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# Public Opinion on Environmental Issues: Does It Influence Government Action?

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# Public Opinion on Environmental Issues: Does It Influence Government Action?

## **Abstract**

It was V. O. Key Jr. who stated, "Unless mass views have some place in the shaping of policy, all the talk about democracy is nonsense" (Glynn, 1999). According to most scholars "the responsiveness of government policy to citizens' preferences is a central concern in .. democratic theory"(Page, 1982). This opinion summarizes the motivation behind the vast amount of political science research that has been conducted in an attempt to explore the relationship between public opinion and government action. Since the late 1960s, public opinion on environmental issues has been monitored with varying degrees of attention (Dunlap 1991), and this topic has traditionally been included in those studies examining government accountability (Monroe 1998). Due to the global nature of environmental issues, public opinion and government action in this area needs active monitoring. My hypothesis is that levels of government activity on environmental issues will correlate with changing levels of public opinion support for environmental protection.

## **Public Opinion on Environmental Issues: Does It Influence Government Action?**

**Michael S. Pulia**

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### **Literature Review**

Before examining current levels of public environmental concern, it is helpful to first outline the previous trends. During the late sixties, Erskine declared the "unprecedented speed and urgency with which ecological issues have burst into the American consciousness" to be a "miracle of public opinion" (1978). Public concern peaked at Earth Day 1970 and then began a steady decline that would last the rest of that decade (Dunlap, 1991). The tremendous burst of interest followed by a steady decline led some scholars (Downs, 1972) to predict the complete disappearance of environmental problems from the realm of public concern. As it turns out, "although environmental concern declined throughout the seventies, there was surprisingly little 'backlash' against environmental protection given the nation's economic and energy problems, and by the end of the decade, the public remained more concerned about environmental quality than in the mid-sixties" (Dunlap 1989). It seems that since environmental issues were new to the average citizen, their unbounded saliency was destined to end with a period of adjustment (the 1970s) necessary for environmental concerns to become a permanent component of America's political consciousness.

The situation changed considerably during the 1980s with an apparent public backlash against the Reagan administration's environmental policies and the continuing discovery of new environmental problems such as global warming, ozone depletion, and contaminated water (Dunlap, 1991; Gillroy and Shapiro, 1986). The momentum of the environmental movement carried over into the beginning part of the 1990s, at which time a trends piece was put together by Riley E. Dunlap and Rik Scarce for *Public Opinion Quarterly*, bringing together all public opinion trend data from 1973 to 1990. Since this comprehensive piece, most research and public opinion data available on environmental protection consists of single 'snapshot' views of support for environmental regulation and issue saliency.

Two of these works are particularly effective in explaining the status of public opinion on environmental issues in the 1990s. The first is *Environmental Policy in the 1990s* by Norman Vig and Michael Kraft, which argues that "American environmentalism is undergoing its most fundamental redefinition in decades" (1994). The authors set out to examine some of the parameters that can be utilized in measuring environmental activism and public support of environmental legislation. Written in 1994, this book cites various evidence supporting the fact that public support for environmental protection has been persistent since the 1970's and risen substantially in the early 1990s (Gillroy and Shapiro, 1986).

Further updating the work of Vig and Kraft is *The Environmental Policy Paradox* by Zachary Smith. This work updates the trends discussed by Vig and Kraft into the mid/late 1990s, explaining how several current polls indicated a leveling off or decrease in support for environmental policy (Smith 2000). This new trend is attributed to the possible public perception of successful environmental policies or the possibility that the highly publicized environmental problems in the 1980s caused only a temporary increase in issue saliency. A 1995 Gallup poll found that the public's overall concern had begun to level off, indicating a new environmental public opinion trend. This evidence seems to indicate that public support for environmental issues continued to grow for a short time in the early 1990s and then began to level off or decrease. This development is significant and has yet to be documented extensively.

