

AGE AS A FACTOR IN ENVIRONMENTALISM

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ABSTRACT

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By

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This study examines the idea that age can be used as an indicator of an underlying relationship between the individual and society. More specifically, age can be an indicator of commitment to the social system. Differences in social system commitment levels are reflected by individual participation in social movements. Therefore, the difference between participation and nonparticipation in social movements should be age stratified. This age/commitment relationship was tested and supported with data pertaining to those participating in the environmental social movement <u>via</u> Earth Day, 1970. AGE AS A FACTOR IN ENVIRONMENTALISM

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Whatever shortcomings remain in this work are of my own making and cannot be attributed to those mentioned above.

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THE PROBLEM

This paper will examine the affect of age on participation in the environmental movement. The consideration of age as a factor in the determination of participation in social movements can be justified from both a common sense as well as from a more theoretical sociological perspective.

The Common Sense Perspective

There exists a rather pervasive common sense belief that participation in social movements is disproportionately characteristic of the young. This notion has been given credence by media coverage and analyses of recent social movements in American society. For example, depending on one's political bias, the fact that parents, businessmen and women, and clergy involved themselves in anti-war demonstrations added a sense of credibility and weight to claims heretofore ignored or dismissed as rumblings from draft dodgers, college radicals, and youthful ingrates. The fact that parents, professional persons, and older persons in general were participating in sit-ins and other civil

rights activities added clout to previous demands which were associated with springtime "fun and games" of college kids.

The common sense perspective descriptively emphasizes social movement participants as "still wet behind the ears." Youth involvement in social movements is literally taken for granted, as evidenced by the common sense implication that issue salience is discredited merely by youth involvement.

This paper will attempt to develop a sociological perspective to explicate the common belief concerning age and social movement participation and subsequently to examine this perspective with appropriate empirical data. It could be, for instance, that only college youth participation is disproportionate in social movements; i.e., that there is no general relationship between age and participation, or that media focus on college youth because of the visible and dramatic aspects of their participation. The relationship between age and social movement participation has not been empirically documented or specified in its particulars.

The Sociological Perspective

From a sociological perspective, there have been some general sensitizing conceptualizations which suggest that age influences social

change participation. The writings of Karl Mannheim (1972) and Rudolf Heberle (1951) are of such a nature.¹

Mannheim views the potential for social change as dependent upon specific "generational location." "Generational location" is determined by historic social/cultural and unique social system processes. These processes create unique and differentiating modes of thoughts and experiences, as Mannheim states, a "stratification of experience." Differences in "stratification of experience" subdivide a generation into smaller "generation units." Social change potential is created as "generation units" become increasingly differentiated from one another and from their surrounding generation context. Social change is depicted as a product of the inevitable and natural process of generational succession.

The natural process of generational succession implies that new participants are continually replacing old participants, "and it is therefore necessary continually to transmit the accumulated cultural heritage" (Mannheim 1972:107). According to Mannheim, the most receptive period to the transmission of cultural heritage is around the age of 17 (1972:115).

¹For a more detailed summary of Mannheim's and Heberle's concepts of generation as applicable to age participation differences in social movements, see Hornback (1974).

Heberle, as compared to Mannheim, specifically focuses on the impact of the social structure on the historical process of generation formation. Generations are defined as persons experiencing a "decisive politically relevant experience" during the "formative period" of their lives (1951:122). Generations need not form a cohesive social collectivity, because the locating of historical experience is mediated by intervening structural variables. Social location mediates or channels the impact of historical processes. For Heberle, to adequately explain differential involvement in varying social collectivities requires major emphasis on intervening structural variables such as geographical location, age, and class. Hornback aptly captures this idea in his review of Heberle in stating, "it is not the generation per se that forms the core of social movements, however, but the relations that come to exist between some individuals and the remainder of their social context" (1974:36).

While Mannheim's and Heberle's writings provide a general sensitization to the importance of the relation between age and social movement participation, Ryder (1965), Foner (1974), Hornback (1974), and Waisanen (1968) makes more explicit the argument for the inclusion of age as an important theoretical and empirical factor in social movement participation.

Ryder argues that special proneness for social change occurs at cohort career junctures. A cohort is an aggregate of individuals

who experience the same event within the same time interval (1965:845). Career junctures are significant changes of status through which cohorts must pass over time. The events which change status might vary from society to society, but generally include completion of education, marriage, entry into the labor force, class mobility, becoming a parent, etc. If time is measured in sequential and equal intervals, age becomes the natural indicator of this process. Age becomes the identifying and comparing factor in the analysis of social change. Ryder states, in terms of a cohort's critical career junctures, "age is not only a general rubic for the consequences, rewards, and penalties of experience, it is an important basis for role allocation in every society" (1965:846).¹ Age itself, then, directly affects behavior only in a restricted sense, while society's ascriptive consignments (role allocation/status changes) affect how people think, feel, and behave. Since society's ascriptive consignments constitute a foundation upon which attitudes and behaviors are formed, one can study the extent to which participation in major social change is age-specific. In concluding, Ryder emphasizes the importance of age as a variable in social change by stating,

Parsons similarly points out that age grading constitutes an important connecting link and organizing point of reference (1942: 604-616).

in particular, the potential for change is concentrated in the cohorts of young adults who are old enough to participate directly in the movements impelled by change, but not old enough to have been committed to an occupation, a residence, a family or procreation, or a way of life (1965:848).

