introduced each pair of variables as representing opposite ends of a continuum. Because of this, I do not perceive “Positive Peer Support” as a concept to be measured as a nominal 0-1 variable which a person either has or does not have. Rather, I envision peer influence as a continuum between Positive Peer Support and Negative Peer Pressure. At the risk of over simplifying the metaphor, it is an individual’s perception of peer support or peer pressure which “tips the balance” and the teeter-totter shifts in favor of the side with greater perceived “weight.” Considering the influence of peers on an individual’s behavior, a person is theoretically somewhere along the continuum between perceiving that her peers support her, or perceiving that her peers make her feel constrained. Her perception of that support or constraint defines whether peer influence is a motivation enhancer or inhibitor for her.

The same theory applies to all of the Motivation Modifiers. It is the individual’s perception of each variable which determines if the sum total will result in enough of the “balances” being tipped toward motivation enhancers and facilitating participation in action. Conversely, participation is likely to be blocked if “enough” of the variables are perceived as inhibiting involvement. At this point, I do not know what constitutes “enough” of the balances, however by analyzing the written and spoken comments from the surveys and focus groups, I have identified several of the major variables which enhance or inhibit participation in environmental actions by Polish teens. I presume that the variables will vary between populations. As an example, negative peer pressure emerged as a strong inhibiting variable for adolescents, although I would expect different variables to emerge from a study of adults.

I suggest that it is possible to identify the variables perceived by a study

population as inhibiting or enhancing their behaviors. The utility in such an exercise is therefore not to categorize individuals on various continua, but to identify aspects which affect the target population. With this understanding, programs can be developed to address specific needs within that population to remove the barriers perceived to be inhibiting their participation in environmental and social actions.

Programmatic Recommendations based on Data Interpretation

To illustrate how this information can help inform programmatic decisions, I will focus on the four Motivation Moderators which were mentioned the most frequently in the comments of the adolescents in the survey sample. These include the motivation enhancers of “Affinity for Nature” and “Opportunities for Involvement” and the motivation inhibitors of “Negative Peer Pressure” and “Lack of Opportunities for Involvement.” Since the two “Opportunities” variables are opposite ends of a continuum, I will begin with the other two variables noted.

Recommendations to Enhance Affinity for Nature

Comments reporting an “Affinity for/Interest in Nature” were mentioned by 27% of respondents who scored in the top quartile of the Environmental Action Index. This suggests that positive feelings toward the environment contribute to becoming involved in actions. This connection was reflected in comments such as this 14-year old girl from the heart of the industrial region in southern Poland:

I am very interested in biology, especially animals and plants and that's why I want to help the environment to make our life better.

Case # 2223

The prevalence of such statements among the most environmentally active youth in the survey provides compelling evidence for the value of developing programming which helps increase a young person's affinity for nature. Polish teenagers have indicated that an interest in nature is one of the most important motivators which they perceive as inspiring their participation in environmental actions.

This topic was mentioned frequently in the focus groups with young people involved in clubs and organizations. In a large industrial city in central Poland I met with members of a school ecology club. During the ice-breaker activity, I asked them to write about an incident in which they first became aware of their interest in the environment. Eight of the twelve young people wrote about early childhood experiences in nature, as in the words of this 13-year old girl:

When I went out of the city with my family to the countryside, to a meadow. I left the concrete and smelled the fresh air..then I thought how great it would be if it were the same in the city.....if there was no trash on the streets like in the country, then everyone could be carefree.

Experiences in nature with family were mentioned often as being pivotal to the young person's current interest in nature. A 13-year old boy in the same club explained: *"The subject of ecology was introduced to me by my grandparents who always took care of the natural environment."*

These statements parallel the findings in the environmental education literature collectively called Significant Life Experiences research (Chawla, 1998; Palmer, 1993; Tanner, 1980). Like the current study, those studies all found that spending time in nature with a caring adult is vital to developing an affinity for nature.

In terms of program development, this suggests the need to create programs which bring children in contact with nature at an early age. This is particularly important

in Poland, where 68% of the population live in urban settings. Many Poles live in large apartment complexes with very little green space. From a city planning perspective this points for the need to develop green belts and parkways close to where people live. The city of Lodz in central Poland is developing an extensive greenway network in order to develop a ring of attractive public parks throughout this large industrial city.

Another programmatic recommendation from the perspective of family ecology would be to develop opportunities for families to spend time together in nature. Organizations could offer activities such as family fishing tournaments, nature hikes, and parent-child camping excursions. A 14-year old girl from the school ecology club even suggested a way to get families involved in tackling ecological problems:

We should do something to keep the environment beautiful and not destroy it. I think it would be a great idea if we have ecology lessons for parents and kids together. Whole families could discuss different ecological problems. It would be fantastic, and it would be one of the best solutions.

The young people also had suggestions regarding how to improve school lessons so that more people would become interested in the environment. One point that was stressed was the need to start teaching about the environment to very young children. A 14-year old girl in the school ecology club was the most specific:

I think that we should learn about ecology from a very young age. There should be a special program of ecology in school, not just something from time to time for special events. There should be one or two or more hours a week assigned to it, so that we will know something about the environment.

Her colleagues agreed and added that the lessons would be best if they included role-plays, brainstorming and small group discussions to think of answers to environmental problems. Currently, most classrooms in Poland emphasize teacher

lectures and rote memorization, although there are growing numbers of teachers who are incorporating the innovative techniques the students described above.

Recommendations to Reduce Negative Peer Pressure

Negative peer pressure was mentioned by 20% of all respondents who wrote comments. The frequency of these types of comments attests to how salient they are to the youth surveyed. Often the writers commented that they personally cared about the environment, but they felt constrained by the perception that many of their peers felt otherwise. A 14-year old boy from a large city in eastern Poland explained his lack of participation this way:

I am stopped by the fact that if I start to care about the environment other people will destroy my work immediately. It would be easier if others cared about the environment.

Case #2020

This statement illustrates one of the more frequent comments in this category: the acknowledgement that if more people would be interested in doing environmental projects, it would be easier to get involved. When I met with youth who were active in environmental organizations, they also mentioned the lack of interest of much of society as being a powerful inhibitor to involvement. One way to address this issue would be to develop marketing campaigns to promote the environment. Obviously, a campaign to improve the popularity of ecology would be a costly but if it resulted in more a more concerned citizenry, the benefits would be enormous. In several of the focus groups young people mentioned the example of the “Great Orchestra of Help,” an annual event to raise funds for hospital care for children in Poland. Well known musicians and actors

donate their time and the event is considered widely popular among teenagers. A similar event focused on environmental issues could help reduce the stigma many young people seem to have regarding environmental actions. A 15-year old girl who is a member of a 4-H club suggested: *“Positive ecological actions should be shown on TV, and in newspapers...they should be promoted by famous people – people like to copy them.”*

The need to engage the media in improving both the urgency of the environmental situation, and the social acceptance of the general public was mentioned frequently in the focus groups with joiner youth. The young people expressed concern that environmental issues were covered by news media very infrequently, and typically the focus was on presenting the viewpoints of *“experts – usually old guys from the Ministry”* who presented only one-sided views of the situation. In contrast, people involved in environmental actions were often presented as crazy, as in the media coverage of the protests to stop the development of a highway. An 18-year old boy who is active in an ecological club in a large city explained:

At St. Anna’s mountain there was a big protest against the highway that was going to cross the highest point in Silesia and cut down the forest. The media showed this as the action of a few young crazy people who do not attend school, who do not want to study....And on the other side are the western firms who want to build the highway in the name of the country and the citizens, and so destroying nature is okay.

Members of this club have addressed the problem proactively by creating their own daily radio show about the environment. They produce short pieces on topics of local and national interest and have found that it has helped improve the image of the organization and it has also helped recruit new members.

Another factor related to negative peer influence and environmental actions has to

do with the type of actions. In focus group discussions it became apparent that for many of the non-joiner youth, environmental actions were limited to litter clean-up events. According to the survey, 86% of respondents had taken part in a litter clean-up event, and many of the respondents had not participated in any other types of actions for the environment. With such a limited interpretation of environmental actions, it is not surprising that there are strong negative perceptions against involvement. In focus group discussions with youth involved in clubs, I heard several young people express the opinion that different type events needed to be organized in order to increase the popularity of environmental actions. A 16-year old girl who is a member of a 4-H club in a rural community had this suggestion:

If I were to organize something, I would try to make people connect ecology with something pleasant. Now, people associate it with cleaning, something they have to do, so people do it reluctantly.