A 1994 article in *The Economist*, entitled "As Green Turns to Brown: Environmental Groups" supports Smith's findings by describing environmental groups with declining membership and increasing debt as we move into the second half of the 1990s. In addition to the troubles faced by environmental organizations, consumers have started to feel the economic costs of rapidly expanding environmental programs. It costs US consumers 2.1% of the GNP to comply with the current regulations, compared with less than 0.5% for Japan. Americans have begun to wonder whether more environmental legislation is needed and if it can be afforded. It is crucial to note that strong generalized support does not translate automatically into policy support due to the influence of economic factors (Vig, 1994). Here Vig refers to the concept that support for environmental protection is dependent on the economic conditions of citizens. Since the concepts and measures associated with environmental protection often require a 'long-term' benefits perspective, in times of trouble citizens may focus their concern on more immediate concerns such as poverty or healthcare. For the most part, the element of alarm about the environment appears to be gone and a green industry consisting of lobbyists, lawyers and federal workers now carry the agenda forward. This entire trend relates to the discussions about the high economic costs of environmental legislation and the increasing difference between those individuals with environmental concerns and those supporting further specific environmental policies.

### **Measuring Environmental Public Opinion**

Despite the tremendous amount of data available on environmental public opinion, the constantly evolving dynamics of support levels prompted researchers to determine a truly effective way to measure opinion on environmental issues. Moving away from traditional polls that examine strength of concern over long periods of time,

Chris Carman has offered another approach. He sets out to "arrive at an understanding of the underlying dimensional nature of *environmental policy support* in the United States" (Carman, 1998). Carman hypothesizes that instead of environmental concern being a simple uni-dimensional concept, it *is* an attitude comprised of complex subdimensions. Specifically he contends that "three subdimensions constitute the attitude 'support of environmental policy'. ..the individual's qualitative assessment of the environment; the individual's perception of government regulation of the environment; and finally, the individual's relative evaluation of trade-offs between environmental protection and economic forces" (Carman, 1998). Carman justifies this detailed study by citing evidence that shows environmentalism alone to be a salient public attitude with significant policy relevance. Dunlap and Scarce demonstrated that 21 percent of the public viewed pollution as a major problem in the United States and a 1990 Gallup poll placed "environment pollution" as the second-most-important problem in the United States. Since the 1990s, fewer questions suitable for trend analysis of environmental issues have been asked. This can most likely be attributed to the fact that public support for increased environmental legislation seemed to reach a high water mark early in the 1990s (Dunlap, 1991) and opinion was not changing appreciably in that time. A large portion of the questions used in Dunlap's 1991 trends piece have since been discontinued, which creates a scattered set of trend data throughout the 1990s. The lack of available data made it necessary to explore alternative approaches to measuring the public opinion/attitude about environmental issues.

In his work *Public Opinion in America: Moods Cycles, and Swings*, James A. Stimson develops the concept of policy mood. This technique involves aggregating a wide range of questions asked over time in a systematic fashion and then developing a public mood index for a given issue (Stimson, 1999). This technique will be ideal in utilizing the scattered public opinion data available throughout the 1990s on environmental issues. This method is designed to elucidate the general feelings/mood of the public on environmental policy issues over time. This mood trend can then be compared with various measures of government responsiveness to determine if changing opinions influence policy.

## **Research Design**

The research data contained in this paper was obtained from a variety of sources. The public opinion data come from national survey questions asked between 1990-1999 concerning environmental issues. All public record data, used to construct proxy measures for Congressional attention/action on environmental policy were obtained from either the *Congressional Record* (1990-Present), *United States Statutes at Large* (1990-1999), or *The Statistical Abstracts of the United States*.

Fourteen survey questions were used to construct an environmental policy mood index. These items were selected because they were asked during the 1990s, the question format/wording did not change when asked over time, and previous research indicated the question type to be suitable for effective measurement of public support for environmental policies. (See Table 1 for a listing of the actual questions and the time(s) they were fielded).

