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A Proposed Measuring Instrument and Preliminary Results[1]

THE "NEW ENVIRONMENTAL PARADIGM"

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Numerous writers have argued that our nation's ecological problems stem in large part from the traditional values, attitudes and beliefs prevalent within our society (e.g., Disch, 1970). For example, it is often suggested that our belief in abundance and progress, our devotion to growth and prosperity, our faith in science and technology, and our commitment to a laissez-faire economy, limited governmental planning and private property rights all contribute to environmental degradation and/or hinder efforts to improve the quality of the environment (see, e.g., Caldwell, 1970; Campbell and Wade, 1972; Dunlap, 1976; Whisenhunt, 1974). Pirages and Ehrlich (1974:43-44) have argued that such a constellation of values, attitudes and beliefs comprises our society's "Dominant Social Paradigm" (or DSP). A DSP constitutes a world view "through which individuals or, collectively, a society interpret the meaning of the external world . . . [and] . . . a mental image of social reality that guides expectations in a society." Not surprisingly, they further argue that our society's fundamentally anti-ecological DSP must be replaced by a more realistic world view if ecological catastrophe is to be avoided.

Despite the predominance of an anti-ecological DSP within our society, new ideas have emerged in recent years which represent a direct challenge to this DSP. For example, we increasingly hear of the inevitability of "limits to growth," the necessity of achieving a "steady-state" economy, the importance of preserving the "balance of nature," and the need to reject the anthropocentric notion that nature exists solely for human use (see, e.g., Barbour, 1973; Commoner, 1971; Daly, 1973; Meadows, et al., 1972). Taken together, such ideas comprise a world view—perhaps best captured by the "spaceship earth" metaphor—which differs dramatically from that provided by our DSP. In recognition of this fundamental contrast, we term this new world view the "New Environmental Paradigm" or NEP.

The NEP appears to have gained considerable popularity in academic and intellectual circles (see, e.g., Harman, 1977; Henderson, 1976), as well as among many college students (Yankelovich, 1972); however, very little is known concerning the degree to

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which the general public has come to accept the ideas embodied in it. Thus, although there have been dozens of studies of environmental attitudes, they have generally focused on pollution, population or natural resources (especially energy), rather than the newer and broader issues of limits to growth, steady-state economy, etc. (see Dunlap, 1975; Weigel, et al., 1977). Consequently, the purpose of this paper is to report a preliminary effort to determine the extent to which the public accepts the content of the NEP and, in doing so, to develop an instrument to measure the New Environmental Paradigm.

Methods

During the spring and summer of 1976 survey data were gathered from two samples of Washington state residents. First, a systematic probability sample of 1441 Washington households was drawn from the telephone directories for every community in the state.[2] Questionnaires with cover letters addressed to the name listed in the telephone directory were mailed to each of the households. However, in an effort to obtain a higher proportion of female respondents than typically obtained in heads-of-household surveys (see Dillman, et al., 1974:753), one-half of the cover letters (every other one) requested that the questionnaire be completed by an adult female if one was present in the household, while the other half requested that the questionnaire be completed by an adult male if one was present (if an adult of the appropriate sex was not present, the addressee was requested to complete the questionnaire).[3] Using the mail survey techniques developed by Dillman (1978), we achieved a relatively good response rate: of the original 1441 sample members, 208 had to be deleted for reasons of being deceased, physically incapable of completing the questionnaire, having moved and left no forwarding address or having moved out of the state. Of the remaining 1233 potential respondents, 806 returned completed usable questionnaires for a response rate of 65.4 percent. These 806 respondents should be reasonably representative of the total Washington adult population, and will be referred to as the General Public Sample (GPS).[4]

We also surveyed the membership of a state-wide environmental organization in Washington during the same time period. We were given permission to draw a sample from the organization's mailing list, and we selected a systematic sample of one-half of the members by taking every other name on the list. Of the 558 individuals selected, only 16 had to be deleted for reasons of being deceased, physically incapable of completing the questionnaire, or having moved and left no forwarding address. Of the remaining 542 potential respondents, 407 returned completed questionnaires for a response rate of 75.1 percent. In view of the large sample size and high response rate, the respondents (hereafter referred to as the Environmental Organization Sample or EOS) should be representative of the total organizational membership. The availability of this sample is quite important, as we would logically expect individuals who have joined an environmental organization to be more likely to endorse the NEP than members of the general public.[5] Thus, a comparison of EOS and GPS responses will provide information on the validity of the proposed NEP measuring instrument.