Recommendations to Increase Opportunities for Involvement and Improve Institutional and Organizational Support

By far the most common type of comment reported on the survey had to do with the motivation inhibitor “Lack of Opportunities for Involvement; Institutional and Organizational Support.” Over half of all respondents mentioned this variable as inhibiting their participation. The fact that the continuum counterpart for this variable, “Opportunities for Involvement,” was mentioned most frequently by respondents in the top action quartile attests to the powerful perception youth have regarding the need for opportunities for involvement.

In considering how this information could be used effectively to develop programs that could increase opportunities, it is important to realize that there are many

ways in which people can perceive that their opportunities are limiting them. Often in the survey responses, the opportunity lacking was “clubs and organizations.” When the comments for this survey question were originally coded into 36 response categories, “lack of clubs and organizations” was the single most frequent code among girls, mentioned by 37% of the girls who answered this question. This topic came up frequently in the focus groups also. In ice-breaker activities with non-joiner youth, I asked them to write down what they would like to change in the community where they lived. Places for young people to gather, including clubs for young people were often mentioned. In one focus group with girls in a city in the agricultural region, seven of the ten participants wrote about the need for a teen center or place for youth.

In the focus groups it became clear that when many of the young people mentioned the need for clubs, they were referring to physical spaces to meet, as distinct from organizations:

I would like that there will be organized centers for young people where people can meet, because we do not have such places when we can gather and that people will have different hobbies not only drink in the streets and fight. – 15-year old girl from a city in the agricultural region

If there were clubs like that for teenagers, we would be grateful for having a place, a building, that we can arrange ourselves. We could paint the walls and nobody will look at it, it would be ours. 15-year old girl from Warsaw

These girls, and apparently many of the survey respondents, aspire to having a place of their own to meet. This is particularly important for Polish youth, because the typical Polish apartment is very small. Youth in the focus groups expressed that they had no place to meet with friends. In large cities this factor is already linked with environmental issues, since urban development is taking away parks and playgrounds

where children and youth used to gather. Both in the focus groups and in the survey, Polish youth are clearly expressing their desires for youth clubs.

Depending on the location and available facilities, one recommendation would be for local governments and non-governmental organizations to create youth clubs. During the communist era, “Culture Homes” were constructed in many Polish cities. Even tiny villages of less than one thousand inhabitants have a “Dom Kultury” where music and art classes were offered. If funding could be established to create Teen Centers in these buildings, young people could have the clubs they seek. In order that these centers meet the needs of young people, authorities and organizations need to work closely with youth in the development of any such facilities.

This leads to another critical limitation. Opportunities can also be limited by lack of organizational ability and cooperation with authority figures. Many of the youth I met in the focus groups expressed that they were limited by the lack of adult support. The non-joiner youth shared many stories of how their ideas for youth events had been rejected by school and/or city authorities. It was my impression that these young people, through no fault of their own, lacked basic organizational skills necessary to coordinate actions or projects. Obviously, these two issues are related, for cooperation between youth and adults provides opportunities to develop the effective organizational skills and mutual respect needed to organize more actions and opportunities in the future.

Under communist rule, very few people had the opportunity to organize community or environmental events, thus there is a need to develop the skills necessary to organize clubs and activities. The young girls I met with who had formed a social services club in their rural district on the border with Russia explained that they had

learned how to organize events and write grant proposals by attending a workshop provided by the Foundation of Village Support. They credited their abilities on the skills they learned at the workshop and the support of key adults, including their mothers and a teacher at their school. These girls demonstrate how organizational ability and adult support can open doors for young people. Developing workshops to train young people and the adults who work with them is an excellent way to deliver important skills to young people.

Another way to increase opportunities for young people to be involved in environmental and community activities is to involve the schools. Whenever I met with Polish youth in focus groups, the young people complained that one of the distinct limitations to their involvement was the amount of schoolwork they had to do each day. In the Polish school system young people compete academically for spaces in the most sought-after high schools, and then compete in final examinations to gain admission to universities. As a result, Polish teenagers spend much of their time studying and doing homework. When the comments written for Question 19 were tallied using the original 36 codes, 21% of all respondents included a comment about “no time” and 10% of all respondents specifically stated they had no time because they were too busy with schoolwork. This comment from a boy from the coal mining area is representative:

I am not very involved but I would like to be very much. My responsibilities, such as going to school, helping my parents prevents me.. If I had less school responsibilities it would help.

Case #2211

One way to facilitate more participation by young people is to develop school curricula which incorporate active community and environmental service in the learning. One possible curricular reform would include service-learning, an educational approach

which integrates classroom learning with student-led investigations into real-life community issues including active participation in community service (Rhoads, 1998). Research in the United States, where by 1999 half of all public high schools had developed some form of service-learning, has shown that by coordinating service opportunities with learning, students can gain personal and social development skills, a sense of civic responsibility and enhanced academic learning (Billig, 2000). Learning is combined with service, adding richness and value to both (Honnet & Poulsen, 1989).

By developing service-learning opportunities, several objectives could be realized. The focus on real issues would create a sound platform for study, and would help young people understand the environmental and social issues where they live. It was notable that during the focus groups with non-joiner youth, many of the young people seemed to understand environmental issues only in a very general way. They did not express awareness of local issues. A geography teacher who cooperated in the study told me that she is worried about how little students know of the places in which they live. Over the years she has given students the assignment to write down all the information they can think of in five minutes about the geography and biology of their areas. She reports that most of them run out of ideas after just a few sentences, a fact she finds very disturbing (M. Bugdal, personal communication, April 7, 2000). Service-learning programs provide opportunities to help students learn about their communities by engaging them in issue investigation and problem solving.

A vital component of service-learning is the inclusion of critical reflection. These are structured activities which help students reflect upon what they are learning, and examine their previously held beliefs in light of new experiences in order to reframe their

understanding (Eyler, Giles Jr., & Schmiede, 1996). This kind of reflective thinking helps to develop critical analysis and thinking skills, which are much needed to address the complexities of environmental issues.

Many survey respondents mentioned the lack of time as a factor inhibiting their involvement in environmental actions. By including participation in action within a learning activity, students would have the opportunity to participate in environmental and community actions while performing sanctioned school assignments. As was seen with the rejection of litter events by some of the boys, it is important that students be involved in the selection of topics for service-learning projects. In this way, students will be actively involved in their learning, and more likely to participate with enthusiasm.

Developing service-learning programs in schools would also be an excellent way to create collaborative partnerships between schools and non-governmental organizations. I would anticipate that there might be hesitancy on the part of teachers to adopt a new program which would require additional work on the part of the teachers. Part of this additional workload could be reduced through cooperative partnerships with local NGOs and other non-formal learning centers. The first step would be to enlist Polish teachers to adapt the lessons learned from service-learning programs in the U.S. and elsewhere to create teacher training programs in Poland.

Any time programs are imported from another country there is a need to adapt them rather than simply “adopt” them. This is particularly crucial in the case of developing a more learner-centered approach to education that is fundamental to service learning programs. This relates to the third type of opportunity limitation, which has to do with the lingering effects of the communist legacy on the psyche of the people. For

almost 50 years, the people of Poland were under the authority of a centrally-planned government. There were few opportunities to take individual responsibility. In addition, a great distrust in the government developed which still affects how people view the government today. The young people I met in focus groups were well aware of the impacts of the former government, even though they had little personal memories of the time. A 15-year old boy living in Warsaw, who was five when the government transition occurred, described it this way:

More time has to pass. Communism influenced people's psyche and nobody had to do things better for the government. Many years ago, when somebody was doing something well it was not good because he was serving communists. Everything changed, but it is difficult to change people's mentality.