**Table 1. Question Wording of Variables Comprising the Environmental Policy Mood Index**

1. Do you believe that economic growth should be sacrificed for environmental quality, should environmental quality be sacrificed for economic growth, or does it not necessarily have to be a choice between the two? (Annual 1992-1999)
2. Here are two statements which people sometimes make when discussing the environment and economic growth. Which of these statements comes closer to your own point of view? (90,91, 95,97,98, 99,00)
3. Do you feel good about the quality of air, water, and environment where you live and work, or not? (Annual 1997-2000)
4. Do you think that the environmental laws and regulations that are currently on the books are adequate, should go further than they do, or have they gone too far already? (1990,1995,2000)
5. Agree or Disagree ... Protecting the environment is so important that requirements and standards cannot be too high and continuing environmental improvements must be made regardless of cost? (90,92,93,94,95,96,97,98, 99)
6. There need to be stricter laws and regulations to protect the environment? (92, 94,97,99)
7. Do you think there is too much, too little, or about the right amount of government regulation and involvement in the area of environmental protection? (91,93,94,96,97,98,00)
8. How willing would you be to pay much higher prices in order to protect the environment? (93,94)
9. Problems regarding pollution and the environment will get significantly worse during my lifetime. (91,92,93,96,97)
10. I'd like you to tell me whether you think we're spending too much money, too little money, or about the right amount on: improving and protecting the environment (90,91,93,94,96,98,99)
11. I'd like you to tell me whether you think we're spending too much money, too little money, or about the right amount on: the environment (90,91,93,94, 96,98,99)
12. Federal government should become more involved in solving environmental problems? (90,91,00)
13. Please tell me how serious you consider environmental problems? (00)

14. Stricter environmental laws and regulations cost too many jobs and hurt the economy. Stricter environmental laws and regulations are worth the cost. Do you feel stronger about that, or not? (00)

The technique of creating a policy mood index is based entirely on the work of James Stimson. In his work, Stimson discusses the difficulty in creating regular time series for public opinion data due to the irregular intervals at which questions are asked. He then goes on to offer his solution to this problem by outlining in detail how to develop a 'measure of mood' across time for domestic policy issues. Essentially, each question response was re-coded as a reply either favoring or opposing increased environmental legislation. For each question, a percentage of those responses indicated a desire for increased environmental protection was calculated. Since each year has more than one question asked, the scores (% of respondents favoring increases environmental protection), were averaged to get a more accurate measure of the actual public mood during that year. The number of questions used per year ranged anywhere from five to nine, with the average being eight questions per year. While constructing the index, careful consideration was also given to the effects of questions with unusual scores due to unique question wording. In such cases, the question was eliminated from the mood index calculations. Constructing this index allows for a variety of randomly asked questions to be aggregated into a picture of how public support for increasing environmental policies actually changes with time.

Traditionally, operationalizing a variable to measure government responsiveness to changes in public opinion has proved difficult. Researchers have attempted to develop various techniques and representative proxy measures to replace the unavailable direct measurement. The decision was made to use the following proxy measures to operationalize the dependent variable: (1) The length (pages) of legislation on environmental issues found in the *United States Statutes at Large* (per year); (2) The annual budget of the EPA (adjusted for inflation and presented as 1992 dollars); and (3) The number of listings in the *Congressional Record* index (per year) under Ecology/Environment. The categories of entries included in the count of total listings are Amendments, Bills and Resolutions, Remarks in House, Remarks in Senate, and Reports/Reports filed. These categories provide the best measures of time and energy spent by Congress dealing with environmental issues. It could be argued that the entries in both the *Statutes at Large* and *Congressional Record* dealt with repealing environmental legislation rather than increasing it. Thus, a random sample of five entries from each source was selected and analyzed to ensure pro-environmental content. After establishing trends for each of the variables across time, bivariate correlation values were calculated in order to determine if the changes in the mood index of support for environmental policy were followed by changes in the level of government attention. It is important to note that although a correlation may exist between the mood index and the dependent proxy measures, this data can never be considered completely explanatory evidence for the responsiveness of government to changes in public opinion. This shortcoming emerges for two specific reasons: (1) The measures used to determine congressional/governmental attention are proxies; and (2) A variety of other variables (media) may be spuriously causing this relationship. In order to reduce the chance of spuriousness causing a false relationship to appear, an economic control variable (Per

Capita Income) was also included in this study. Regarding the media, any influence increasing coverage of environmental issues has on either public opinion or government attention was not quantitatively explored, leaving this important topic an area for future research. Also, this study focuses entirely on American politics and contains no internal controls to account for any global influences on domestic governmental activity on environmental issues.