The questionnaire used in the survey included a wide range of items. It began by asking about respondents' perceived quality of life, perception of problems facing the state and local community, support for funding state programs, etc. The second half of the questionnaire focused specifically on environmental issues, and the 12 items designed to measure the NEP were included among a list of 35 Likert-type items concerning a range of environmental issues—pollution, population and natural resources. The set of items

was introduced by the following statement: "Now we would like to get your opinion on a wide range of environmental issues. For each of the following statements please indicate the extent to which you agree or disagree." Each item was accompanied by four response categories: "Strongly Agree," "Mildly Agree," "Mildly Disagree" and "Strongly Disagree."

The NEP items were carefully constructed by the researchers. First, in an effort to achieve content validity (Nunnally, 1967:79-83), we attempted to include items reflecting all of the crucial aspects of the NEP: limits to growth, balance of nature, anti-anthropocentrism, etc. In obtaining a representative set of items we were guided by our reading of the NEP literature cited above, and also consulted several environmental scientists and ecologists at our university. The advice of the latter individuals was helpful both in selecting a representative set of items and in wording the various items in an appropriate fashion.

Results

The 12 items designed to measure the New Environmental Paradigm are shown in Table 1. They are listed in the order in which they appeared in the questionnaire (although they were interspersed among 23 other Likert items). Eight of the items are worded such that agreement reflects acceptance of the NEP, while for the other four (3, 4, 6 and 10) disagreement reflects acceptance of the NEP. Respondents were assigned scores of 4 for "Strongly Agree," 3 for "Mildly Agree," 2 for "Mildly Disagree' and 1 for "Strongly Disagree" for the eight pro-NEP items, while the scoring for the four anti-NEP items (3, 4, 6 and 10) was reversed (and missing values on all items were assigned the sample mean for the item). The table gives the frequency distribution, mean (which has a possible range of 1.0 to 4.0), and standard deviation for each item for both the GPS and EOS, as well as a test of significance for the difference between samples for the means for each item (and the corrected item-total correlation for each item, which will be discussed in a subsequent section).

Two aspects of the results stand out. First, an examination of the frequency distributions for the items reveals a remarkable degree of acceptance of the NEP—not only among the environmentalists, which was expected, but among the general public as well. In every instance a majority of the GPS gave a pro-NEP response, ranging from a low of 53.6 percent who expressed some degree of disagreement ("strongly" or "mildly") with item 4 ("Mankind was created to rule over the rest of nature") to an incredible 95.6 percent ("strongly" and "mildly" agree) for item 8 ("Humans must live in harmony with nature in order to survive"). In fact, a majority "Strongly Agreed" with the latter item. Other items which received strong endorsement are item 2 ("The balance of nature is very delicate and easily upset") and item 9 ("The earth is like a spaceship with only limited room and resources"), as over 40 percent "Strongly Agreed" with both, and item 10 ("Humans need not adapt to the natural environment because they can remake it to suit their needs"), as over 40 percent "Strongly Disagreed" with it. This pattern of pro-NEP responses is reflected in the item means. Given our 1 through 4 coding scheme, the median coding point is 2.5; however, the means range from a low of 2.63 for item 4 to a high of 3.52 for item 8, reflecting the skewness toward accepting the NEP. In sum, the overall pattern of responses to the NEP items by the general public reflects a surprising degree of acceptance of the New Environmental Paradigm on their part.

Second, despite the pro-NEP response pattern of the GPS, it is also apparent from Table 1 that the environmentalists endorse the NEP much more strongly than does the

TABLE 1: Responses to New Environmental Paradigm (NEP) Scale Items by the General Public Sample (GPS) and the Environmental Organization Sample (EOS), with Means, Standard Deviations, Statistical Significance of GPS-EOS Differences and Corrected Item-Total Correlations for each Item.[a]