Ryder specifically argues that age should be examined in the analysis of social change participation. Furthermore, he points out that it is not age <u>per se</u> that affects participation, but rather society's ascriptive consignments based on age. That is, as Foner succinctly states, "age in its own right is an important base of societal stratification" (1974:194). Finally, Ryder implies that societal consignments carry with them varying degrees of commitment to the social structure. The level of commitment for optimal participation in movements for change is found in young adults.

Ryder's argument concerning the relationship between age and social change participation essentially emphasizes its structural aspects. In Waisanen's (1968) model of modernization a similar emphasis is placed on the relationship between age and social change participation. Waisanen's model, however, can be viewed as a social psychological elaboration of Ryder's structural framework. Waisanen's model is built upon the four concepts of participation, time, rank, and esteem. The concepts of participation and time are analogous to Ryder's concepts of ascriptive consignment and age.

Participation refers essentially to role behavior. Role behavior is behavior which is oriented to the social system. The orientation process has a dual nature. As the individual gains in knowledge of and identification with the social system, he also develops selfidentity. In the process of role performing the individual becomes cognitively and emotionally oriented (committed) to the social system. In general, as participation increases social and self-identity with the social system increases. Additionally, social and self-identity can increase to the social system by participating in the same roles over a longer period of time.

Time has a direct affect on identity formation. Because identity formation is substantially interwoven into the social system <u>via</u> participation, the individual becomes committed to the social system which affords social and self-identity. If participation is constant, the more time spent in the social system the more identity accrues from that system, therefore, the more commitment to that system. Generally, individuals will not attempt to alter the social system from which they acquire and expect to maintain their identities. If time-in-the-system can be thought of as indicated by age, the young, <u>ceteris paribus</u>, have less knowledge and identification with the social system. Their identities are less firmly rooted in the social system. Therefore, they are less committed than their elders to the social system and are more apt to participate in movements of social change.

The relationship between age and social change participation, according to both Ryder and Waisanen, involve the concept of commitment to the existing social structure. While they do not specify how age, participation, and commitment to the existing social structure are related, Hornback (1974) elaborates this relationship indicating an interpretation suitable for empirical test. According to Hornback,

by focusing attention on the strength of the bond between the actor and the social system, this concept (mine, commitment) expresses the difference that age makes in political behavior. Age itself is only an indicator of an underlying relationship between the individual and society; i.e., it is not being under 30, per se, that may predispose one toward social movement involvement more than being over 30 does, but rather the social location and social roles implied by the status of being a given age. The single concept of commitment may be broadly applied to capture the implications of age differentials and the varieties of status differentials associated with aging (1974:50).

Keeping in mind Hornback's inference that commitment captures the affect of status differentials indicated by age on all forms of political behavior; i.e., as in social movement participation, the following elaboration of Ryder's and Waisanen's notions can be made.

Ryder posited, but did not elaborate, the idea of an "optimal" age grouping for maximum social change participation (1965:848 and above 4-5). This notion of "old enough, but not old enough" definitely implies both a starting and ending point of influence in the factors which affect participation rates. He loosely specifies this idea in his explicit comments concerning commitment to the social system. In

discussing the factors of occupation, residence, procreation, and way of life, he obviously infers that these activities increase commitment to the social system and decreases the potential for movement participation. In other words, aging viewed in terms of its associated component, commitment, reflects when social system commitment exceeds commitment for social movement participation.

While Ryder's discussion gives a fairly precise idea as to what determines decrease in potential for movement participation and when this increase in social system commitment occurs, he fails to specify what "old enough" means in terms of commitment. Similarly, no elaboration is provided for determining the rate of movement participation change once an individual is "old enough" to participate and prior to becoming "but not old enough."

The specification that social system commitment levels vary in an age-graded nature implies, for reasons to be discussed, that the nature of the environmental social movement makes it likely that an empirical test of Ryder's idea should exclude those persons less than the age of university graduates. The exclusion of students, including those in the university, does not alter Ryder's original inference concerning "optimal" age grouping. Being "old enough" to participate "directly" means (1) possession of necessary social skills, (2) freedom to participate of one's own volition rather than as a result of institutionalized or associated peer group proselytizing, as, for instance,

in a classroom, and (3) not having incurred the commitments that make one "but not old enough."

Definitions and Hypotheses

In terms of maximum social movement participation the above elaboration of Ryder's idea of "optimal" age grouping suggests, for the movement and social context under consideration here, (1) decreasing participation around the late 20's, (2) participation starting around the early 20's, and (3) no clear specification of changes in participation rates between the start and end of this participation period. This specification of Ryder's idea of "optimal" age grouping provides the basis for Figure 1.

Figure 1 is a graphic representation of the elaborations developed from Ryder's ideas of "optimal" age grouping and Waisanen's "crescive" commitment idea soon to be discussed. Point A represents the beginning of the acquisition of the necessary knowledge and experience required for movement participation (during the late teens and early 20's) and the A to B area denotes the period in which commitments to the social system are low and opportunity for social movement participation maximum. Point B is the age of predicted decreasing social movement participation (the late 20's), because commitments to the

· 3



Fig. 1.--Speculative differences in participation rates (by age) in social movements.

social system increase. The description of Figure 1 forms the basis for the following definitions.

- <u>Definition 1</u>: The <u>participation period</u> denotes the acquisition of the necessary social skills for movement participation. The participation period is composed of two subperiods.
- **Definition la:** The <u>low commitment period</u> denotes lower levels of commitment to the social system.
- <u>Definition 1b</u>: The <u>high commitment period</u> denotes higher levels of commitment to the social system.

