Gender and Environmentalism: Results from the 1993 General Social Survey*

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Objective. This research tests the proposal that women will be more concerned about the environment than men because of their socialization to the caregiver role and because of their structural position relatively outside the labor market and in the home. Previous research has produced mixed results. *Methods.* We employ data from the 1993 General Social Survey to explore the issue of gender differences in environmental concern in more depth. The 1993 survey includes over forty items measuring environmental beliefs, attitudes, and reported actions, from which we derive ten environmental orientation indexes. We look specifically at effects of social status, knowledge, trust in science, and religiosity. *Results.* We find that while women do tend to show somewhat more personal concern than do men, they are no more likely to engage in environmental action than are men. Women (and men) of higher social status, with more knowledge, and with greater trust in science are more likely to engage in proenvironmental action, not less. Further, we replicate some findings of adverse effects of homemaker status and parenthood on environmental orientations. *Conclusions.* While there appear to be a few gender differences in environmental orientations, these are not strong or consistent, and they do not extend to actions.

Is concern for the quality of our environment a gendered phenomenon? If so, why? Two decades of research have yet to provide unequivocal answers to the questions. Those who predict differences between women and men with regard to environmental concern generally argue from socialization or structural theories. Drawing on these theories, researchers have generated five potential explanations for gender differences in environmental attitudes and behavior. In this article, we examine the various explanations and in addition analyze the effects of religiosity on women's and men's environmental orientations. Our research overcomes two shortcomings of much existing work in this area—the use of localized samples and limited indicators of environmental concern.

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Gender and Environmental Concern

The general theoretical context for empirical research in this area is based on two often-implicit assumptions. The first is that Western society views the environment as a resource to be exploited and developed by science and technology for the purpose of economic progress (Dunlap and Van Liere, 1984). Second is that both the socialization process and the operation of the occupational structure have denied women access to the marketplace and to scientific and technological realms while assigning to them the role of caregiver (Ortner, 1974; Merchant, 1979; Jackson, 1993). These then encourage females to be ecologically "nurturing" and males to be ecologically "destructive" (Cowan, 1979; Merchant, 1979; Barbour, 1980).

Socialization and Structural Theories. The most commonly used argument from socialization theory posits that females are directed toward the caregiver role, thereby encouraging women to be more compassionate, nurturing, protective, and cooperative than men (Chodorow, 1974; Gilligan, 1982; Beutel and Marini, 1995). Once internalized, this "motherhood mentality" extends to protective attitudes toward nature, as females see themselves as embedded in their community and in the larger world.

Male socialization presumably stresses an economic provider role, which encourages men to be more rational, masterful, accumulative, and competitive than women. Male children are encouraged to adopt a more separatist, controlling role that extends to the objectification and control of the environment and a definition of self as separate from the world (Chodorow, 1974; Gilligan, 1982; Keller, 1985). Resulting male socialization into a "marketplace mentality" is linked to unecological attitudes that give priority to economic growth, technical mastery of the earth, and exploitation of resources, regardless of environmental destruction (Ortner, 1974; Merchant, 1979; Barbour, 1980).

Socialization-based theories are extended by structural theories, which argue that the gendered nature of occupational and economic positions reinforces the differing environmental orientations of women and men. The "marketplace mentality" acquired through socialization is enhanced by an occupational structure in which men have historically held the breadwinner role and controlled the technoscientific realm. Even contemporary women in the paid workforce continue to play nurturance roles by assuming responsibility for child care and housework (Hochschild, 1989). While women may be expected to accept the goals of economic growth, from this standpoint they would show greater concern about harmful effects of such growth on the environment.

These frameworks are clearly related to the environmental-paradigm models advanced by Dunlap and Van Liere (1984). The "human exemptionalism paradigm" (HEP) parallels masculine (not necessarily male)

connections to the environment; the "new ecological paradigm" (NEP) depicts a more feminine (not necessarily female) relationship to the natural world. (Readers interested in these connections should see Steger and Witt, 1989; Blaikie, 1992; Stern, Dietz, and Kalof, 1993; and Scott and Willits, 1994).