## Data Analysis

After successfully compiling the public opinion data from 1990-2000 on environmental issues, the mood index was created and the values were plotted across time (see Figure 1 in Appendix). The percent of individuals favoring environmental protection reached its highest levels from 1990-1992 (71 -74% support). This supports the reliability of the constructed mood index because it follows the trend observed in Riley's research. Using four different questions asked from 1973-1990 that concerned public support for environmental protection, Riley concluded that public support had reached previously unseen heights by 1990 (approximately 70% support for environmental protection; see Figure 2 in Appendix). After the high levels observed in the constructed mood index from 1990-1992, public support for environmental protection dropped significantly, to 58% in 1993. This finding indicated a significant 'cooling' in the public's support for increased environmental protection. Before accepting this sharp drop in public support as valid, careful consideration was given to the possibility that different types of questions were used to calculate the 1993 mood index value. This, in fact, was not the case, and the 1993 decrease was further validated by the similar public mood values obtained for 1994 and 1995. Following 1995, the mood index values begin following an oscillating pattern that seems to focus around 60% support for environmental protection. With a completed trend for the independent variable, the focus then shifted to an examination of any trends present for the dependent proxy variables of government attention.

The *Congressional Record* variable, comprised of a sum of actions on environmental issues, turned out to have an oscillating pattern with no distinguishable trend from 1990-2000 (see Figure 3 in Appendix). Suspecting that this might have been caused by the distinct differences between actions that were included in the summation (i.e. bills and resolutions vs. comments made), the trends for each type of actions were plotted separately and compared. Not surprisingly, both comments (House and Senate) and Bills/Resolutions/Amendments moved together across time (bivariate correlation-. 654, significant at .05 level), indicating the differences in the variables was not the cause for the oscillating, trendless pattern observed for the total actions variable (see Figure 4 in Appendix).

The trend data obtained for the *Statutes at Large* variable followed a more distinguishable pattern than the *Congressional Record data*. The number of pages of legislation devoted to either environmental protection or conservation reached its high point in 1990, with over 500 pages. The number of pages steadily declined until it bottomed out in 1995 with only one page of legislation dedicated to environmental protection (see attached Figure 5). This indicated that the government had decided enough environmental legislation had been passed during the early 1990s and it was time



to let the status quo remain. Although the amount of environmental legislation did make a slight comeback after 1995, it never approached the high water mark seen in 1990.

The final dependent variable, EPA's annual federal outlays, also followed a distinguishable trend. Presented in adjusted 1992 dollars, the EPA's budget followed a nearly direct linear increase from 1990-1999. The only decline in the EPA's budget was observed in 1996 (see Figure 6 in Appendix). This is hypothesized to be a delayed effect of the government's decision to cease all further additions to environmental protection legislation in 1995. The observed patterns seem logical because it probably would take longer for a government decision, to slow activity on environmental protection, to affect agency budgets than the amount of legislation enacted.

The completion of trends for each dependent variable enabled the direct comparison of trends between the mood index and measures of government attention. In order to present comparable graphs for each of the variables, measured in entirely different units, mathematical functions were utilized to adjust the data. The comparison of the public opinion mood index and the number of congressional actions (see Figure 7 in Appendix) did not produce a significant bivariate correlation (.107). It can be hypothesized that the fluctuations in levels of congressional action depend on other factors, such as party control or party agendas. This helps to explain why the levels of congressional action, on environmental issues, show no distinguishable trend throughout the past decade.