Curves 1, 2, and 3 in Figure 1 represent different logical possibilities of Ryder's implied curvilinear argument. Curve 1, the sharp peak, indicates a rapid acceleration in participation rates followed by a rapid decrease around the late 20's. Curve 2, the curved peak, represents a gradual acceleration in participation rates followed by a moderate decrease around the late 20's. Curve 3, the plateau, indicates constant participation rates followed by a mild decrease around the late 20's. Curve 4, the linear, represents Waisanen's "creascive" commitment argument.

The elaboration of Ryder's idea of "optimal" age grouping provided the major basis for Figure 1 and the above definitions. This elaboration coupled with the above definitions provides the basis for the following hypothesis.

<u>Hypothesis 1</u>: Social movement participation will be highest in the low commitment period and monotonically decrease in the high commitment period.

Waisanen's notion, as compared to Ryder's, introduces the inference concerning the effect socialization has on the relationship between age and social movement participation. Essentially as time passes (age increases) persons become more and more identified with the social system, because of the nature of role behavior. The more identity a person has with a social system the more committed a person is to it. That is, every year of age adds an increment of socialization which makes change more and more difficult. Since a likely effect of socialization is to increase commitment to the social system, social movement participation is expected to decrease with succeeding years of age. Thus, from the initial acquisition of the necessary social skills for movement participation each succeeding year is a crescive increment of system commitment. This increment decreases the potential for movement participation. The following hypotheses are based upon the idea of a linear increase in social system commitment.

<u>Hypothesis 2</u>: Social movement participation will monotonically decrease in the participation period.

<u>Hypothesis 3</u>: The average age of social movement participants in the participation period is lower than the average age of the general population.

These hypotheses, as Ryder's, must be understood in the context of the environment social movement. The stipulation excluding students in the test of these hypotheses makes a more conservative and practical test of Waisanen's idea of "crescive" commitment. That is, the likely

contamination by students in the test of these hypotheses due to the inherent nature of the environmental movement is controlled. Furthermore, even if this problem did not exist, the exclusion of those 21 years of age and under makes a more rigorous test of the age graded affects on social movement participation inferred in these hypotheses.

Before turning to the data and methods employed to test these hypotheses, their scope of application needs specification. The rationale developed in these hypotheses explicitly implies the exclusion of social movements which are specifically issue relevant to certain age groups; e.g., the Townsend Movement of the 1930's. Also, the argument applies only to reform movements in an open, pluralist society. Furthermore, additional clarification of the present argument is gained from Hornback's analytical specifications concerning phenomena which can be addressed with the age/commitment theory. He states,

first, the degree of departure from the dominant culture that a movement program suggests would be expected to influence the extent to which the young are differentially involved in the movement. Second, when applying the age/commitment notion to any given movement, special attention must be paid to the time period in question, both in terms of the overall duration of the movement and the stage of the movement at a particular point in time (1974:63).

The second point focuses on the inevitable progression of social movements through time. The first point ramifies the progression notion

in terms of variation in degrees of departure from the dominant culture. Variations between social movements and within social movement stages in the radicalness of departure from the dominant culture would affect participation in an age graded fashion. Both points indicate that particular attention should be paid to the data used in testing age/commitment hypotheses.

DATA AND METHODOLOGY

Background

The data used to test the age/commitment hypotheses of this study were obtained from a national survey of a mailing list compiled by the organization sponsoring Earth Day, 1970 (Environmental Action of Washington, D.C.). Earth Day, 1970, was a major event representing an effort to make environmentalism a mass issue.

Environmental concern is not a new issue. In the United States concern for the environment has traditionally crystallized around two dominant viewpoints. These views found expression in the conservation movement which developed around the turn of the 20th century. According to Morrison, Hornback, and Warner (1972) these viewpoints are the "preservationalist" and "utilitarian." The preservationalist goal is to "keep unique features of the natural environment from alteration and from use except for man's aesthetic and controlled recreational enjoyment" (1972:261). The utilitarian view emphasized the environment as an economic asset, to be exploited, but used wisely and properly. While these traditional conservation perspectives influence the present day movement, the current movement differs from the conservation one

in (1) a broader conception of the features of the environment that are of concern, (2) a broader conception of man's role in the development of environmental problems, (3) a more sophisticated ecological notion of the relationship of man to his environment, and (4) the note of general crisis in man's relationship with his environment (Morrison et al. 1972:261-262).

The growth of mass public interest in environmental issues in the late 1960's has been documented in studies by Buttel (1972), Funkhouser (1973), Hornback (1974), McEvoy (1972), and Munton and Brady (1970). These studies document with various indicators, media coverage rates, membership rates of environmental formal voluntary organizations, and public opinion surveys the growth of the environmental movement. Hornback's (1974) study clearly demonstrates the growth and decline in public opinion concerning environmental problems. Public opinion concerning the environment peaked in 1970,¹ the same year of the Earth Day Teach-In.

In an effort to gain attention and mass support for environmental issues, the Washington, D.C., based organization, Environmental Action, served as the national coordinating office for local groups on 2,000 campuses, in 2,000 communities, and in 10,000 high schools

See particularly pages 124-143 and Figures 11, 12, and 13 (Hornback 1974).

throughout the country for the April, 1970, Earth Day (Environmental Action, 1970). This effort was (1) generally to sensitize the public to environmental problems, and (2) specifically to involve students in environmental issues through the Environmental Teach-In. The environmental movement in general and Earth Day in particular were by no means, however, specifically for youth in terms of the content of the concerns nor the proposals for implementing environmental change. The issues were viewed as generic to society as a whole. The effort was designed to appeal to individual participation and to forge an environmental interest lobby. The 1970 Teach-In was an attempt to come to grips with the problems of our environment at the level of the individual private citizen (Bell 1970).