Similar arguments can be found in ecofeminist theory, which holds that, because of their reproductive and nurturing roles, women have closer ties to the natural world than do men. Following Steger and Witt (1989) and Stern, Dietz, and Kalof (1993), we assume that, if such ties exist, they derive from cultural and social-structural factors rather than from biological or innate traits (see Salleh, 1989; Biehl, 1991; Agarwal, 1992). This rationale guides the categorization of existing research in the following section.

Existing Research Models. While there would seem to be theoretical justification for expecting gender differences in environmental attitudes and actions, dramatic differences have eluded documentation. Reviews of empirical studies report inconsistent findings on gender and environmentalism (Van Liere and Dunlap, 1980; Hines, Hungerford, and Tomera, 1986; Jones and Dunlap, 1992). For example, in a recent trend study of responses to the General Social Survey environmental spending item between 1973 and 1990, Jones and Dunlap (1992) found the relationship between gender and environmental concern to be weak and inconsistent; however, when significant gender differences emerged during that eighteen-year period, women were found to be more environmentally concerned than men.

Building on this historical context and an extensive review of the research on gender and environmentalism, we group the existing hypotheses and findings into five specific areas based on the characteristics used to link gender and environmental concern: (1) economic growth orientations; (2) concerns about health and safety issues; (3) environmental knowledge; (4) parenthood status; and (5) trust in science and technology (see Davidson and Freudenburg, 1996, for details of specific studies).

Economic Growth Orientation. Men's greater involvement in the marketplace makes them more likely than women to favor economic growth; favorable orientations toward economic growth are associated with lower levels of environmental concern. Studies examining this hypothesis have produced mixed and inconclusive results (Passino and Lounsbury, 1976; Stout-Wiegand and Trent, 1983; McStay and Dunlap, 1983; George and Southwell, 1986; Blocker and Eckberg, 1989; Steger and Witt, 1989; Mohai, 1992; Austin and Woolever, 1994).

Concerns about Health and Safety. Women's nurturance orientation leads them to be concerned about health and safety issues; this is reflected in higher levels of environmental concern. This hypothesis has received support in virtually all existing studies, particularly those dealing with nuclear energy and wastes (Passino and Lounsbury, 1976; Nelkin, 1981;

Stout-Wiegand and Trent, 1983; Brody, 1984; Solomon, Tomaskovic-Devy, and Risman, 1989; Steger and Witt, 1989; Dunlap, Kraft, and Rosa, 1993).

Environmental Knowledge. Men are likely to be more knowledgeable about technical environmental issues; this knowledge is linked to less concern with environmental damage. While several studies have found men to have more knowledge of the technical aspects of environmental issues, greater knowledge is generally not related to lower concern about these issues (George and Southwell, 1986; Arcury, Scollay, and Johnson, 1987; Solomon, Tomaskovic-Devy, and Risman, 1989; Schahn and Holzer, 1990; Hoban, Woodrum, and Czaja, 1992).

Parenthood Status. Women in more traditionally "female" roles (e.g., as homemakers and childrearers) should be the most nurturing and therefore the most concerned about environmental damage. Conversely, men with children should be expected to be more oriented toward economic growth and less toward environmental concern, since it is in the job market that the traditional father role is played. The findings on this are mixed and inconclusive (McStay and Dunlap, 1983; Hamilton, 1985a, 1985b; George and Southwell, 1986; Blocker and Eckberg, 1989; Mohai, 1992; Austin and Woolever, 1994).

Trust in Science and Technology. Women tend to be more distrustful than men of science and technology; low levels of trust are positively related to environmental concern. This hypothesis has received virtually no attention in empirical research. Several studies have found men to have more trust or confidence in science and technology than do women (Blaikie, 1992; Fox and Firebaugh, 1992; Hoban, Woodrum, and Czaja, 1992; MacGregor et al., 1994). Other research reports a negative association between trust in various institutions and fear of environmental risk (Freudenburg, 1993). We found no studies, however, that actually provide a multivariate test of the proposed relationships.

We also examine another area neglected by past research—relationships among gender, religiosity, and environmental orientations. Religion, like science, is a "way of knowing" about the natural world and the place of humans in it. While women may have relatively less faith in science, they tend to have more faith in religion than do men (Gallup Report, 1987; Batson, Schoenrade, and Ventis, 1993). Given the documented effects of religious beliefs on environmental concern (e.g., Eckberg and Blocker, 1989, 1996), it is important to inquire into the role of religiosity in environmental orientations.