	Items		SA[b]	MA	MD	SD	Mean[c]	S.D.	P	r_{i-t}
1.	We are approaching the limit of the number of people the earth can support.	GPS	34.6%	38.4%	19.5%	7.5%	3.00	.906	.001	.483
		EOS	71.8%	21.3%	5.0%	2.0%	3.63	.670		.358
2.	The balance of nature is very delicate and easily upset.	GPS	40.7%	39.4%	16.7%	3.2%	3.18	.811	.001	.490
		EOS	75.4%	18.0%	5.7%	1.0%	3.68	.625		.361
3.	Humans have the right to modify the natural environment to suit their needs.	GPS	6.9%	31.2%	41.0%	20.9%	2.76	.840	.001	.451
		EOS	1.5%	18.7%	28.4%	51.4%	3.30	.805		.382
4.	Mankind was created to rule over the rest of nature.	GPS	18.5%	28.0%	25.7%	27.9%	2.63	1.057	.001	.402
		EOS	2.3%	5.4%	15.6%	76.8%	3.67	.671		.348
5.	When humans interfere with nature it often produces disastrous consequences.	GPS	29.8%	46.4%	20.6%	3.2%	3.03	.781	.001	.394
		EOS	57.7%	34.5%	6.8%	1.0%	3.49	.661		.477
6.	Plants and animals exist primarily to be used by humans.	GPS	11.0%	27.6%	31.2%	30.2%	2.81	.970	.001	.400
		EOS	1.8%	6.1%	21.1%	71.0%	3.61	.672		.350
7.	To maintain a healthy economy we will have to develop a "steady-state" economy where industrial growth is controlled.	GPS	20.6%	49.3%	24.2%	5.9%	2.85	.790	.001	.415
		EOS	58.4%	33.2%	6.5%	1.8%	3.48	.690		.456
8.	Humans must live in harmony with nature in order to survive.	GPS	56.6%	39.0%	4.2%	0.3%	3.52	.583	.001	.455
		EOS	87.2%	11.8%	0.5%	0.5%	3.86	.400		.357
9.	The earth is like a spaceship with only limited room and resources.	GPS	42.2%	40.9%	12.2%	4.7%	3.21	.818	.001	.533
		EOS	86.4%	12.6%	0.5%	0.5%	3.85	.406		.328
10.	Humans need not adapt to the natural environment because they can remake it to suit their needs.	GPS	3.0%	12.4%	41.4%	43.3%	3.25	.766	.001	.394
		EOS	1.0%	3.3%	16.4%	79.3%	3.74	.558		.338
11.	There are limits to growth beyond which our industrialized society cannot expand.	GPS	24.1%	51.2%	19.8%	4.9%	2.94	.767	.001	.503
		EOS	71.9%	21.2%	5.9%	1.0%	3.64	.628		.425
12.	Mankind is severely abusing the environment.	GPS	35.5%	43.5%	17.9%	3.1%	3.11	.789	.001	.587
		EOS	83.0%	15.0%	1.7%	0.2%	3.81	.450		.479

[a] N = 806 for GPS and N = 407 for EOS.

[b] SA = Strongly Agree, MA = Mildly Agree, MD = Mildly Disagree and SD = Strongly Disagree.

[c] Means were computed after reverse scoring items 3, 4, 6 and 10.

general public (as one would expect). Thus, on every item a majority of the EOS "strongly" endorsed the NEP, either by "Strongly Agreeing" with pro-NEP items or "Strongly Disagreeing" with anti-NEP items. Further, except for item 3, the pro-NEP position was endorsed by over 90 percent of the EOS. Particularly striking is the fact that 99 percent of the EOS agreed that "Humans must live in harmony with nature in order to survive" and "The earth is like a spaceship with only limited room and resources." These extremely skewed (toward the NEP) responses of the EOS are reflected in their item means, which range from 3.30 for item 3 to 3.86 (out of a possible 4.0) for item 8, and are significantly higher ($P < .001$) than the GPS means for all 12 items.[6] Such results clearly suggest that the EOS strongly endorses the NEP.

In short, we can summarize the data on response distributions to the NEP items by noting that the general public tends to accept the content of the emerging environmental paradigm much more than we had expected, and that the environmentalists strongly endorse it. The former suggests that the proponents of the NEP may have been more successful in getting their message across to the public than has generally been imagined, and the latter indicates the extent to which the outlook of environmentalists has broadened considerably beyond their traditional "preservationist" ideology and more recent

narrow focus on pollution and population problems (Albrecht, 1976; Dunlap, 1976). Clearly concepts such as "limits to growth," "balance of nature," "steady-state economy" and "spaceship earth" are beginning to permeate the consciousness of the American public, and are apparently well established among environmentalists.

Constructing the "NEP Scale"

While the foregoing results suggest that a majority of both samples endorses aspects of the NEP, they fail to address a critical issue—the degree of consistency among responses to the individual NEP items. This issue is crucial, because if we are witnessing the emergence of a true "paradigm" or "world view," then we should find a fair amount of consistency among respondents (in both samples) in their responses to the various aspects of the NEP reflected in the 12 items. Thus, we need to determine if individuals who indicated a pro-NEP position on one item tended to take similar positions on the other items. This question of response consistency leads directly to a central issue in attitude measurement—the extent to which several individual attitude items can be treated as an internally consistent and unidimensional attitude scale.