When the environmental mood index was plotted alongside the number of pages of environmental/conservation legislation, the two apparently followed similar trends (see Figure 8 in Appendix). The similarity in the trends was verified when the bivariate correlation (.799, significant at the .05 level) indicated a statistically significant relationship. One particularly fascinating aspect of the compared trends is the apparent delay between the significant decrease in the public's support for environmental legislation (1993) and the low point in environmental protection legislation (1995). This critical finding can potentially give us a better understanding of the much sought after relationship between shifts in public opinion and government action responses. In this case, it seems it took the government two years to fully grasp the shift in public opinion. As a potential explanation for the entire trend, we can hypothesize that the flurry of legislative activity in 1990 was a result of the government attempting to catch up with rapidly increasing public support for environmental protection in the late 1980s. This high level activity continued even after public opinion had cooled, as demonstrated by the lowest additional legislation level seen in 1995. It would be extremely interesting to extend the public opinion mood index and pages of legislation variables back into the mid-1980s to see if the delayed effect was also observed for increased levels of environmental protection support between 1985 and 1990.

When comparing the EPA annual budget with the environmental mood index, it was immediately obvious that the two moved in virtually opposite directions (see Figure 9 in Appendix). The opposite trends were quantified using bivariate correlation analysis (-.691, not statistically significant due to a low number of cases,  $n \sim 6$ ). This finding indicated that the EPA budget is related to some other variable, such as economic conditions. To explore this possibility, per capita personal income was used as a control variable. When the EPA budget and per capita income levels were plotted simultaneously, an immediate relationship emerged. Both follow an extremely similar

increasing trend across time, and the bivariate correlation (.672, not significant due to a low number of cases, n=7) supported this relationship (see Figure 10 in Appendix). This indicates that economic variables play a greater role in determining the budgeting for federal agencies, which makes sense considering that the overall federal budget increases with higher income levels.

As an attempt to address Vig's argument concerning the influence of economic conditions on public support for environmental issues, the per capita income control variable was then plotted against the environmental protection mood index. Here again the two variables moved in divergent paths (bivariate correlation of -.721, insignificant due to n = 7 cases) (see Figure 11 in Appendix). This evidence seems to directly confront Vig's claim that levels of environmental support will increase during periods of economic prosperity, while decreasing during economic hardship. Although several other economic condition variables should be explored to further validate this observation, this remains an area for further study.

## **Conclusions**

The hypothesis that shifts in the constructed public opinion mood index would correlate with a proxy measure of government attention was supported by the significant bivariate correlation that emerged between the index and pages of environmental legislation enacted. This finding is significant because it bolsters the claim that the government, as elected representatives of the people, is actually attentive to changing public opinion. Regarding this relationship, it appears that support for environmental protection peaked in the early 1990s and the government responded with a plethora of new environmental/conservation legislation. Sensing a significant cooling in public support for increased environmental protection, after a two-year delay, the government responded in 1995 with a virtual shutdown in environmental legislation. In addition, it does not appear that economic concerns drive public opinion on environmental issues.

Areas of future research on the topic of public opinion on environmental protection and government responsiveness include an examination of the media's influence on both the public's considerations of environmental issues and the government's activities. Although the media almost certainly influences both, that topic remains an area for further research. In addition, it would also have been useful to track levels of membership in environmental organizations and relate that to shifts in the public opinion mood index. The index would become much more reliable if expressed preferences (support for environmental protection) were mirrored by behavioral shifts (membership). As previously mentioned, it would have also been interesting to extend all of the variables into the mid-1980s to examine the changes in government action as public opinion quickly rose moving into the 1990s.