Method

For data, we turn to the 1993 General Social Survey (GSS), which contains measures that are relevant for addressing all of the foregoing issues

(Davis and Smith, 1993). Along with its usual set of background measures, the 1993 GSS includes a set of over forty items measuring knowledge of, attitudes toward, and actions aimed at the environment. The original GSS sample included 1,606, but 49 respondents were not asked any environmental questions, leaving us a sample of 1,557.

Environmental Attitude and Action Indexes. To reduce the items to a reasonable number, we formed indexes based on item wording and scoring. We included only items that obtained reasonable correlations with their fellows and used factor analysis with varimax rotation to assess the factorial nature of the indexes. In all, we employed all but four of the attitude and action items in the formation of ten indexes (see Table 1).

The indexes allow us to explore several facets of environmental belief, attitudes, and (reported) actions. The set includes five indexes of action or policy orientations, which range from direct actions to state policy (indexes [1] through [5]). One attitude index (index [8]) measures the extent of fear of the effects of various forms of pollution. Two others, which we call "human actions hurt nature" (index [6]) and "economy over the environment" (index [7]), resemble items in the Dunlap and Van Liere (1984) NEP scale. Two indexes measure degree of belief in animal rights (index [9]) and extent of belief that nature is sacred (index [10]) because it was created by God. The first of these may tap nurturing attitudes, although the highly political animal-rights movement goes far beyond concern with mistreatment of animals. Research has found that the second index primarily measures degree of belief in and devotion to God (Eckberg and Blocker, 1996). We are uncertain of the degree to which it measures a caring attitude toward nature itself.

Background Characteristics Items and Indexes. When contrasting female and male positions on the environmental indexes, we control for a series of attributes drawn from the aforementioned research models: knowledge, attitudes toward science, socioeconomic status, and religiosity. We also search for gender-specific results of having had children or of having children under the age of six in the house and consider effects of homemaker status on women. In regression analysis, we control for several additional demographic or lifestyle traits—age, ethnicity, urbanism, political conservatism, *childhood* socioeconomic status, religion, and urbanism—all of which may be related either to environmentalism (Jones and Dunlap, 1992) or to the background characteristics. The childhood items provide proxies for socialization measures.

Knowledge. The data set includes three measures of knowledge: (a) the score on a ten-item vocabulary test; (b) the score on a six-item test of environmental knowledge; and (c) the score on a four-item test of general scientific knowledge (weighted somewhat toward environmental issues). The measures predict environmental beliefs and attitudes similarly and are moderately correlated. Principal-components analysis yielded a one-factor

TABLE 1

Ten Indexes of Environmental Attitudes and Actions

1. Engages in personal "green" activities.
   Four items: (a) How often do you recycle? (b) Do you do "what is right for the environment," even if it costs money or takes up time? (c) Is it too difficult for you to do much about the environment? (d) Have you ever signed a petition about an environmental issue?
   alpha = .527
2. Participates in organized "green" activities.
   Two items: (a) Are you a member of any environmental group? (b) Have you participated in a demonstration on an environmental issue?
   alpha = .392
3. "Green" lifestyle
   Three items: (a) How often do you eat organic fruits and vegetables.
   (b) How often do you refuse to eat meat? (c) How often do you cut back on driving for environmental reasons?
   alpha = .564
4. Is willing to bear costs to protect the environment
   Three items: Are you will to (a) pay much higher prices? (b) pay much higher taxes? and (c) have a lower standard of living to protect the environment?
   alpha = .833
5. Approves government regulation to protect the environment:
   Two items: Should the government make (a) people, (b) businesses protect the environment?
   alpha = .642
6. Believes human actions (scientific/economic) hurt nature
   Three items: (a) Any human change in nature—no matter how scientific—is likely to make things worse; (b) Almost everything we do in modern life harms the environment; (c) Economic growth always harms the environment.
   alpha = .587
7. Believes economy takes precedence over the environment
   Four items: (a) Modern science will solve our environmental problems with little change in our way of life; (b) We worry too much about the environment and not enough about prices and jobs; (c) People worry too much about human progress harming the environment; (d) In order to protect the environment, America needs economic growth.
   alpha = .589
8. Worries about effects of pollution
   Thirteen items: Are (a) air pollution caused by cars (b) nuclear power stations, (c) air pollution caused by industry, (d) pesticides and chemicals used in farming, (e) pollution of waterways, or (f) the "greenhouse" effect dangerous—(i) in general, (ii) for you and your family? (g) Will auto air pollution cause a large increase in ill health?
   alpha = .910
9. Believes in animal rights
   Three items: (a) Animals should have the same moral rights as humans; (b) It is right to use animals for medical testing; (c) Nature would be at peace and harmony if only humans would leave it alone.
   alpha = .527
10. Considers nature to be sacred
    Two items: (a) Nature is sacred because it was created by God;
    (b) Human beings should respect nature because it was created by God.
    alpha = .459