On the assumption that all 12 items in Table 1 reflect aspects of the emerging environmental paradigm, we decided to examine the appropriateness of combining them into a single "NEP Scale." We formed a summated rating scale, by summing respondents' scores on all 12 items (Nunnally, 1967:522-534). Using the scoring procedures outlined earlier, the resultant scores can range from a low of 12 (reflecting complete rejection of the NEP) to a high of 48 (reflecting complete acceptance of the NEP). We then used several procedures to assess empirically the legitimacy of treating the items as a single scale.

We began with the "item analysis" approach suggested by Nunnally (1967:241-244; 532-533), primarily focusing on the corrected item-total correlations for each item (261-269). These correlations are shown in the last column of Table 1, and it can be seen that they are all positive and of substantial magnitude. The corrected item-total correlations for the GPS range from .394 to .587 and average .459, while for the EOS they range from .328 to .479 and average .388 (the lower figures for the EOS stem from the "restriction of range" problem introduced by the extremely skewed scores and the small standard deviations in their responses to the 12 items—see Nunnally, 1967:126-128). Both sets of correlations suggest that the 12-item NEP Scale has a considerable amount of internal consistency, and that it is not necessary to delete any of the individual items.

The internal consistency of the scale is confirmed by two additional measures: Cronbach's *alpha*, which is equivalent to the mean of all possible split-half reliabilities (Nunnally, 1967:194-198; 210-211), is .813 for the GPS and .758 for the EOS; while *omega*, which is obtained from factor analysis and measures the proportion of common factor variance in a composite score (Heise and Bohrnstedt, 1970:114-118), is .849 for the GPS and .802 for the EOS. Both sets of figures are acceptable, and the lower coefficients for the EOS can again be attributed to the lower item standard deviations within that sample.

Finally, the unidimensionality of the scale is suggested by the results of a principal factor analysis, as the first unrotated principal factor accounts for 69.2 percent of the variance in the GPS and 63.3 percent in the EOS. Further, all 12 items load highly on this factor; for the GPS the loadings range from .431 to .672 and average .526, while for the EOS they range from .378 to .575 and average .466. These results suggest that it is appropriate to treat all 12 items as forming an internally consistent and unidimensional NEP Scale. They further suggest that the members of both samples respond to the NEP items in a relatively consistent fashion.

Validating the "NEP Scale"

Since it appears legitimate to treat the NEP items as a single scale, the next step is to determine if the scale is a valid measure of the "New Environmental Paradigm." We will assess its validity in terms of the three types of validity outlined by Nunnally (1967: Chap. 3): predictive, content and construct validity.

In terms of predictive validity (sometimes termed criterion or concurrent validity—Nunnally, 1967:76-77), we have several pieces of information with which to evaluate the NEP Scale. First, we would expect a scale designed to measure acceptance of the NEP to significantly differentiate between the general public and a group of known environmentalists, as the latter would be expected to be relatively strong proponents of the NEP by virtue of their membership in an organization whose activities and goals are in general accordance with the NEP. This turns out to be the case, as we have already seen in Table 1 that the EOS scores significantly higher than the GPS on each of the 12 items. Not surprisingly, therefore, the EOS also differs significantly from the GPS in terms of total scale scores, as the mean score on the NEP Scale for the EOS is 43.8 compared to a mean of 36.3 for the GPS ($P < .001$).

Focusing specifically on the general public sample, we also examined the relationship between scores on the NEP and other measures of environmentalism. First, the questionnaire included a list of state programs—including "pollution control" and "conservation of natural resources"—and respondents were asked to indicate whether they felt