So many things about this era are difficult to change, including the focus of this study: personal perceptions of individual responsibility. Democracy offers the chance for citizen participation, and in fact, for real democracy to flourish, citizens *must* participate. For this to be realized, people must be aware that they *can* participate. This affects all aspects of social life, including participation in environmental and social causes. To encourage youth in Poland to participate actively in their communities, programs and policies should be developed which help remove the physical, organizational and mental barriers to their full participation.

CHAPTER 6.

SUMMARY AND RECOMMENDATIONS

Young people have to know that they can do something, for example, for the environment. They need to know that they will be supported. Very often young people need guidance, and in the beginning they need help to start a project. It would help because to start something, to come up with an idea, to create something - it is difficult. It should be something interesting, something that will be attractive, and that it will be to the advantage of young people and give them experience, a feeling of satisfaction.

First they have to understand, they have to be convinced. The main thing is to convince people. When people decide they will join, this is already half of a success.

•16-year old girl, member of a rural youth group

In the course of this study, I traveled from rural villages to large urban centers and met with young people who generously shared their opinions. The data included 453 Youth Environmental Concern and Action (YECA) surveys and transcripts from 15 focus groups. To summarize the research findings, I will return to my research “experts,” and share the voices of the Polish youth I met. The chapter concludes with research and programmatic recommendations based on the findings.

Research Question: What role do youth see for themselves in addressing Poland’s environmental and social problems?
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Research Finding: Young people who are not engaged in youth and environmental organizations are more likely to conclude that they are powerless, and unable to do anything to address the environmental situation. In contrast, young people involved in organizations are more likely to recognize their own efficacy and feel a “need” to be involved in finding solutions to environmental and community problems.

The focus group discussions revealed that there are notable differences between those youth who are involved in youth or environmental organizations, and those who are not involved. Non-joiner youth displayed a very shallow understanding of issues, limited mainly to problems of trash and recycling. Many of the non-joiner

The forest will never be clean and beautiful because there will always be somebody that will litter.

– 13-year old boy, village near urban center

youth seemed to equate ecological actions with litter clean-up events. More than 86% of all survey respondents had participated in a large litter event. The survey results show that litter events are not only very popular, they are often the *only* type of action young people are familiar with. Almost half of the respondents participated in only one other non-litter event over a two-year period.

Young people not involved with organizations perceived of their role as limited

Teens today do not want to listen to such topics as ecology. If I wanted to do something by myself I could not;

I would need friends, people who would like to help me and the environment.

Frankly speaking there are not many people like that.

– 14-year old girl, village in central region

to participating in litter events organized by other entities, usually schools. For these young people, there was frequent reference to the fact that “nobody cares about the environment.” Most of the non-joiner youth did not express realization of a personal role in addressing or contributing to environmental

issues. They seemed unaware of the possibilities for involvement. The YECA results confirm that respondents who did not belong to a club participated in significantly fewer actions than respondents who belonged to at least one club.

In distinct contrast to the non-joiner youth, in focus groups the joiner youth

I'm not indifferent to the future of the world. That is why I wanted to participate and have an impact. Knowing that not everything is lost, I want to change many things. Specifically important to me are animals, their future fate, and in general, all of nature. If, by our actions, even one person understands and "returns" him or herself to a more correct way, I think this has value. Basically I don't want to be passive.

– 19-year old girl, member of Green Federation, eastern city.

spoke quite passionately of how the environment was personally important to them. They were aware of the problems, and expressed concern over what they saw to be underlying causes of the major issues: increasing consumerism and public apathy which resulted in non-involvement. Rather than let these factors discourage them, these young

people seemed to draw encouragement from the fact that they personally could make a difference. They explained that they couldn't be passive, and perceived that by the example of their own commitment they could help convince others to lead more ecological lifestyles. Joiner youth also acknowledged a sense of responsibility to care for animals and the environment.

- ◆ **Research Finding:** There are a variety of variables which are correlated with environmental concern of Polish youth.

Multiple regression analyses revealed six variables which correlated significantly with level of concern as measured by the Environmental Concern Index (ECI). These factors are: importance of the environmental situation among

I learned about ecology when I was little, from my parents who are very sensitive to issues concerning ecology. We segregate all our garbage.
– 14-year old girl, small town.

national issues, perception of pollution in the local environment, family influences,

I am afraid that when I am old, my kids will tell me – 'Dad, you messed up the world (wasted it)' - 13-year old boy, village in the mining region

personal experiences in nature, negative

environmental influences, and knowledge of

environmental issues. This suite of factors

explained 22.8% of the variance in ECI scores for

boys and 14.7% of the variance for girls.

- ♦ **Research Finding:** The majority of Polish youth would like to have more opportunities to be involved in actions to help the environment.

Over 60% of survey respondents indicated that they would like to be more involved in actions to help the environment. Less than 5% of respondents declared themselves not interested in the environment. The levels of concern noted above are clearly associated with a desire to be more involved.

Research Question: What motivates Polish youth to participate in environmental and community actions?

I computed stepwise multiple regressions to determine which of seven proposed variables were correlated to action participation. For boys, two variables emerged as significantly affecting action participation. These were parental support, which was positively correlated to action participation, and teacher support which was negatively correlated. Although I found this puzzling at first, a comment made in a focus group by a 15-year old girl provided insight. When I asked the group about various

environmental actions, and who was involved, she answered “*Teachers order us to pick up litter.*” Boys in particular may take offense at being forced to take part in an action they aren’t interested in, and this may even cause some to refuse future offers of action participation. Over 10% of boys surveyed indicated that they had taken part in a large litter event against their wishes because it was required by their schools. Thus, teachers who continue to focus exclusively on litter events run the risk of alienating students, particularly boys.

For girls, when I computed stepwise regression analyses with the seven proposed variables, only knowledge of action strategies was significantly correlated to action participation. In fact, when data for boys and girls were combined, only knowledge of action strategies emerged as significantly affecting action participation. The action precursors examined explained only 12% of the variance in the Environmental Action Index scores for boys, and 10.9% of the variance for girls, suggesting that there are additional factors involved in explaining participation.

I don't do anything as I don't think it will change much.

*It would be easier if I had more information about what I could do.
– 14-year old girl, large industrial city.*

Research Question: What factors enhance or inhibit youth participation?

- ◆ **Research Finding:** Lack of opportunities for involvement, negative peer pressure and lack of adult support were the most frequently mentioned inhibitors to youth participation. Opportunities for involvement and an affinity for nature were identified as motivation enhancers.

By quantifying the responses from an open-ended question on the YECA, I identified the most prevalent themes mentioned by the youth as the bridges which enhance their participation, as well as the barriers which inhibit their involvement. I believe that this line of inquiry shows great promise for understanding the constraints experienced by young people in regards to participation in community and environmental actions.

The motivation enhancer mentioned most frequently by the young people in the survey was the presence of opportunities for involvement made available by clubs and

organizations, including supportive schools.

None of my friends was ever involved. I don't know how to do anything. I can't do anything by myself, can I?

It would be easier if there was an eco organization, then I could join.

– 14-year old boy, city in the mining region

Similarly, the most frequently mentioned motivation inhibitor was the *lack* of opportunities and organizations. Over half of the respondents who scored in the lowest quartile of the EAI mentioned that they felt limited by the lack of opportunities, particularly clubs and youth organizations.

The underlying theme in these comments reveals that many young people in Poland are not yet prepared to take the responsibility for organizing their own clubs and actions. Rather, they indicated that *they* personally can do nothing until *someone else* provides them with a club or organized activities. Their comments suggest an overall low level internal locus of control. Under communist rule, personal responsibility for civic engagement was largely denied, thus people did not have opportunities to develop the skills needed, as were chances to build the confidence in their own abilities.

Although the politics have changed, the transformation of personal expectations will take perhaps much longer.

The young people who are active in environmental and community organizations represent a vanguard for change. They have already taken the initiative and demonstrated their willingness

I can't do much by myself and others don't want to help. I will get involved when I know what threats will come of it.

- 14-year old boy, village in central region

Nobody in my neighborhood is interested in helping the environment, but if somebody showed initiative I would join.

- 13-year old girl, village in central region

to become personally involved in organizing actions for their communities, despite, or partially *because of* the lack of involvement of their peers.