solution, so we reduced each measure to a scale of 0–1 and summed them to form a knowledge index.

Socioeconomic Status. We have four measures of social status: (a) years of education, (b) occupational prestige, (c) whether one is a professional, and (d) family income. Again, principal-components analysis yielded a one-factor solution, so we formed an index of socioeconomic status in the same fashion as we did with knowledge.

Science Attitudes. We have three measures of approval of science: (a) level of confidence in the scientific community; (b) extent of belief that science worsens "things"; and (c) belief that we trust too much in science and not enough in faith and feelings. Once again, principal-components analysis yielded a one-factor solution, so we formed an index as above.

Religion. Seventeen items measure religion and religiosity. Principal-components analysis, with varimax rotation, allows us to reduce these to three indexes: one of religious sectarianism or fundamentalism; one of common religiosity; and one of religious activity.

Findings

We first document any gender differences in the background characteristics of social status, attitudes toward science, level of knowledge, and religious orientation. Then we examine the relationships among these variables and the environmental-orientation scales. The analytical focus then becomes more specific, as we examine effects of parenthood and homemaker status on environmentalism. When we use the whole sample, we employ $p < .01$ as our criterion for statistical significance; still, the reader should be aware that some "significant" findings may be of questionable social significance.

In preliminary analyses not shown here, we compared women's and men's mean scores on the background indexes. Men had slightly higher average levels of knowledge and social status, were less religious than women (no matter how this is measured), and approved science more. These findings were as expected.

Environmentalism: Relations with Background Items and Sex. In Table 2, we use Pearson's r to show zero-order relationships between environmental indexes, on the one hand, and sex ("female" is a dummy variable) and major background measures on the other. The correlations show women to be more likely to lead a "green" lifestyle, to believe that humans naturally harm nature, to fear effects of pollution, to express belief in animals' rights, and to express belief in the sacredness of nature. They are not, however, more likely to engage in *any* type of environmental action, and there is no gender difference in attitudes regarding the relationship of the economy and the environment.

TABLE 2

Correlations with Environmental Index Scores (Pearson's *r*)

Major Correlates	Personal Actions	Organized Actions	Will Bear Costs	Approves Gov't Reg.	"Green" Lifestyle
Female	−.00	−.02	−.02	−.03	.13***
Knowledge	.41***	.12***	.17***	.20***	−.05
Sectarianism	−.32***	−.15***	−.15***	−.16***	−.04
Common religiosity	−.14***	−.09**	−.09**	−.07*	.02
Religious activity	−.04	−.04	−.05	−.03	−.02
Social status	.31***	.07*	.13***	.05***	−.03
Science approval	.26***	.04	.11***	.17***	−.09**
	Economy Central	Hurts Nature	Environmental Fears	Animal Rights	Nature Sacred
Female	.01	.18***	.07*	.17***	.15***
Knowledge	−.39***	−.29***	−.08*	−.25***	−.25***
Sectarianism	.32***	.16***	−.03	.05	.43***
Common religiosity	.16***	.05	.02	.01	.48***
Religious activity	.12***	−.05	−.06	−.15***	.30***
Social status	−.23***	−.28***	−.08*	−.26***	−.24***
Science approval	−.32***	−.33***	−.03	−.21***	−.30***

NOTES: N = 1,557. Means substitution is used for missing values.

*$p < .01$.