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the state should spend "less," the "same" or "more" money on each program. Since the responses to the two environmental programs were strongly correlated ($r = .41$), responses were combined to form a measure of support for funding environmental programs. Second, respondents were presented a list of 13 "federal and state programs and regulations designed to improve and protect environmental quality," and were asked to indicate the extent to which they favored or opposed each program. Twelve of the items were found to form an acceptable scale (*alpha* = .79) and responses to them were summed to form a measure of support for environmental regulations.[7] Finally, the respondents were given a list of "some activities that have been suggested as ways people can help solve environmental problems," and were asked to indicate the extent to which they engaged in each of the activities. Eight of the reported behaviors were found to constitute an acceptable scale (*alpha* = .64), and responses to them were summed to form a measure of personal environmental behavior.[8] These three measures allow additional tests of the predictive validity of the NEP Scale, as we would expect members of the general public who endorse the NEP to support more funding for state environmental programs, to favor state and federal environmental regulations, and to engage in personal behaviors designed to improve environmental quality. The results suggest that the NEP Scale does have an acceptable degree of predictive validity, as the validity coefficients (product-moment cor-

relations) are .47 ($P < .001$) for funding environmental programs, .58 ($P < .001$) for support for environmental regulations and .24 ($P < .01$) for personal environmental behaviors.[9]

The content validity (which encompasses what is often termed "face validity") of a scale is more difficult to assess, for as Nunnally (1967:79-83; 99) notes, it depends primarily upon intersubjective agreement that the scale items adequately represent the "content" of the concept being measured—in the present case, the "New Environmental Paradigm." As noted previously, we attempted to include a representative set of items tapping all important aspects of the NEP. Our selection was made on the basis of a careful consideration of NEP-oriented literature, and was aided by the suggestions of knowledgeable individuals. In the final analysis, however, readers will have to make their own determination concerning the content validity of the NEP Scale.

We can provide more direct evidence concerning the final type of validity—construct validity (Nunnally, 1967:83-94). Prior studies have found that three of the most consistent predictors of environmentalism are age, education and political ideology (Buttel and Flinn, 1976; Buttel, 1977), and there are theoretical reasons for expecting each of these

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variables to be related to acceptance of the NEP. First, we would expect that on the average younger individuals would be less resistant to the NEP, since they are presumed to be more flexible in their world views, and have been exposed to the competing DSP for a shorter period of time, than their elders. Second, we would expect better educated individuals to be more favorable toward the NEP, both because they are more likely to have been exposed to "ecological" ideas (via higher education, mass media, personal reading, etc.) and because the more education one has the better one can comprehend the rather complex concepts involved in the NEP. Finally, individuals with a "liberal" ideological orientation should be more favorable toward the NEP because they are presumed to be less committed to the status quo in general, and numerous aspects of the DSP listed at the beginning of this paper in particular, than their conservative counterparts. Each of these variables was correlated with the NEP Scale among the GPS, and the resultant validity coefficients suggest that the scale has construct validity.[10] The coefficients (product-moment correlations) are .22 ($P < .001$) for ideology, .11 ($P < .001$) for education and .09 ($P < .01$) for age. Although these coefficients are modest, we should point out that product-moment correlations of .3 and under between these variables and environmental attitudes are quite common (see, e.g., Buttel and Flinn, 1976; Buttel, 1977).[11]

In summary, on the basis of the foregoing results, we believe the NEP Scale has predictive, construct and content validity. Consequently, we tentatively conclude that it

represents a valid instrument for measuring the New Environmental Paradigm. We hope future research will serve to further validate the NEP Scale, or at least point to ways to improve it.

Discussion

Although we have accomplished our two major goals, assessing the degree of public endorsement of the NEP and developing an instrument for measuring it, we must stress the importance of further study of the NEP. First, it is obviously important to determine if other populations endorse the NEP as strongly as do Washington state citizens,[12] and likewise it is important to determine if acceptance of the NEP is on the increase in our society (as we expect). Second, research on the relationship of the NEP to other attitudes and actual behavior is quite important, especially since we fear some may draw overly optimistic conclusions about the future of public commitment to environmental quality given the surprising degree of public endorsement of the NEP found in our study. Caution against doing so is suggested by a considerable body of social-psychological research on attitudes and their relationship to behavior.

We know, for example, that the link between attitudes and behavior is often rather tenuous, especially when dealing with very general attitudes such as those embodied in the NEP (Schuman and Johnson, 1976:170-181). Consequently, it would be naive to expect individuals who endorse the NEP to consistently engage in behaviors congruent with this new world view. Also, it has been demonstrated that the public may hold "inconsistent" attitudes, endorsing contradictory ideas without perceiving the conflict between them (Oskamp, 1977: Chap. 5; Rokeach, 1973: Chap. 8). Therefore, it is quite likely that many of those who endorse the NEP do not yet fully understand the personal and societal implications of "limits to growth," "living in harmony with nature," etc., and thus hold other attitudes and engage in behaviors which are not congruent with the NEP. In short, future research is needed to determine the degree to which endorsement of the NEP leads to a de-emphasis on favorable attitudes toward growth, progress, materialism and so forth, and the conditions under which acceptance of the NEP leads to behavioral changes compatible with it.