From the comments of the young people, it was clear that for many of them the

Why don't I do more for the environment? Because I am afraid that this way I will lose my friends who have different opinions on this topic.

- 14-year old girl, village eastern Poland

opinions of their peers effectively stopped them from taking part in environmental and community actions. Many teens held the perception that their peers don't approve of doing things for the environment. More than 30% of the respondents who indicated that they would like to be more

involved in actions to help the environment in the future wrote on the survey that they were currently constrained by the opinions of their peers. Those who decide to become involved in actions have to be able to get beyond the possible ridicule of peers.

All of the young people I met in focus groups with joiner youth expressed having overcome public ridicule and skepticism, factors which are undoubtedly powerful barriers for many youth. The young girls I met on the Polish-Russian border explained

how they had learned about organizing projects and proposal writing at a workshop for young people. This provided them with the encouragement to organize their projects for local school children. When I met them, they were exuberant over their successes, but they told me how they had initially not been accepted by peers nor by local community

There is needed support from parents, adults ...because often adults are very skeptical towards young people who would like to do things.

They assume young people do not know how to do things. Things like this should not happen because it stops people from trying. They are not treated seriously. It would help if young people were treated as equals, in partnership.

– 16-year old girl, rural youth club

members. There was public skepticism as to why a group of young people would want to do something for no financial gain, and the girls were criticized. If they had not had the support of significant adults (the girls mentioned their mothers and a teacher), and the background of the training workshop, this ridicule from peers and community members might have been enough to stop them before they could realize their project.

Acceptance or dismissal by significant

Young people are more interested in the environment than adults....but when they want to do something adults do not allow us to do it. 'you can not speak up, go away'...
–15-year old girl, Warsaw

adults was frequently mentioned as a bridge or a barrier, respectively. One of the most resounding themes to emerge from the focus groups I conducted with non-joiner youth was

that young people strongly believe adults are not listening to them. In every focus group with non-joiner youth, the young people told me how they felt undervalued and ignored by adults in their schools and communities. They shared examples of how their ideas had been rejected by the adults in their communities. It was obvious that these

perceptions contributed to feelings of futility, and as a result the young people were disinclined to become involved.

Conversely, the young people active in youth groups often mentioned how the support by parents and other significant adults had been pivotal for their own involvement. In focus groups and surveys, youth shared their opinions of their need to be listened to, and valued by adults.

Additional Research Findings:

- ◆ **Research Finding:** Polish youth are concerned about the environment, and girls were significantly more concerned than boys.

The majority of young people indicated that they are concerned for the environment, and girls expressed higher levels of concern than boys. Survey respondents selected “destruction of the environment” third behind unemployment and crime and violence as the most important issues facing Poland. Two thirds of the respondents indicated that the state of the environment was a “great” or “very great” concern for them. Many are worried, for their own health and the health of future generations. The environmental situation is definitely an area of concern for most Polish youth.

I don't want our planet to "die" and the water to be dirty...I want the air to be clean.
- 15-year old boy in large city in mining region

- ◆ **Research Finding:** Girls participate in fewer actions than boys overall, but tend to participate at higher levels of leadership and personal involvement.

The YECA survey revealed that in Poland, participation in environmental and community actions by young people is currently low. Although boys participated in more kinds of environmental actions than girls, when I compared levels of participation with the Environmental Action Index (EAI), which incorporates degrees of personal involvement, there was no significant difference in participation by boys and girls. Girls participated in fewer actions, but at greater levels of involvement (often as assistants or the main organizer of the action) which compensated for the lower numbers of actions compared with boys.

In a related section of the YECA survey, girls were more likely to describe action strategies with more personal involvement and complexity than boys. By their responses to these open-ended questions, the girls more frequently demonstrated that they had knowledge of the strategies needed to attempt solutions to address environmental issues than did boys. Whether these same girls possessed the skills needed to put these plans into action is beyond the scope of this study. Almost one fifth of all respondents who wrote answers to the three action strategy questions described responses which indicated no involvement or action, such as “there’s nothing I can do” or “I don’t know what to do.” In focus groups and in their comments on the open-ended question, young people indicated that they would get more involved if they knew what to do. Further research should investigate what is needed to provide young people with the necessary skills to implement action strategies.

What would YOU do about a polluted pond near your school?

I would gather few friends willing to help and we would clean it ourselves. If we call the city they would help us, too. – 14-year old girl, large city in northern Poland

In their survey responses, girls indicated that they would like to participate in actions in the future. For six of the nine actions in the EAI, more than one quarter of all female respondents selected the option “I haven’t participated, but if I had the opportunity to participate, I probably would.” This sizable portion of girls who would like to be involved in more actions indicates that schools and non-governmental organizations should develop more opportunities for involvement, particularly activities other than litter events.

- ◆ **Research Finding:** Polish youth have a low level of understanding of important environmental issues.

Another finding from the survey was that Polish youth presently have a low level of understanding of important environmental issues. The average score among respondents was three out of six items on the Knowledge Index. In the focus groups, global warming was mentioned several times as the leading environmental threat for Poland, yet on the survey less than 14% of respondents could correctly identify the main causes of global warming. Citizens are called upon to make decisions regarding environmental issues in the form of voting for policy changes and governmental leadership, but also in daily behavioral and lifestyle choices. Well-informed decisions require a clear understanding of issues, including the scientific and social dimensions. In this regard, Polish youth are unfortunately not alone in their lack of preparation, for studies in the United States have concluded that American teenagers are similarly unprepared to make environmental decisions (Gambro & Switzky, 1996; NEETF & Roper Starch Worldwide, 1999). The teenagers I met in this study will be taking on

positions of increasing responsibility in the next decade as they pursue university degrees, establish careers and raise families. They will need to be able to reach decisions regarding tough environmental issues that will only get more complex.

In 1999, the Polish Educational System initiated a new schooling system which encourages but does not mandate the inclusion of environmental education at every grade level. I support the integration of environmental education into school curricula, however from my observations of the present Polish educational system, with its heavy reliance on rote memorization, there will need to be changes in the educational delivery methods in order to provide young people with the skills needed to tackle the complex problems. Service-learning, discussed in Chapter 5, is an educational approach which combines active participation in community service with classroom education would provide an excellent structure for active learning.

Research Recommendations Based on Study Results

In this study, I proposed a new model to explain youth participation, the Action-Motivation cycle. The model differed from previous models designed to explain responsible environmental behavior of adults in three key areas: the inclusion of youth-specific variables, the focus on action as opposed to behavior, and the cyclical nature of the model. In this study, I have demonstrated two of these key differences. Through data analysis, I have identified the importance of youth-specific variables, notably opportunities for involvement, peer support/pressure and adult support. The Environmental Action Index has been shown to be an effective tool to measure participation in environmental actions as distinct from pro-environmental behaviors.

As for the third key difference, I assert that the relationship of action-motivation is cyclical. Due to the nature of the data collected, however, I was not able to test this cyclical nature statistically. I did not include multiple-item measures for all the proposed variables, a feature which is required both to increase the reliability of test measures and to test proposed variables via structural equation modeling. This was an exploratory study, and the data reflects a moment in time. I am therefore unable to make inferences as to causality, in other words I cannot discern if involvement in environmental actions led to greater levels of environmental concern, and similarly, if continued involvement would contribute to greater concern.

A particularly interesting line of research involves the finding that high levels of participation were not necessarily linked with high levels of concern. The ECI scores were distributed with a strong negative skew, indicating that the majority of respondents held opinions which indicated concern for the environment. The EAI scores were distributed with a strong positive skew, indicating that the majority of respondents did not participate in very many actions. This suggests that concern is *not* in and of itself a sufficient precursor to action. Survey results indicate that there is no correlation ($r = .001$; $p = .976$) between an individual's environmental concern, as measured by the Environmental Concern Index (ECI) and action participation, as measured by the Environmental Action Index (EAI). This finding confirms results of other studies (e.g. Dunlap et al., 1993; McConney & McConney, 1995). The data in the present study suggest that for teenagers there are a variety of factors which can contribute to decisions to participate in actions. Some of these variables were discussed above as motivation enhancers and inhibitors.