Perhaps the full intent of the effort to gain public attention and support can be captured in the following two descriptions.

EARTH DAY, APRIL 22 marks a time of warning. We are fouling our streams, lakes, marshes. The sea is next. We are burying ourselves under 7 million scrapped cars, 30 million tons of waste paper, 48 billion discarded cans and 28 billion bottles and jars a year. A million tons more of garbage pile up each day. The air we breathe circles the earth 40 times a year, and America contributes 140 million tons of pollutants: 90 million from cars--we burn more gasoline than the rest of the world combined-15 million from electric-power generation, one-third of the world's total. Lead in San Diego's air gets deposited in layers on the Pacific. LA smog may cause mass deaths by 1975. Noise, straining our lives, doubles in volume every ten years. There are 5,500 Americans born each day; 100 million more by 2000. We already consume and waste more than any other people. We flatten our hills, fill

our bays, blitz our wilderness. The quality drains from our lives: I am one-twenty-millionth of a swelling megalopolis. On Earth Day, Americans young and old are coming together for a national teach-in to talk about our wrecked earth. Environmental Action, a group of fired up college kids, is coordinating the teach in. But after Earth Day, the talk and warning end, because THE FIGHT TO SAVE AMERICA STARTS NOW (Look, April 21, 1970:23).

On Earth Day, April 22, Americans concerned about what is happening to the environment will hold meetings, march, rally, listen to speeches, attend conferences, watch films, in protest against ever-present air and water pollution, garbage, litter, noise, crowding, traffic james, ugliness. Colleges and schools have planned programs for this day which may mark the turning point in the near-fatal despoiling of our once beautiful land (S.A.V.E. Our Environment, March, 1970).

The Data

During the Earth Day period, September, 1969, through September, 1970, a systematic card file was maintained by Environmental Resources, an auxiliary, nonpolitical research and resource arm of Environmental Action, of all correspondence (N = 42,000). In September, 1970, Environmental Resources received funds from the Corporation of Public Broadcasting to survey this mailing list on a broad range of topics including standard demographic characteristics (questionnaire available upon request). The study and the questionnaire were designed by Environmental Resources; however, Professor Denton Morrison and Kenneth Hornback, a doctoral candidate in the Department of Sociology, Michigan State University, helped coordinate the organization and processing of the questionnaire and obtained custody of the data. Of this mailing list over 9,000 questionnaires were returned from a single mailing (N = 9,115). The data are not a probability sample. But the data are the most complete and detailed national information available on environmental movement participation during the early to peaking phase of the movement.

Approximately 78 percent (33,000) of those on the mailing list did not return the questionnaire. The possible affects of these nonrespondents on the present analysis must be considered. It should be apparent that the entire mailing list is in some sense special as compared to the general population. These individuals did correspond with the national coordinating organization, regardless of whether it was a contribution, description of their activities concerning participation in Earth Day, or inquiry about environmental information. As compared to the entire mailing list survey, those who returned the questionnaire can be depicted as even more special. It can be reasonably assumed that these individuals constitute the core of the environmental movement. Thus, it can be argued that it is not fully relevant to be concerned about the extent to which the respondents are representative of the mailing list population. That is, the set of cases analyzed can be considered a meaningful self-selected sample of core environmental movement participants. Theoretically, a rich and detailed picture of the movement's core can be obtained from a population size of 9,115. The greater degree of detail and precision in the data analysis afforded by this large N as compared to a much smaller N is indeed an advantage. A much smaller N, particularly when developed from a more careful sample design for a follow-up mailing procedure would clearly sacrifice this advantage, while increasing the representativeness of the sample.

It could also be argued, however, that the respondents may not be self-selected on the basis of movement involvement, but rather on the basis of age, a consequence that would severely bias the results of the present study. The problematic nature of the respondents' representativeness can be partially examined by generalizing from the Michigan data to the total survey list and by making a conservative assumption about the age characteristics of the nonrespondents.

A total of 1840 persons from Michigan corresponded with Environmental Action. From this total survey list of Michigan 756 persons returned the questionnaire. Michigan correspondents (only) who did not initially return the questionnaire were sent an identical copy (marked "second") and again asked to fill it out and return. The mean age for all the Michigan, 1970, returnees for persons 22 years old or over was

35.5 years. This mean age is substantially below the U.S. population's, 1970, mean age of 45.5 years, for persons 22 years old or over. The mean age for the returnees from all states was 35.3 years, for persons 22 years old or over. The first mailing Michigan returnees composed 76 percent of the 756 returnees and had a mean age of 35.0 years. The second mailing returnees compose 24 percent of the total Michigan returnees and had a mean age of 37.4 years. By taking the first returnees from the total survey list of Michigan (1840) and dividing this result into the number of second returnees it was estimated that each successive mailing of the questionnaire would "hypothetically" produce an additional 14 percent of the unreturned questionnaires. At this rate it would take 7 mailings to obtain all the questionnaires from the total survey list of Michigan. By computing the percent of mean age increase from the first to second returnees and applying this rate (+7 percent) to a total of 7 mailings, a total survey list mean age for Michigan was estimated to be 42.3 years, for persons 22 years or over. This mean age is still below the U.S. population's mean age. Based on these results, then, all nonrespondents in this study are given the same age characteristics as the general population, are combined with the respondents in the analysis, and then are compared with the U.S. population's age distribution as a cautionary step in the analysis. It is reasoned that, if the expected differences obtained

under this quite conservative test persist, then the problem of respondent/nonrespondent, age selectivity is a <u>non sequitur</u>. Hereafter, then, this age-assumed total group of correspondents (N = 33,000) is called the "total survey sample," while questionnaire returnees (N = 9,115) are called the "movement core."