While urging caution among our readers, we nonetheless must end by stressing what we believe to be the rather remarkable nature of our results. When we consider that just a few short years ago concepts such as "limits to growth" and "spaceship earth" were virtually unheard of, the degree to which they have gained acceptance among the public is extremely surprising. This acceptance is all the more surprising when one realizes how dramatically the NEP departs from our society's traditional world view or dominant social paradigm. Indeed, in a society which has always taken abundance, growth, progress, etc. for granted (Whisenhunt, 1974), the rise of the NEP represents a revolutionary occurrence. While we are not so naive as to believe that the NEP will quickly replace our society's traditional world view, and thus become the new DSP, we cannot help but be impressed by its rapid ascendance. Since the transition to a steady-state society to cope with increasing scarcity and limited growth will be aided immeasurably by widespread acceptance of the New Environmental Paradigm, the importance of following the development (and possible decline) of the NEP seems apparent.

NOTES

1. This is a revision of a paper presented at the annual meeting of the American Sociological Association, Chicago, September, 1977. The research reported herein was supported by Project 0158, Department of Rural Sociology, Washington State University, Pullman, Wash. 99164; and this is Scientific Paper No. 4969, College of Agriculture Research Center, WSU. The authors would like to thank William R. Catton, Jr. for helpful comments on an earlier draft.

2. Since 93 percent of Washington households have telephone service, the use of this sampling frame should not introduce a substantial bias.

3. As a result, 43 percent of the questionnaires were completed by females.

4. It is difficult to determine the degree to which the sample is representative of the total adult population of Washington state because of the unavailability of current census data. However, an indication of the degree of representativeness of samples obtained via the survey procedures we followed is available in Dillman, et al., 1974, as the five surveys described there were conducted between 1970 and 1973 and are compared to 1970 census data. We can provide a general indication of the nature of our sample by noting the following characteristics: in addition to 43 percent of the respondents being female, 34 percent live in rural areas or in small towns under 2,500, 83 percent are under age 65, 43 percent have a high school education or less and 47 percent have family incomes of under $15,000 per year. More detailed information can be obtained from the authors.

5. Membership in the organization is a particularly apt indicator of "environmentalism," since the organization focuses on a wide range of contemporary environmental issues rather than focusing primarily on specific areas such as wilderness preservation, overpopulation, air pollution, etc. (as do many environmental organizations).

6. The difference of means test was computed using separate variance estimates for the two samples rather than a pooled variance estimate. This was done because the item variances among the EOS are significantly smaller than among the GPS, except for item 3. See Loether and McTavish, 1976: 501-505.

7. The 12 items are: Enforcement of 55 mph speed limit, Restricting heavy industry in the state, Banning non-returnable containers, Stiff fines for littering, Restricting production of large cars, Setting aside land as wilderness areas, Higher taxes on gasoline, Heavy penalties for industrial pollution, Regulation of land use, Establishing more recycling centers, Prohibiting billboards on highways, and Regulation of water use.

8. The behaviors are: Use low or nonphosphate detergents, Save cans and bottles for recycling, Avoid buying aerosol sprays, Save newspapers for recycling, Keep thermostats turned down, Avoid environmentally damaging products, Cut down on driving, and Conserve electricity by turning off lights.

9. Attitude-behavior correlations are generally weak (see Schuman and Johnson, 1976).

10. Ideology was measured with the following continuum: "Liberal, Slightly Liberal, Middle of the Road, Slightly Conservative, Conservative;" education with the following categories: "Never attended school, Some grade school, Completed grade school, Some high school, Completed high school, Some college, Completed college, Some graduate work, An advanced degree;" and age by these categories: "18-24, 25-34, 35-44, 45-54, 55-64, 65-74, and 75 or over."

11. It is likely that as the NEP becomes more coherent and identifiable, it will also become more predictable on the basis of social characteristics.

12. Although it is often assumed that residents of the Pacific Northwest are exceptional in their concern for environmental quality, much of the region's reputation stems from Oregon's leadership in environmental protection (see Rosenbaum, 1977:83, 197, 267-268). Further, 1970 Harris (1970a; 1970b) surveys conducted in the two states found a considerably lower level of environmental concern among Washington residents. For example, whereas 98 percent of Oregon residents volunteered some type of environmental problem as one of the "two or three most serious problems" facing the state, only 56 percent of Washington residents did likewise.

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