In the case of variables which inhibit motivation, a person may feel strongly concerned about the environment and want to participate in an action to help resolve an environmental problem. If, however, the inhibiting moderators are strong, this individual may feel constrained and decide to *not* participate. In the case of the inhibiting moderator of “Lack of Opportunities” people may not participate because it isn’t even an available option. To return to the teeter-totter metaphor introduced in Chapter 5, if the moderator is an inhibitor and tips the balance toward inhibition on the continuum of motivation-inhibition, the variable is effectively a barrier to participation. On the other hand, if the moderator is an enhancer and tips the balance toward motivation, the variable offers a bridge to facilitate participation.

I suspect that additional constructs such as group identity (joining in an action because of peer involvement) and demonstrating resistance to authority (in the case of protests or letters written to government) would be factors that also influence a young person’s decision to participate. This will require additional research, involving more specific questions regarding the variables which participation, and additional focus groups and interviews with active youth.

One of the weaknesses previously discussed was the fact that several very important factors were included as single items in the YECA survey. I suggest that in future studies multiple items be used, particularly in the areas of peer support/peer pressure, opportunities for involvement, and personal experiences in nature. These variables emerged both in the focus group discussions, and in the textual analysis of survey responses. Future studies could include focus groups to identify further areas of inquiry, followed by more specific survey questions.

I recommend further study of the motivators and inhibitors to action participation. The written comments from just one open-ended question provided a wealth of understanding of the factors which encourage or inhibit participation. I think it is particularly worthwhile to continue further investigations into the practical applications of the Motivation Enhancers-Inhibitors, to find ways to better understand what motivates and inhibits youth participation.

I strongly recommend the hybrid approach to research which integrates the strengths of qualitative and quantitative research methodologies. Each one added different dimensions to my understanding. Other research areas to pursue include studies to examine the unexpected finding that intolerance is a concern for Polish youth. I think that focus groups, or one-on-one interviews would provide better understanding of what is meant by their concerns for intolerance.

I would also like to explore developing research protocols which involve the youth in data analysis and interpretation. The youth I met in focus groups were bright and articulate, and thrilled to be asked for their opinions. I am convinced of the merit of including their opinions, and hope other researchers will consider involving youth perspectives in research and in program design.

Programmatic Recommendations Based on Study Results

- ◆ **Encourage the establishment of clubs and organizations for youth.** Many survey respondents indicated that they would become more involved if there were opportunities and organizations in their communities. A related need is for the creation of physical spaces for youth to meet, such as teen centers.

- ♦ **Promote leadership training programs.** Survey respondents demonstrated a low level knowledge of organizational strategies to plan environmental actions, and in focus groups non-joiner youth indicated that they did not have the leadership skills to organize events or youth clubs. Workshops for the young people and the adults who work with them are an effective way to develop group leadership and organizational skills.
- ♦ **Include young people in planning and designing action projects.** As the action survey has shown, the majority of young people have taken part in litter clean-up events, but lack experience in other types of action events. It is therefore not surprising that morale is low for such actions. If young people were encouraged to organize and plan actions, there would be greater ownership and hopefully greater participation.
- ♦ **Increase opportunities for young people to share their opinions at their schools and in their communities.** In focus groups and on the survey, young people frequently reported that adults ignored their ideas and discouraged their participation. One possibility would be to involve young people in school and community boards as full-fledged voting members.
- ♦ **Develop school curricula which include hands-on issue investigations, involving student-led investigations.** A service component would also add greatly to the school system, such as the service-learning programs which are increasing in popularity in the United States.
- ♦ **Develop communication networks for youth groups to share information.** This could include newsletters, on-line bulletin boards, and regional workshops and

training sessions for young people to share their experiences and gain new skills.

Both in focus groups and in survey responses, youth expressed that “they didn’t know what to do” for the environment. One immediate recommendation is to remove the criterion in Poland which limits group registration to persons over the age of 18. It is important that groups of younger youth have means of communicating between themselves, as well as with national and international youth-serving organizations.

- ◆ **Encourage the creation of programs which bring children in contact with nature at an early age.** A vital element of this includes increasing opportunities for families to spend time together in nature.
- ◆ **Develop marketing campaigns to promote the environment to help improve the “image” of environmental actions.** Engage the media in improving both the urgency of the environmental situation, and the social acceptance of people who are concerned about the environment. Survey results revealed that many young people hesitate to take part in actions for the environment due to perceptions that their peers do not support such actions.
- ◆ **Establish civic awards and educational scholarships for young people who have contributed to their communities.** Increase the recognition and value of participation in community actions.

Concluding Remarks: The Challenge

Encouraging youth participation has the potential to provide multiple benefits. From a developmental standpoint, adolescents are at the stage in life when they feel the need to be involved in something important (Karns & Myers-Walls, 1989). A survey of 1000 American youth found that an overwhelming majority (93%) believed that they could make a difference in their communities, but the same survey revealed that very few civic organizations involved youth in their work (Princeton Survey Research, 1998).

For youth of post-communist societies, even less is known about their opinions. The transition to democracy is not as simple as holding public elections, and the involvement of young people in community and environmental projects can provide the foundations for the establishment of a more civically engaged society. Roger Hart, the Director of the Children's Environments Research Group at City University of New York wrote in the introduction of his book *Children's Participation*, published by UNICEF : "Only through direct participation can children develop a genuine appreciation of democracy and a sense of their own competence and responsibility to participate" (Hart, 1997 p. 3). Hart elaborated that this "democratization" of young people is the most important aspect of their participation since it helps them develop "a sense of shared responsibility and skills that will enable them to continue to participate as adults and to recognize the importance of their participation in local, national, and even global environmental decisions" (Hart, 1997 p. 8).

For countries emerging from a communist history, this has profound implications. Young people in central and eastern Europe are the first generation to be raised in a climate of personal responsibility. They are coming of age in a society with

opportunities and possibilities that were unavailable to past generations. They are a largely untapped resource of energy and ideas. Educators and policy makers should commit to providing them with the skills they need and the opportunities they desire to develop into active participants in their communities.

*A child is not only
learning,
but also thinking and
can do something
good...
– 15-year old boy,
Warsaw.*

APPENDICES

APPENDIX A. Focus Group Overview.

Date, location and participants of focus groups.

J = "Joiner" youth involved in youth or ecological organization (shaded);

N = "Non-joiner" youth NOT involved in youth or ecological organization

DATE	J N	WHO, WHERE	B = BOYS; G = GIRLS;	AGE RANGE
08/98	J	4-H members, Summer Camp (participants from all over Poland)	(8) G	15 - 17
08/98	J	4-H members, Summer Camp (participants from all over Poland)	(1) B (7) G	14 - 18
08/98	J	4-H members, Summer Camp (participants from all over Poland)	(4) B (4) G	12 - 18
02/00	N	Group High School, mid-sized city in agricultural region, northeast Poland	(9) B	16
02/00	N	Group High School, mid-sized city in agricultural region, northeast Poland	(10) G	16
03/00	N	Elementary School , large urban center, central Poland	(7) B	15 (grade 8)
03/00	N	Elementary School , large urban center, central Poland	(7) G	15 (grade 8)
03/00	J	Green Federation : environmental club in northeastern Poland urban center	(9) B (5) G	17 – 36
03/00	N	Elementary School : small village near a large urban center	(8) B	13 – 14 (grade 7)
03/00	N	Elementary School : small village near a large urban center	(8) G	13 – 14 (grade 7)
04/00	J	Group High school and Middle School, large urban center, central Poland	(3) B (9) G	13 – 14 = (grade 7)
04/00	J	Group High school and Middle School, large urban center, central Poland	(4) B (2) G	17 – 18
04/00	J	Environmental Club "The Source", large urban center, central Poland	(3) B (2) G	16 – 19
09/00	N	POST-SURVEY FOCUS GROUP: middle school, small town, central Poland	(3) B (3) G	14
09/00	J	POST-SURVEY FOCUS GROUP: Social service club "Momajacy," rural village, northern Poland	(5) G	16 – 19

APPENDIX B. Focus Group Discussion Guides

Key Questions for Groups with NON-JOINERS (youth not involved with youth or environmental organizations)

Icebreaker Questions:

I asked participants to write down their answers to the following 3 questions, and then we discussed them in the group.