Before turning to the operationalization section, some general descriptive characteristics of the data used in the test of the hypotheses will be given:

- There are approximately 16 percent age nonresponses (1455/ 9115).¹
- Thirty-five percent of the respondents are 21 years old or younger (2584/7656).
- There are approximately 1 percent occupational nonresponses (112/9115).
- 4. Thirty-five percent of the respondents are students (3141/8993).
- 5. Forty-three percent of the respondents are in nonstudent educationally related occupations (3879/8993).

¹This 16 percent is composed of 16 percent student and 84 percent nonstudent age nonresponse. This 84 percent (1227/1459) nonstudent composition will be given the age characteristics of the general population and combined with the respondent/nonrespondent age distribution.

- There are approximately 1 percent education nonresponses (145/9115).
- 7. Fifty-two percent of the respondents have a college Bachelor's or higher degree (4604/8970).¹

¹The number of cases upon which the percentages are based is indicated in parentheses.

OPERATIONALIZATION

Dependent Variable

The dependent variable is environmental movement participation. Participation is defined to mean location on Environmental Resources' mailing list. That is, persons who corresponded with Environmental Action with regards to contributions, activities, inquiries, etc. relating to Earth Day, 1970. Furthermore, as related above, participation more precisely means return of the questionnaire. It should be clear that participation does not refer to degrees of involvement; e.g., leader, member of organization, number of meetings attended, etc., but to proportions of questionnaires returned for various age levels.

In order to further clarify the dependent variable it is important to recall Hornback's (1974) analytic specifications regarding movement stage and program.

The period prior to Earth Day, 1970, when the mailing list was compiled, was characterized by increasing awareness and involvement in the environmental movement. At this time only a minority of environmental organizations were power oriented, while the majority of

organizations and Earth Day's emphasis were participation oriented. A power oriented social movement is "a deliberate, voluntary effort to organize individuals to act in concert to achieve group influence to make or block change. Coordinated group actions are thought to be the necessary means of obtaining from some elements in the larger social context the changes desired by the participants" (Morrison 1971:676-677). The programs and strategies of a power oriented movement "attempt to achieve sufficient group influence to coerce change" (Morrison et al. 1972:264). In a participation oriented movement "group actions are in and of themselves viewed as primary sources of the benefits or gratifications desired by individual participants" (Morrison 1971:677). The programs and strategies of a participation oriented movement "focus on education and urge people voluntarily to make change" (Morrison et al. 1972:264).

In addition to the distinction between the environmental movement's programs and strategies another distinction can be made:

The environmental movement has been largely a consensus movement, with broad, general support from the population at large. But because conflict will be a concomitant of power usage, we expect it rapidly to become a movement of conflict between the environmentalists and those who stand to suffer economically by the costs of environmental reform (Morrison <u>et al</u>. 1972:265-266).

The environmental movement, during the Earth Day, 1970, period, had a broad, general population support base, change emphasis focused on individual and family consumption decisions not coercion of high

public and private decision making levels. The movement at this stage could hardly be viewed as "radical." The data therefore represent a conservative test of the theoretical argument. The argument would maintain the more radical a movement's program, the less commitment to the existing social system, therefore the greater potential for youth participation. Since this was not the case, at this time, the data represent a relatively conservative test of the argument.¹

Independent Variables

The main theoretical problem is the effect of the independent variable, age. Respondent age was directly taken from an optimal response item of the questionnaire. It is clear, however, that occupation and education differences are related to age. These variables will also be examined in conjunction with age.

Environmental interest is much more characteristic of some occupations than others, simply because of the content of environmental change ideas. Thus, there are "occupations that might be considered 'losers' because of economic threats prompted by environmental reforms or 'gainers' because of heightened private and government interest in

¹See particularly pages 60-64 (Hornback 1974).

environmental issues" (Hornback 1974:91). Additionally, since the emphasis of Earth Day, 1970, was centered on though by no means limited to educational institutions, and was successful as clearly indicated by the data (43 percent of the respondents were in nonstudent educationally related occupations) a logical deduction would be that occupation is an important variable in determining environmental movement participation. It may be the case, for example, that, although the young participate more than the old, this is because teachers participate more than nonteachers and teachers tend to be younger than nonteachers. Therefore the examination by age of teacher-environmentalist versus teacher-nonenvironmentalist must be made. This controls for occupation. If the expected age differences are consistently found for a variety of occupations, greater confidence that movement participants tend to be young regardless of occupation will be gained.

Similarly, environmental interest is much more characteristic of the more educated, simply because of the content of environmental change ideas. It may be the fact that the findings about age merely reflect the fact that the educated tend to be younger. Therefore it must be demonstrated that at each level of education environmental participants are younger than nonparticipants. This controls for education. Education refers to the number of grades the respondent has completed.

The test of the hypotheses which explicitly state the expected relationship between age and environmental movement participation, and the test of the control variables, occupation and education will be comparative. Comparisons will be made between the survey data and data compiled in the 1970 census of the United States.

Because previous argument has restricted the applicability of the age variable to those 22 years old and above (N = 5,072), the census data will be similarly restricted. It should be recalled that this was done to deal as conservatively as possible with the problems of the nature and stage of the environmental movement and the data used to test the hypotheses. Since Earth Day, 1970, was largely though not completely a solicitation of the educational institution <u>via</u> the Teach-In, this restriction is particularly crucial. Because students represent 35 percent of the respondents, empirical support for the hypotheses would not be very credible were this exclusion not made. This restriction, thus, provides for a more conservative test and increases the credibility in the results.