**$p < .001$.

***$p < .0001$.

The results for the background measures do *not* clearly fit expectations derived from theory and past research. Respondents with greater social status and knowledge and more positive attitudes toward science are less likely to believe that humans harm nature, that animals have rights, and that nature is sacred, but they also are less likely to believe that the economy is more salient than is nature. Further, these characteristics are *positively* associated with all four types of proenvironmental action and policy stances, with the one exception—approval of science—not being related to organized actions. Correlations for the religiosity indexes generally are the opposite of those for higher social status and knowledge and approval of science.

Sex and Environmental Index Scores. Table 3 contains the results of a series of OLS regressions in which demographic and lifestyle traits are statistically controlled. We will consider any effect with $R^2 < 1\%$ to be socially insignificant.

We can dismiss two of the significant relationships as not relevant to the present discussion. First, the greater tendency for women to state that nature is sacred comes about almost entirely through religiosity; controlling the religiosity measures virtually obliterates the effect. As stated earlier, the index appears to measure devotion to God, not environmentalism per se. Second, the gender effect on belief that humans harm nature is very weak to begin with, accounting for less than 0.5 percent of variance, and survives controls for nothing except religiosity. That is, women are essentially no more likely than men to believe that human activity is intrinsically harmful to nature.

The other three effects—women's greater tendency to be "green" in lifestyle, to be concerned about pollution, and to believe in animal rights—survive all controls intact. In each case, over 70 percent of variance accounted for by sex is independent of control item effects. This indicates that the cause is something more concrete and specific to gender differences. We will return to this.

Family Roles and Environmentalism. We now narrow our focus to investigate more specific elements of gender roles. According to both the "motherhood" and the "marketplace mentality" arguments, gender differences in environmentalism are largely accounted for by parenthood and labor force participation. We therefore split the sample and used *t*-tests to directly contrast women who are homemakers with those in the labor force; among homemakers, we contrasted those who always had been homemakers with those with labor force experience. What we found, for the most part, was precisely the opposite of theoretical predictions, which replicates findings by Blocker and Eckberg (1989) and Mohai (1992).

Homemakers are somewhat *less* prone than other women to recycle ($p < .05$), to be willing to bear the costs of caring for nature ($p < .01$), to

TABLE 3

Regressions of Environmental Index Scores Across Gender

Background Measures	Personal "Green" Acts		Organized "Green" Acts		Will Bear "Green" Costs	
	Bsex[1]	AdjR² sex[2] (%)	Bsex	AdjR² sex (%)	Bsex	AdjR²sex (%)
Zero-order	−.001	−0.06	−.007	−0.03	−.009	−0.03
Net of Sci	.014	0.05	−.005	−0.05	−.002	−0.07
Net of Kn	.021	0.18	−.001	−0.06	.001	−0.06
Net of Rel	.007	−0.04	−.002	−0.06	−.002	−0.06
Net of SES	.009	−0.02	−.005	−0.05	−.004	−0.06
Net of All	.026*	0.31	.000	−0.06	.007	−0.04
Background Measures	Approves Gov't Regulation		"Green" Lifestyle		Believes Economy More Important than Environment	
	Bsex	AdjR²sex (%)	Bsex	AdjR² sex (%)	Bsex	AdjR² sex (%)
Zero-order	−.020	0.05	.049***	1.53	.004	−0.05
Net of Sci	−.007	−0.05	.045***	1.27	−.014	0.05
Net of Kn	−.006	−0.05	.047***	1.40	−.016	0.09
Net of Rel	−.016	0.00	.049***	1.45	−.007	−0.03
Net of SES	−.014	−0.01	.048***	1.48	−.003	−0.06
Net of All	−.001	−0.06	.044***	1.12	−.027*	0.35

Background Measures	Worries about Pollution		Believes Humans Harm Nature		Believes in Animal Rights	
	Bsex	AdjR^2 sex (%)	Bsex	AdjR^2 sex (%)	Bsex	AdjR^2 sex (%)
Zero-order	.059***	3.30	.026*	0.48	.066***	2.93
Net of Sci	.059***	3.20	.010	0.02	.057***	2.08
Net of Kn	.057***	3.02	.014	0.09	.055***	2.00
Net of Rel	.062***	3.41	.027*	0.49	.073***	3.38
Net of SES	.058***	3.09	.019	0.22	.059***	2.32
Net of All	.059***	3.02	.010	0.01	.059***	2.13