1. What do you like to do when you have free time?
2. What are some of your greatest concerns for the future?
3. If you could change anything about the community where you live, what would it be? Don't worry about money or "reality" – tell me what you would like to change!

Discussion Questions:

1. I'd like to prepare a list of the things young people in Poland are concerned about. What kinds of things do you think young people are worried about for the future?
2. What about ecological problems? What do you think are the most important ecological problems in Poland?
3. What is the source of ecological problems?
4. Who has responsibility to take care of these problems?
5. Tell me what young people in Poland can do to help the environment
6. Why do you think young people are not more involved in the environment?

Key Questions for Groups with JOINERS (youth involved in a youth or environmental organization)

Icebreaker Questions:

I asked participants to write down their answers to the following 3 questions, and then we discussed them in the group.

1. Think back to when you first became interested in the environment and nature. Write about a specific moment that comes to mind when you first became concerned about the environment.
2. Who in your life has been the biggest influence on your interest in ecology and nature? You don't need to tell me their name, just explain their relationship to you.
3. Why are YOU personally involved in actions to help the environment?

Discussion Questions:

1. What are the most important ecological problems in Poland?
2. What types of actions do young people do for the environment? Who organizes them?
3. In your opinion, what role do young people have in solving these problems?
4. What do you gain from your involvement in ecological actions?
5. What do you think other people think of what you do for the environment?
6. What are some of the main reasons why young people are NOT involved in social and environmental actions?
7. What are some ideas for getting MORE young people involved in actions?

APPENDIX C: Youth Environmental Concern and Action Survey

(English version)

Note: This survey has been modified to fit formatting requirements. The Polish version used in the actual study was printed on 11 pages, and included graphic designs in the margins.

Thank you for helping with this survey. By answering these questions, you will help me with my research about the opinions of Polish youth. This information will be used to write reports to let government and non-governmental organizations know what young people think about different issues. This is your chance to have your voice heard!

The information you write will be completely confidential. The surveys will not be seen by your parents or teachers. Please do not write your name on the questionnaire.

Take your time to read each question carefully and answer it as best you can. For some questions, you will be asked to select an answer from a list of options, for other questions you will need to write your opinion. Remember that I am really interested in what YOU think. This is not a test.

YOUTH OPINION SURVEY

1. What year were you born?
2. Are you (1) ☐ girl (2) ☐ boy
3. Let's start with issues that are problems for many countries. From the list below, select UP TO THREE issues by marking an "X" in the boxes next to them. Select the issues which IN YOUR OPINION are the MOST IMPORTANT problems in Poland:

- | | |
|--|---|
| (1) ☐ Threat of war | (6) ☐ Destruction of the environment |
| (2) ☐ Crime & violence | (7) ☐ Not enough money for living |
| (3) ☐ Drugs | (8) ☐ Disease (e. g., cancer) |
| (4) ☐ Unemployment | (9) ☐ Purchase of Polish land and businesses by foreigners |
| (5) ☐ Lack of tolerance for other people (other races, religions, etc.) | (10) ☐ Other – PLEASE DESCRIBE
..... |

4. To what degree does the state of the natural environment in Poland concern you? When we say "environment", we mean all the elements that make up the surroundings and conditions for life of the individual and society, including the natural environment and the built environment. Select ONE answer and mark an "X" in the box:

- | Very great degree
(1) | Great degree
(2) | Not much
(3) | Basically, not at all
(4) | Difficult to say
(5) |
|--------------------------|--------------------------|--------------------------|------------------------------|--------------------------|
| ☐ | ☐ | ☐ | ☐ | ☐ |

5. In your opinion, is the place where you live polluted?

Definitely

(1)

☐

Somewhat

(2)

☐

Not really

(3)

☐

Not at all

(4)

☐

Difficult to say

(5)

☐

6. Below are some statements about the current environmental situation.. For each of these statements, please mark one box to indicate how much **you** agree or disagree

	Strongly Agree	Agree	Disagree	Strongly Disagree	Difficult to say
(a) I feel that we need to change the way we treat the environment as quickly as possible.	☐	☐	☐	☐	☐
(b) I believe that the seriousness of the environmental situation has been greatly exaggerated .	☐	☐	☐	☐	☐
(c) I am very concerned about the impact that present environmental problems might have on future generations.	☐	☐	☐	☐	☐
(d) Quite honestly, I am not very concerned with the environment	☐	☐	☐	☐	☐

7. Which of these issues do you think are the **MOST IMPORTANT threats** for the state of the environment in Poland? From the list below, select **THREE** answers and mark an "X" next to them:

(1) ☐ air pollution from industry

(6) ☐ degradation of plant cover
(e.g. grass, fields)

(2) ☐ air pollution caused by cars

(7) ☐ deforestation

(3) ☐ chemicals used in farming

(8) ☐ waste and garbage

(4) ☐ extinction of plant and animal species

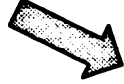
(9) ☐ most people don't understand the seriousness of ecological issues

(5) ☐ pollution of Poland's rivers, lakes and streams

(10) ☐ other – **PLEASE DESCRIBE:**
.....

8. What are the most important environmental problems where you live? List several:

9. People can get information about the state of the environment and environmental issues from many sources. From the following list, select the **MOST important** source of information on the environment and the **SECOND** most important for YOU , and write the numbers in the boxes:

(1) television	(7) environmental organizations	MOST important
(2) radio	(8) family	 ☐
(3) newspapers	(9) friends	 ☐
(4) school	(10) internet	second
(5) magazines	(11) Other: <i>PLEASE LIST:</i>	
(6) direct contact with nature		

ENVIRONMENTAL ISSUES

The next six questions are the **ONLY** questions in the survey with right and wrong answers. We are only interested in finding out what young people know about the environment. Remember, this is **NOT** a test! For each question, put an "X" in the box next to the answer you think is best.

10. Acid rain is one of the ecological problems the modern world struggles with. In Poland, what is the greatest contributor to acid rain?

- (a) ☐ Automobiles
- (b) ☐ Using spray aerosols (e.g., deodorant, hairspray)
- (c) ☐ Chemical fertilizers used in agriculture
- (d) ☐ Burning coal

11. When a plastic bottle is discarded to the dump, it will be decomposed after:

- (a) ☐ 5 months
- (b) ☐ 5 years
- (c) ☐ 50 years
- (d) ☐ 500 years

12. Biodiversity:

- (a) ☐ refers to the number of animals in an ecosystem.
- (b) ☐ refers to the number and variety of species in an ecosystem.
- (c) ☐ is one of the goals of modern agriculture.
- (d) ☐ is increasing in many parts of the world.

13. Which of these are considered major causes of global warming, "the greenhouse effect"?

- (a) ☐ Ozone hole and automobile exhaust
- (b) ☐ Coal-burning electrical plants and the increase in the level of oceans
- (c) ☐ Solar energy and methane gas released in agriculture
- (d) ☐ Automobile exhaust and deforestation of tropical forests

14. Which of the following statements about water quality in Poland is **true**?

- (a) ☐ There is no threat of a drinking water shortage because when it rains, the rivers and reservoirs are refilled.
- (b) ☐ Groundwater cannot be polluted because it is so deep in the ground.
- (c) ☐ Domestic sewage is a major pollutant in much of Poland.
- (d) ☐ Current freshwater supplies are as plentiful as a hundred years ago.

15. The major reason that animals become endangered or extinct today is:

- (a) ☐ global warming
- (b) ☐ destruction of their natural habitats
- (c) ☐ inability to reproduce due to environmental pollution
- (d) ☐ natural selection kills the weaker individuals

EDUCATION – SCHOOL:

16. Now think about ecology and environmental topics you may or may not have studied at your school. For each of the following topics, mark one box to indicate if you've studied it:

We have studied this topic at my school.

We have NOT studied this topic, but I would like to learn about it.

We have NOT studied this topic, and I have no interest in it.