Analysis

This study is a firsthand analysis of age strata differences based upon survey data.¹ Comparisons are between survey and 1970 Census data. Since the survey data do not represent a probability sample, inferential statistics will not be used.

¹"Age strata differences refer to the differential impact of an event across age states at a single point in time" (Hornback 1974: 247). For further specification see Appendix F in Hornback (1974).

FINDINGS

Discussion

In the elaboration and development of the age/commitment hypotheses the conservative aspects of the test schema were pointed out on several occasions. This section begins by briefly summarizing these points so that the findings of this study can be evaluated.

The first limitation was to exclude individuals 21 years of age or less from the test. Even though Earth Day, 1970, was not limited nor entirely oriented toward youth support and participation, its dominant focus was directed toward students. Because of the possible effect of over-representation of youth, the exclusion of all students was felt to be justified.

The second limitation dealt with the scope and applicability of the data. The environmental movement during the Earth Day, 1970, period, was participation oriented and consisted of a consensus support base. Its programs and strategies were not radical as compared to the surrounding dominant culture. Therefore, the nature of the environmental movement's programs and strategies did not mitigate the likelihood of nonyouth participation. The third limitation developed from one of the points made concerning the possible effects of the mailing list nonrespondents. As one aspect of the data analysis nonrespondents were given the age characteristics of the general population. Furthermore, nonstudent respondents who did not fill in the optional age item of the questionnaire (a 16 percent total consisting of 16 percent students and 84 percent nonstudents) were also given the age characteristics of the general population. Combining these two weighted groups with the survey respondents (movement core) to make an additional age distribution was viewed as a conservative control for the problem of nonrespondent selectivity on age. In the analysis this group will be called the "total survey sample."

Test of the Age/Commitment Hypotheses

The age distributions in Figure 2 were obtained by dividing the age category frequency by the appropriate population N. The movement core; i.e., questionnaire respondents, distribution is based on 5,072 cases, the total survey sample distribution on 25,693, and the 1970 Census distribution on 119,422,758. Figure 2 is based on the percentages in the Appendix.





The questionnaire respondents' distribution clearly indicates the following facts. First, youth participation is proportionally greater than participation by the elderly. Secondly, there is a sharp decline in participation rates after 28 years of age. This sharp decline in participation rates essentially occurs between the ages of 29-39. After this age period, the attrition in participation rates is more moderate. Finally, the core distribution indicates a tendency for peak participation between the ages of 23-28.

The total survey sample age distribution also clearly demonstrates, though not as dramatically, the above points.

The movement core and to a more limited extent the total survey age distributions in Figure 2 generally supports Ryder's idea of "optimal" age grouping as specified in hypothesis 1. Hypothesis 1 stated, social movement participation will be highest in the low commitment period and monotonically decrease in the high commitment period. It is apparent that commitment levels to the existing social system changed most dramatically between the age periods of 23-28 years (low social system commitment) and 29-39 years (sharp increase in commitment to the social system). Furthermore, there is a continual attrition in participation rates as age increases beyond this sharp decline period. This is as predicted by hypothesis 1 and depicted previously in Figure 1.

The movement core and total survey age distributions in . Figure 2 also generally support Waisanen's somewhat less specific

idea of "crescive" commitment increments stemming from socialization. Hypothesis 2 stated, social movement participation will monotonically decrease in the participation period. There is a net change (decline) in participation rates in the movement core from the peak point in the low commitment period to the lowest point in the high commitment period of 5.8 (age 76:0.0 from age 23:5.8). Similarly, there is a net decline in participation rates in the total survey of 3.1 (age 79:0.4 from age 23:3.5). The distributions show that participation rates generally decline with increasing age. This clearly supports the prediction of hypothesis 2.

The less specific hypothesis dealing with mean age developed from Waisanen's idea of "crescive" commitment is also supported by the age distributions. Hypothesis 3 stated, the average age of social movement participants in the participation period is lower than the average age of the general population. This is also found to be the case. The mean age for the movement core is 35.3 years, for the total survey 43.5 years, and for the general population 45.5 years.

Taken alone, hypothesis 3 is a very general and imprecise elaboration of the "crescive" commitment idea. Mean age does not give a complete or detailed picture of the age distributions. However, when combined with hypothesis 2 which specifies the entire distribution, a more rigorous and rich analysis is achieved.

The evidence in Figure 2 clearly supports hypotheses 1, 2, and 3. The corè movement and total survey distributions must, of course, be viewed in terms of their relationship to the general population distribution. It is abundantly clear that these distributions can not be accounted for by the general population distribution. The percentage differences between survey data and the 1970 Census data are too large and consistent to be explained away by error or chance. In fact, the substantial and consistent difference between the survey data, even when tested under relatively conservative conditions, and 1970 Census data adds credibility to the interpretation that the evidence is supportive of the hypotheses.

Control Variables

Table 1 shows the mean age of comparable occupations between the movement core and experienced labor force in the general population. These comparisons show that the movement core has 25/32 cases in which the mean age was lower than the general populations. It should be noted that the cases in which the movement core does not have a lower mean age are concentrated (6/7 cases) at the younger end of the population occupation array. That is, because 6/7 of these cases are already young, even in the general population itself, the possibility

	Mean Age Movement Core	Direction*	Mean Age 1970 Census ¹
Federal government admin/manag, except farm	34.1 (n=11)	+	47.6
Local government admin/manag, except farm	34.3 (24)	+	47.3
High school and elementary school administrators	42.5 (152)	+	45.3
State government admin/manag, except farm	43.4 (10)	+	45.2
Private M.D., D.D.S., and related practitioners	33.3 (23)	+	44.9
Religious workers	37.2 (44)	+	44.9
Business admin/managers	38.9 (81)	+	44.7
University administrators	41.4 (73)	+	43.4
Law professors	38.7 (34)	+	42.3
Architects	43.4 (19)	-	42.1

TABLE 1.—Mean age of comparable occupations for the movement core and 1970 Census.