Background Measures	Believes Nature Is Sacred	
	Bsex	AdjR^2 sex (%)
Zero-order	.089***	2.29
Net of Sci	.067***	1.23
Net of Kn	.072***	1.44
Net of Rel	.035*	0.29
Net of SES	.079***	1.79
Net of All	.021	0.08

NOTES: [1]Bsex is the unstandardized regression coefficient for female.
[2]AdjR^{2}sex is the adjusted R^2 added to the equation by female.
N = 1,557.
*p < .01.
**p < .001.
***p < .001.

approve environmental regulation ($p < .05$), or even to fear pollution ($p < .05$). They are *more* prone to believe in the salience of the economy over nature ($p < .001$).

The curious effects are extended when we compare homemakers who have always had that status with those who have not. In comparison with "temporary" homemakers, permanent ones are even less likely to recycle ($p < .05$), to engage in organized "green" actions ($p < .06$), or to be willing to bear costs of protecting nature ($p < .01$), and they are substantially more positive toward economic activity ($p < .01$).

Men's traditional family role as breadwinner leads to the expectation that fathers would be more concerned about economic matters and less concerned about nature, whereas the reverse would be true for women. When we test this with ANOVA, the evidence does not support theory consistently. There are no direct *or* interaction effects of having children under the age of six in the house on any index, and the effects of ever having had children are for the most part unexpected. People who have had children are *less* likely to engage in organized environmental actions ($p < .01$), to be willing to bear the cost of protecting nature ($p < .01$), to believe that human action is intrinsically harmful ($p < .05$), or to believe in animal rights ($p < .001$). They are more likely to believe in the salience of the economy ($p < .001$).

Two significant interaction effects do partly support theory. Whereas childless women and men are almost identical in their tendency to have a "green" lifestyle, women with children are more so and men are less so ($p < .01$). And fathers are less likely than childless men to fear pollution ($p < .001$), although among women there is no difference on this.

Finally, using only women as subjects, we regressed the four family-role variables and a series of background variables that have been shown to be important for predicting environmental orientations across the ten indexes. This controlled for social-background differences and determined whether any of the family role variables had the expected independent effects. The results, shown in Table 4, find few effects of the family-role variables on women's environmental orientations.

Where there are significant effects, they are just as likely to be the reverse of those expected as otherwise. Thus, always having been a homemaker predisposes one *against* being willing to pay for environmental protection. Having children at home predisposes women to *not* believe that humans are inherently likely to hurt nature and to *not* support animal rights. Having children under age six, however, does seem to dispose women toward what we have called a "green lifestyle," and being a homemaker seems to dispose them toward believing that human actions necessarily harm nature.

In no case does the entire set of four family-role items add as much as 1 percent to the variance provided by the background items. Because family

TABLE 4

Regression of Environmental Indexes across Female Role Items, Net of Background Measure (Unstandardized Regression Coefficients)

Female Role Item	Personal Actions	Organized Actions	Will Bear Costs	Approves Gov't Reg.	Cultural "Green"
Homemaker	−.01	.01	−.02	−.01	−.03
Always a homemaker	−.02	−.03	−.12**	−.03	.00
Children at home	−.02	−.03	−.02	−.05	.01
Children under 6	−.01	.03	.07	−.05	.09*
Total adjusted R^2	1.67%	0.49%	2.07%	0.68%	0.26%
Independent adj. R^2	−0.28%	−0.13%	−0.69%	−0.10%	−0.31%
	Economy Central	Hurts Nature	Environmental Fears	Animal Rights	Nature Sacred
Homemaker	.02	.03*	−.02	.01	.03
Always a homemaker	.06	−.00	−.03	.04***	.07
Children at home	−.01	−.08**	−.01	−.07*	−.06
Children under 6	.00	−.01	.02	.00	−.05
Total adjusted R^2	3.48%	1.49%	0.76%	1.62%	1.23%
Independent adj. R^2	−0.02%	0.77%	−0.04%	0.27%	0.28%

NOTES: N = 894.

Missing data are recoded the item means; on indexes, missing data from the component items are recoded as their means. Background measures include those used earlier plus measures of childhood background, urbanism, age, marital status, southern region, and political orientation.

*$p < .05$.