Ecology/Natural History:

(a) Plants and animals in local regions			
(b) Geology and landscape of the surrounding region			
(c) The interrelationship of humans and the environment			

Environmental Problems:

(d) Loss of diversity of plant and animal species			
(e) Degradation of natural resources			
(f) Waste and Pollution (air and water quality)			
(g) Changes in land use for people and other species			
(h) Human population issues			

Alternatives and Action Strategies:

(i) Citizens' responsibility for environmental protection			
(j) Evaluating problems and identifying possible solutions			
(k) Planning and implementing possible solutions.			

17. Put an "X" on each line to correspond to what you believe:

	a great degree	a moderate degree	Only a small degree	Not at all	(I'm not sure)
(a) I believe one person , by their own actions can improve the condition of the environment in their community.					
(b) I believe people working together can improve the condition of the environment in their community.					
(c) I believe adults in community or environmental groups can improve the condition of the environment in their community.					
(d) I believe teenagers in youth groups can improve the condition of the environment in their community.					
(e) I believe by my own actions I can improve the condition of the environment in their community.					
(f) I believe the government can improve the condition of the environment in our communities.					

18. List several things that you or someone in your family does that are considered 'proecological' – that means **friendly for the environment**. Briefly write a maximum of THREE things:

Pro-ecological behavior:	Done by whom?
1.	
2.	
3.	

19. Which of the statements below **BEST** describes your opinion? *SELECT ONE.*

- (1) ☐ I think I'm very involved in actions to help the environment.
Briefly write why YOU are involved. What motivates YOU?

.....

.....

.....

.....

.....

- (2) ☐ I'm not really involved in actions to help the environment, but I would LIKE to be more involved. *Briefly write about what would make it easier for YOU to be involved?*

.....

.....

.....

.....

.....

- (3) ☐ I'm really not interested in affairs of the natural environment.
Briefly explain why:

.....

.....

.....

.....

.....

20. Thinking about all the ways that individuals might help protect the environment, select **TWO** of reasons listed below which you think **BEST** explain why more young people in Poland are not doing more to protect the environment:

- | | |
|---|--|
| (1) ☐ It's too much bother for them. | (4) ☐ They will join in only when a lot of other people join. |
| (2) ☐ They are too busy. | (5) ☐ They just don't think about it. |
| (3) ☐ They don't think it will make much difference. | (6) ☐ Other – <i>please write</i> |

21. In your opinion, what is needed to encourage greater numbers of young people to participate in actions for the environment? **SELECT TWO**:

- | | |
|---|--|
| (1) ☐ More information about environmental issues. | (4) ☐ More television programs related to ecology |
| (2) ☐ More information about what young people can do. | (5) ☐ More support from adults. |
| (3) ☐ More clubs and organizations for young people. | (6) ☐ Other – <i>please write</i> |

ATTITUDE TOWARD THE ENVIRONMENT

22. What or who has had an influence on your attitude toward the environment? On each line below, mark an "X" in the box which best describes your opinion.

	This has had a MAJOR/ VERY GREAT influence	This has had a MINOR influence	This has had NO influence
(a) Experiences with nature, e.g., camping, hiking, gathering mushrooms, fishing			
(b) Specific examples of environmental destruction and pollution where I live.			
(c) My parents			
(d) My grandparents.			
(e) My friends and acquaintances			
(f) Things I've learned about nature and the environment in school			
(g) Things I've seen on television or read, or heard on the radio			
(h) Environmental catastrophes, e.g., Chernobyl, the flooding in southern Poland			
(i) Negative effects of environmental pollution on my health, or someone close to me.			
(j) Polish Local or national environmental organizations, e.g., PKE, LOP			
(k) International Environmental Organizations, e. g., GreenPeace; WWF			
(l) Other (<i>PLEASE LIST:</i>).....			

FAMILY AND FRIENDS

23. To what degree do you **agree or disagree** with the following statements?

Mark an 'X' on each line:	Strongly Agree	Agree	Disagree	Strongly disagree	Difficult to say
(a) My parents encourage me to do things that help the environment.					
(b) I think most of my classmates think that it is a waste of time to do things for the environment.					
(c) I think many young people are only interested in the environment because it is "in fashion."					
(d) As teenagers, we can do practically nothing to help the environment.					
(e) My teachers encourage us to do things to help the environment.					
(f) Most of the adults I know think that there is no point in doing things for the environment.					
(g) Adults where I live are willing to cooperate with teenagers on environmental actions.					

What would YOU do???

There are many ways people can be involved in helping to solve environmental problems in their communities. Below are some examples of situations you may or may not be familiar with. Read each example, and then briefly describe what **YOU** would do in this situation.

Be honest! If you think you would do nothing or have no interest in this - write that.

24. Next to your school is small pond that is owned by the city. It is polluted and dirty and you're fairly certain that not many fish or frogs can live in it. What could YOU do?

25. A rare species of bird has been discovered living in the region where you live. You know that many people would be interested in this if they knew something about it. What could YOU do?

26. A new road is being planned to go through a nearby forest. Some people say the road is necessary and must go through the forest, and other people say this is not the case. What could YOU do?:

ENVIRONMENTAL AND COMMUNITY ACTIONS

Some young people in Poland participate in a variety of environmental and social actions and activities. Below is a list of some of the kinds of actions. For each action, mark the box to indicate whether you have personally participated in this type of action In the past TWO years.

27. Litter clean-up activities such as "Clean up the World"

- (1) ☐ I have **not** participated in this activity.
- (2) ☐ I participated because it was **REQUIRED** by my school, but I **WANTED** to participate.
- (3) ☐ I participated because it was **REQUIRED** by my school, but I did **NOT WANT** to participate
- (4) ☐ I **VOLUNTEERED** to participate in this activity, that was organized by someone else and **NOT** required by my school.
- (5) ☐ I participated in this activity **AND** I helped to organize it.
- (6) ☐ I participated in this activity as the main **ORGANIZER**
- (7) ☐ I have not participated, but if I had the opportunity, I probably would participate

28. Organizing some type of activity to help a needy group in your community, e.g., activities for children from the Children's Home, or programs to help the sick or elderly...

- (1) ☐ I have **not** participated in this activity.
- (2) ☐ I participated because it was **REQUIRED** by my school, but I **WANTED** to participate.
- (3) ☐ I participated because it was **REQUIRED** by my school, but I did **NOT WANT** to participate
- (4) ☐ I **VOLUNTEERED** to participate in this activity, that was organized by someone else and **NOT** required by my school.
- (5) ☐ I participated in this activity **AND** I helped to organize it.
- (6) ☐ I participated in this activity as the main **ORGANIZER**
- (7) ☐ I have not participated, but if I had the opportunity, I probably would participate

29. Boycotting a product or business because you felt the product was harmful to the environment (e.g. cosmetics tested on animals)

- (1) ☐ I have **not** participated in this activity.
- (2) ☐ I participated because it was **REQUIRED** by my school, but I **WANTED** to participate.
- (3) ☐ I participated because it was **REQUIRED** by my school, but I did **NOT WANT** to participate
- (4) ☐ I **VOLUNTEERED** to participate in this activity, that was organized by someone else and **NOT** required by my school.
- (5) ☐ I participated in this activity **AND** I helped to organize it.
- (6) ☐ I participated in this activity as the main **ORGANIZER**
- (7) ☐ I have not participated, but if I had the opportunity, I probably would participate

30. A protest or demonstration because you wanted to change policy towards more pro-environmental practices (e.g., a demonstration to develop a nature reserve; a street happening to promote bike paths)

- (1) ☐ I have **not** participated in this activity.
- (2) ☐ I participated because it was **REQUIRED** by my school, but I **WANTED** to participate.
- (3) ☐ I participated because it was **REQUIRED** by my school, but I did **NOT WANT** to participate
- (4) ☐ I **VOLUNTEERED** to participate in this activity, that was organized by someone else and **NOT** required by my school.
- (5) ☐ I participated in this activity **AND** I helped to organize it.
- (6) ☐ I participated in this activity as the main **ORGANIZER**
- (7) ☐ I have not participated, but if I had the opportunity, I probably would participate