¹Source: 1970 Census of the Population. Subject Reports: Occupational Characteristics. Table 3. Age of the Experienced Labor Force by Detailed Occupation and Sex: 1970. (PP 28-55). PC(2)-7A.

1970 Census of the Population. Subject Reports: Government Workers. Table 3. Age of Employed Government Workers by Occupation and Sex: 1970. (PP. 13-32). PC(2)-7D.

*+ indicates predicted direction.
- indicates opposite direction.

Table 1.—Continued.

	Mean Age Movement Core	Direction	Mean Age 1970 Census
Craftsmen	38 .9 (22)	+	41.1
Librarians	40.0 (106)	+	41.0
Sales workers	35.5 (35)	+	40.5
Engineers	36.4 (23)	+	40.3
Health specialties professors	35.0 (85)	+	40.1
Engineering professors	38 .9 (56)	+	39.7
Authors, editors, and reporters	35.2 (68)	+	39.6
Service workers, except private household	30.1 (31)	+	39.4
Government librarians and attendants	37.9 (57)	+	39.3
English professors	36.4 (36)	+	38.7
Local government prof/tech, except admin/managers	37.0 (90)	+	38.6
Sociology, Psychology, Economics, Social Science N.E.C. professors	37.7 (48)	+	38.6
High school and elementary teachers, except administrators	32.8 (1657)	+	38.1
University professors, except administrators	38.8 (1101)	-	38.0
State government prof/tech, except admin/managers	40.0 (38)	-	37.6

	Mean Age Movement Core	Direction	Mean Age 1970 Census
Government police and detectives	23.5 (32)	+	36.9
Clerical workers	28.2 (103)	+	36.8
Chemistry professors	37.5 (46)	-	36.8
Biology professors	39.6 (195)	-	36.6
University professors, subject not specified	39.9 (259)	-	36.4
Federal government prof/tech, except admin/managers	31.0 (96)	+	36.4
Atmospheric, space, marine, and earth science professors	37.6 (76)	-	36.4

of sampling younger persons from these occupations greatly diminishes. Since the general result of this analysis is quite clear and consistent, no further attempt will be made to provide <u>post hoc</u> explanations of the "exceptions."

The evidence presented in Table 1 supports the contention that participation in the environmental movement is not occupation specific, but that there is a rather general tendency for age stratification in participation. Table 2 shows the mean age of educational levels between the movement core and the general population. These comparisons show that the movement core has 5/6 education levels in which the mean age is lower than the general population. This evidence, as with the evidence concerning occupation, supports the belief that differences in participation rates in the environmental movement are due to the effects of age stratification differentials.

TABLE 2.--Mean age of education levels between the movement core and 1970 Census.

Educational Level	Mean Age Movement Core	Direction*	Mean Age 1970 Census ¹
8 years and less	50.0 (n=1)	+	56.5
1-3 years of high school	46.9 (21)	-	46.4
4 years of high school	39.4 (116)	+	42.0
1-3 years of college	36.2 (375)	+	41.7
4 years of college	33.0 (874)	+	40.6
5-6 or more years of college	37.3 (3182)	+	42.1

¹Source: 1970 Census of the Population. Subject Reports. Educational attainment PL(2)-5B. Table 2. Urban and Rural Residence of Persons 14 Years Old and Over, by Years of School Completed, Age, Race, and Sex: 1970. (PP. 30-71).

*+ indicates predicted direction.

- indicates opposite of predicted direction.

CONCLUSION

This study has focused on the common sense perspective concerning the relationship of age on social movement participation. This notion was explicated by framing it in a sociological perspective and by evaluating this theoretical perspective with the use of empirical evidence.

A conservative test design was developed to limit the problem of sample representativeness and bias. It was felt that if the evidence was found to support the hypotheses, in spite of this conservative schema, additional confidence in the findings and analysis of the findings would justifiably result.

The data were clearly and consistently in support of the three age/commitment hypotheses. The predicted effects of differential age stratification on social movement participation were substantiated with the comparison of survey to 1970 Census data. The evidence also clearly indicated that the possible effects of occupation and education on social movement participation do not mediate the general tendency for age stratification to make a difference. The evidence gives a detailed, precise, and clear result; age stratification must be considered in the study of social movements.

APPENDIX

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APPENDIX

	(N = 5,072)	$(N = 25, 693)^1$	(N = 119,422,758)
Age	Movement Core % in Category	Mailing List % in Category	1970 Census ² % in Cateogry
22	4.4	3.2	2.9
23	5.8	3.5	2.9
24	5.6	2.9	2.2
25	5,6	3.0	2.3
26	4.7	2.8	2.4
27	5.6	3.0	2.4
28	5.1	2.8	2.2
29	4.2	2.4	2.0
30	3.8	2.3	2.0
31	3.7	2.2	1.9
32	3.6	2.2	1.9
33	3.0	2.0	1.8
34	2.5	2.0	1.9
35	3.3	2.2	1.9

TABLE 1.--Age-by-age percentages for movement core, total survey sample, and 1970 Census.