**$p < .01$.

***$p < .001$.

roles may operate *through* knowledge, attitudes toward science, and political orientation, we removed those items from the model. The only relevant changes were that homemaker status came to have a positive effect on belief in the salience of the economy, and the set of family-role items directly accounted for just over 1 percent of variance on the index measuring belief that human actions are inherently destructive.

In sum, there is little evidence of substantive effects of family-role factors, certainly not in hypothesized directions. While the equations vary, the major sources of women's stances on these topics are their level of knowledge, social status, religious sectarianism, attitudes toward science, and political conservatism. The trend is similar to that found in the combined sample.

Discussion

Returning to the question with which we began, we find a few personal nurturance effects of female gender that appear to be unrelated to our measures of social background and other beliefs. That is, they appear to represent "fundamental" gender differences. Our findings support the well-established finding of women's greater concern for health and safety issues and extends the findings to greater concern for animals. Specifically, women tend to be somewhat more concerned about pollution, more "green" in personal lifestyle, and more in favor of animal rights than are men. We find as well that having had children affects women and men differently. It is associated in women with a greater likelihood of a "green" lifestyle, but does the opposite in men, and is associated in men with less fear of pollution while having no such association in women.

Beyond those, the results point in other directions. We find no zero-order gender differences in environmental actions or in regard for the economy. Contrary to the expectations of gender theory, women (and men) of higher social status, with more knowledge, and with greater trust in science are more likely to engage in proenvironment action and are less likely to see the economy as more important than the environment. We find only extremely weak direct effects of gender (in the predicted direction) on propensity to take part in personal proenvironment actions like recycling, and on regard for the economy. These raise problems both because they are so weak and because they appear only after variables that should have *caused* the gender effects are controlled.

Among women, being a homemaker or having children should lead to greater emphasis on nurturance and hence increased environmental concern and action, but, to a considerable extent, the opposite occurs. Childrearing has no consistent effect on the environmental attitudes of women or men. Finally, multiple regression shows no consistent pattern of effects on women, and the entire set of family-role measures adds virtually no variance to the amount explained by background variables.

This is not the first study to document the weakness of gender, or of the economic provider role, as predictors of environmental belief or action (see the discussions in Mohai, 1992). Why, then, are women not more environmentally active than men, if they are more "concerned"? And why do the structural variables have their curious match of effects? Concerning the first question, it is unlikely that women's greater concern is not translated into action because they lack the knowledge or social status to become involved: controlling the relevant structural variables has little effect on the indexes of interest, and many of the actions are simple or represent only an expressed willingness rather than any actual behaviors.

Mohai (1992) found women to be less *environmentally* active than men, a finding that was not accounted for by background measures and that was curiously different from their tendency to be about as active as men in more generally *political* matters. We find no major differences in action, but we replicate Mohai's finding of the paucity of social-background effects.

It might be that the attitudes tapped by the GSS items are general and abstract, whereas the action measures are fairly specific. A stronger attitude-action relationship might be obtained if both were measured at a similar level of generality (see Scott and Willits, 1994: 20). We believe, however, that women's higher scores may be part of a generalized "nurturance" orientation that extends, as action, only to the boundaries of home life—hence the "green" lifestyle. The exterior world may be viewed quite differently, and public actions—even fairly personal ones like recycling or signing petitions—may be guided by different motivational, situational, and normative factors.

This dovetails with the finding by several researchers (e.g., Blocker and Eckberg, 1989) that gender differences in concerns exist primarily for local issues, not for more general ones. Though the relevant background measures do little to explain most gender differences (and nondifferences) in concern and action, their unique effects merit mention, namely, that statuses that predict "concern" also predict "inaction." Is it possible that those who are more knowledgeable, have higher status, and are more favorable toward science are not actually "unconcerned"? Since active people tend to be highly educated, it seems possible that they follow a personal version of what Merton (1973 [1942]) calls the scientific norm of "organized skepticism." Compared with people who have less knowledge, less status, or less regard for science, they may be less likely to accept accounts about the empirical world without substantial evidence, so they may falsely *appear* unconcerned. The issue deserves investigation.

According to our data, these people are actually *more* likely than others to take pragmatic steps to address issues that they regard as important. They undertake and support environmental actions. Our findings carry the policy implication that insufficient economic participation, knowledge, and trust in science are deleterious to practical environmentalism.

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