31. A project where you collected data to monitor environmental conditions such as air or water pollution:

- (1) ☐ I have **not** participated in this activity.
- (2) ☐ I participated because it was **REQUIRED** by my school, but I **WANTED** to participate.
- (3) ☐ I participated because it was **REQUIRED** by my school, but I did **NOT WANT** to participate
- (4) ☐ I **VOLUNTEERED** to participate in this activity, that was organized by someone else and **NOT** required by my school.
- (5) ☐ I participated in this activity **AND** I helped to organize it.
- (6) ☐ I participated in this activity as the main **ORGANIZER**
- (7) ☐ I have not participated, but if I had the opportunity, I probably would participate

32. Signing a petition in support of environmental protection or the development of environmental or social policies in your community (e.g., segregation of trash; development of a center for homeless people)

- (1) ☐ I have **not** participated in this activity.
- (2) ☐ I participated because it was **REQUIRED** by my school, but I **WANTED** to participate.
- (3) ☐ I participated because it was **REQUIRED** by my school, but I did **NOT WANT** to participate
- (4) ☐ I **VOLUNTEERED** to participate in this activity, that was organized by someone else and **NOT** required by my school.
- (5) ☐ I participated in this activity **AND** I helped to organize it.
- (6) ☐ I participated in this activity as the main **ORGANIZER**
- (7) ☐ I have not participated, but if I had the opportunity, I probably would participate

33. Written a letter to a legislator or government official to let them know your opinions about environmental protection

- (1) ☐ I have **not** participated in this activity.
- (2) ☐ I participated because it was **REQUIRED** by my school, but I **WANTED** to participate.
- (3) ☐ I participated because it was **REQUIRED** by my school, but I did **NOT WANT** to participate
- (4) ☐ I **VOLUNTEERED** to participate in this activity, that was organized by someone else and **NOT** required by my school.
- (5) ☐ I participated in this activity **AND** I helped to organize it.
- (6) ☐ I participated in this activity as the main **ORGANIZER**
- (7) ☐ I have not participated, but if I had the opportunity, I probably would participate

34. Created an activity to educate other youth, younger kids, or the public. This could be by teaching, theater, or informational materials such as brochures, posters, newsletters, fliers, etc.

- (1) ☐ I have **not** participated in this activity.
- (2) ☐ I participated because it was **REQUIRED** by my school, but I **WANTED** to participate.
- (3) ☐ I participated because it was **REQUIRED** by my school, but I did **NOT WANT** to participate
- (4) ☐ I **VOLUNTEERED** to participate in this activity, that was organized by someone else and **NOT** required by my school.
- (5) ☐ I participated in this activity **AND** I helped to organize it.
- (6) ☐ I participated in this activity as the main **ORGANIZER**
- (7) ☐ I have not participated, but if I had the opportunity I probably would participate

35. Written a research report or an article for a newspaper/newsletter about an environmental topic or issue that interested you.

- (1) ☐ I have **not** participated in this activity.
- (2) ☐ I participated because it was **REQUIRED** by my school, but I **WANTED** to participate.
- (3) ☐ I participated because it was **REQUIRED** by my school, but I did **NOT WANT** to participate
- (4) ☐ I **VOLUNTEERED** to participate in this activity, that was organized by someone else and **NOT** required by my school.
- (5) ☐ I participated in this activity **AND** I helped to organize it.
- (6) ☐ I participated in this activity as the main **ORGANIZER**
- (7) ☐ I have not participated, but if I had the opportunity, I probably would participate

36. Describe any other environmental or social actions you have done in the past two years:

NOW, SOME INFORMATION ABOUT YOU:

These next few questions help me understand a little more about you. Remember, this information is strictly confidential!

37. Which of the following organizations and clubs are available for young people where you live, and to what degree you are involved? Mark one 'X' on each line.	There are no such groups in my community	There are such groups, but I'm not involved	I'm a member of such a group	I'm a leader, officer or captain of this group	I don't know
(a) Scouting Organization					
(b) 4-H					
(c) Ecology Club at your school					
(d) Other Environmental organizations <i>Please List:.....</i>					
(e) Church Clubs					
(f) Sports Teams					
(g) Youth Social Clubs					
(h) Other Youth Groups. <i>Please List:.....</i> <i>.....</i>					

38. What kind of high school do you want to attend after middle school? Check one:

- (1) ☐ I want to go to High School (2) ☐ I want to go to a Vocational or technical school

39. What are your parents' jobs? *Please describe exactly what they do, for example shop assistant, farm worker, taxi driver, dentist, hairdresser, teacher. You can also write "don't know" or "has no paid job at the moment" or "unemployed".*

(a) Your Mother: _____

(b) Your Father: _____

40. Does your family have a car? (1) ☐ No (2) ☐ Yes

41. What level of education do your parents have? Mark the level for each:

	Elementary	High School	University	I don't know
(a) Mother	☐	☐	☐	☐
(b) Father	☐	☐	☐	☐

42. How well off do you think your family is?

- (1) ☐ I would say rather poor
- (2) ☐ Not very well off
- (3) ☐ Average
- (4) ☐ Quite well off
- (5) ☐ Very well off

Thank you!

APPENDIX D. Coding categories for Question 19, an open-ended question for self-assessing level of involvement in environmental actions. Responses were initially coded to 36 codes based upon a coding scheme developed independently by the researcher and an environmental educator. These original codes were grouped into similar conceptual categories, and 14 new codes below were established and identified as “Motivation Enhancers” or “Motivation Inhibitors.”

NEW CODE	INITIAL CODE	MAJOR THEMES IN TEXT:	BROAD CONCEPTUAL CATEGORY
MOTIVATION ENHANCERS			
6	15	I need to be part of the solution/don't want to be passive	Internal LOCUS of CONTROL
5	11 12 13 14	I've been encouraged by my teachers I've learned about ecology at school/I enjoy ecology lessons I've been encouraged by organizations such as Scouts or eco-clubs I've taken part in environmental actions such as CUTW, tree planting	OPPORTUNITIES FOR ACTION; INSTITUTIONAL & ORGANIZATIONAL SUPPORT
4	10	I've been encouraged by friends/classmates	POSITIVE PEER SUPPORT
3	9	I've been encouraged by my parents/grandparents/family	SUPPORT BY FAMILY/ADULTS
1	3 4 6 7 8	I've seen how nature is destroyed/I don't like seeing litter, pollution Don't like to see others destroying nature; people don't care and hurt nature I worry about future generations/we need to take care for future generations My life/health or health of others are affected by pollution I'm afraid/fearful/terrified of worsening conditions	NEGATIVE ENVIRONMENTAL INFLUENCES
2	1 2 5 16 18	I would like to see a cleaner environment/ want to see things improve I like/love/care about nature/animals/their beauty I get upset seeing environmental destruction on T.V., in adverts, etc. I study about the environment on my own by reading books/magazines I'm interested in the environment	AFFINITY FOR/INTEREST IN NATURE

Appendix D (con't).

NEW CODE	INITIAL CODE	MAJOR THEMES IN TEXT:	BROAD CONCEPTUAL CATEGORY
MOTIVATION INHIBITORS			
13	27 28	I need more information about the environment I don't know what to do/ we don't talk about it enough	LACK KNOWLEDGE OF ACTION STRATEGIES
12	23 33	One person can't accomplish much/it won't change anything/won't make a difference Other people will take care of environment /it's not my responsibility	External LOCUS of CONTROL
11	19 20 21 22 35	I'm too busy/I lack time Too much schoolwork/studying There are no clubs or organizations where I live Schools/others need to organize more actions/ schools should teach ecology City government doesn't support recycling/need more trash cans	LACK OPPORTUNITIES FOR ACTION; LACK INSTITUTIONAL & ORGANIZATIONAL SUPPORT
10	24 25	Most people don't care/if other people joined, I would too/need more people My friends & classmates laugh/ my peers don't support me	NEGATIVE PEER PRESSURE
9	32	They should pay us/we need to be rewarded	NO ECONOMIC FEASIBILITY
8	26 36	We need more support from adults/adults don't listen I'm too young/adults don't pay attention to kids	LACK OF ADULT SUPPORT
7	29 30 31	I don't find the activities interesting/need more fun actions I'm lazy/I'm not interested I have other interests	LACK AFFINITY FOR /INTEREST IN NATURE
14	17 34	I don't know why, but it's necessary; that's how I am Don't know	Don't know

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