¹The mailing list age distribution is a combined distribution based on survey respondents, Movement Core (N = 5,072), survey nonrespondents (N = 19,394), and survey age nonrespondents (N = 1,227) were given the general population age characteristics.

²Source: 1970 Census of the Population. Table 50. Single Years of Age by Race and Sex: 1970. (PP. 1-265). General Population Characteristics United States Summary PC(1)-B1.

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TABLE 1.--Continued.

Age	Movement Core % in Category	Mailing List % in Category	1970 Census % in Category
36	2.4	1.9	1.8
37	2.0	1.9	1.9
38	2.1	1.9	1.8
39	1.7	1.8	1.9
40	2.5	2.1	2.0
41	1.6	1.8	1.9
42	2.3	2.0	2.0
43	1.4	1.9	2.0
44	1,6	1.9	2.0
45	1.9	2.0	2.1
46	1.5	1.9	2.0
47	1.6	1.9	2.0
48	1.2	1.8	2.0
49	1.4	1.9	2.0
50	2.1	2.0	2.0
51	1.1	1.7	1.9
52	1.1	1.6	1.8
53	0.8	1.6	1.8
54	0.9	1.6	1.8
55	0.9	1.6	1.8
56	0.7	1.5	1.7
57	0.9	1.5	1.7
58	0.5	1.4	1.6
59	0.5	1.4	1.6
60	0.8	1.4	1.6

Age	Movement Core % in Category	Mailing List % in Category	1970 Census % in Category
61	0.4	1.3	1.5
62	0.4	1.2	1.4
63	0.5	1.1	1.3
64	0.3	1.1	1.3
65	0.2	1.1	1.3
66	0.3	1.0	1.2
67	0.1	1.0	1.2
68	0.2	0.8	1.0
69	0.1	0.9	1.1
70	0.3	0.9	1.1
71	0.04	0.7	0.9
72	0.1	0.8	0.9
73	0.1	0.6	0.8
74	0.1	0.6	0.8
75	0.1	0.7	0.8
76	0.0	0.6	0.7
77	0.1	0.6	0.7
78	0.1	0.5	0.6
79	0.04	0.4	0.5
80+	0.1	2.6	3.2

TABLE 1.--Continued.

BIBLIOGRAPHY

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BIBLIOGRAPHY

- Bell, Garrett De. <u>The Environmental Handbook</u>. New York: Ballantine Books, Inc., 1970.
- Buttel, Fred. "The Relationship of Socioeconomic Characteristics of Wisconsin Residents to Pollution Concern." Unpublished MA thesis, University of Wisconsin, 1972.
- Foner, Anne. "Age Stratification and Age Conflict in Political Life." American Sociological Review, XXXIX (April, 1974), 187-197.
- Funkhouser, Ray. "The Issues of the Sixties: An Exploratory Study in the Dynamics of Public Opinion." <u>Public Opinion Quarterly</u>, XXXVII (Spring, 1973), 62-75.
- Hayes, Denis. <u>Earth Day--The Beginning</u>. New York: Bantam Books, Inc., 1970.
- Heberle, Rudolph. <u>Social Movements: An Introduction to Political</u> <u>Sociology</u>. New York: Appleton-Century-Crofts, Inc., 1951.
- Hornback, Kenneth. "Orbits of Opinion: The Role of Age in the Environmental Movement's Attentive Public, 1968-1972." Unpublished PhD dissertation, Michigan State University, 1974.
- McEvoy, James. <u>The American Public's Concern with the Environment: A</u> <u>Study of Public Opinion</u>. Davis, California: Institute of Governmental Affairs, University of California, 1971. Reprinted in Social Science, <u>Natural Resources and the Environ-</u> <u>ment</u>. Edited by William Burch, Neil Cheek, and Lee Taylor. New York: Harper and Row, 1972.
- Mannheim, Karl. "Das Problem der Generationen." Kolner Vierteljahrshefte fur Sojielogie. 7 Jahrq., Heft 2, Heft 3 (1928), 311. Reproduced in Philip G. Altbach and Robert S. Laufer. <u>The New</u> <u>Pilgrims</u>. New York: David McKay Co., Inc., 1972.

- Morrison, Denton E. "Some Notes Toward Theory on Relative Deprivation, Social Movements and Social Change." <u>American Behavioral</u> Scientist, XIV (May/June, 1971), 675-690.
- Morrison, Denton E.; Hornback, Kenneth E.; and Warner, W. Keith. "The Environmental Movement: Some Preliminary Observations and Predictions." <u>Social Behavior, Natural Resources, and the</u> <u>Environment</u>. Edited by William Burch, Neil Cheek, and Lee Taylor. New York: Harper and Row, 1972.
- Munton, Donald, and Brady, Linda. "American Public Opinion and Environmental Pollution." Unpublished technical report, Ohio State University, Behavioral Sciences Laboratory, Department of Political Science, 1970.
- Parsons, Talcott. "Age and Sex in the Social Structure of the United States." <u>American Sociological Review</u>, VII (October, 1942), 604-616.
- Ryder, Norman B. "The Cohort as a Concept in the Study of Social Change." <u>American Sociological Review</u>, XXX (December, 1964), 843-861.
- Shepherd, Jack. "Earth Day, April 22: The Fight to Save America Starts Now." Look, Vol. 34 (April, 1970), 23.
- Siess, Al, and Adams, Ruth. <u>S.A.V.E. Our Environment</u>. Coopersburg, Pa.: Saucon Association for a Viable Environment, 1970.
- Waisanen, Fred B. "Actors, Social Systems, and the Modernization Process." Carnegie Seminar, April, 1968. Department of Government, Indiana University, 1968.