## Appendix

Figure 1. Public Opinion (Environmental Protection) Mood Index

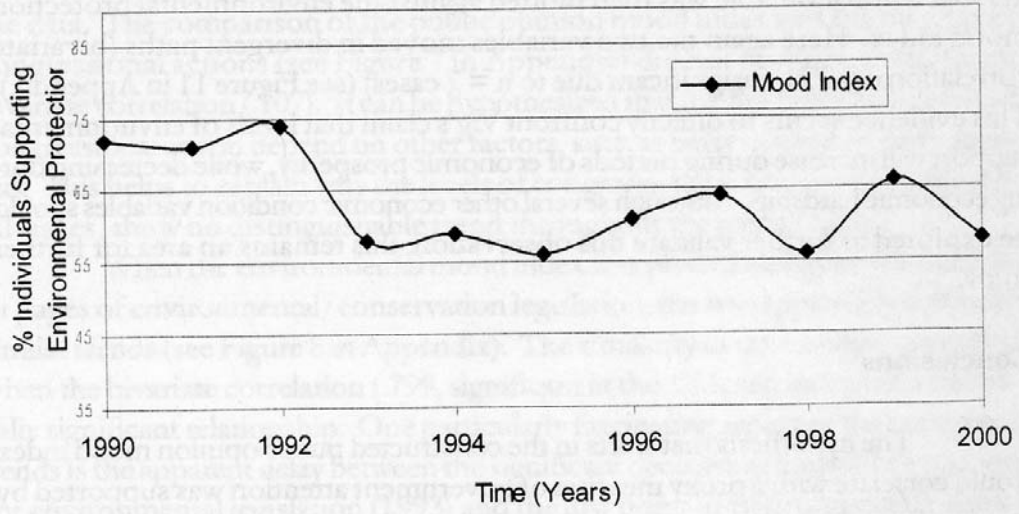


Figure 2.

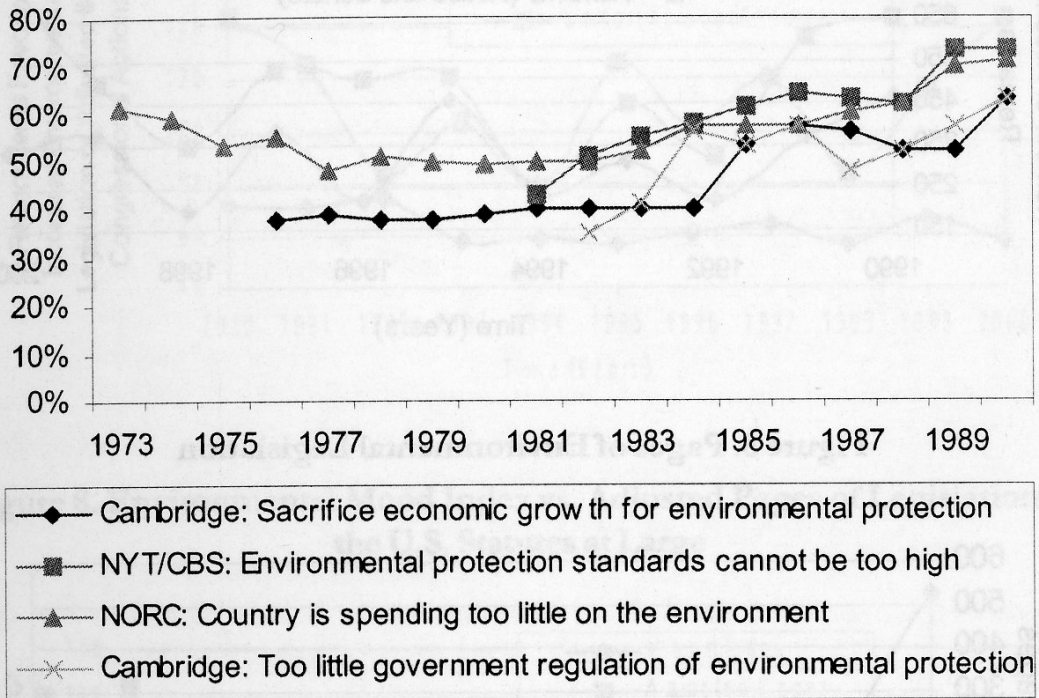


Figure 3. Total Congressional Actions on Environmental Issues (Non-Adjusted)

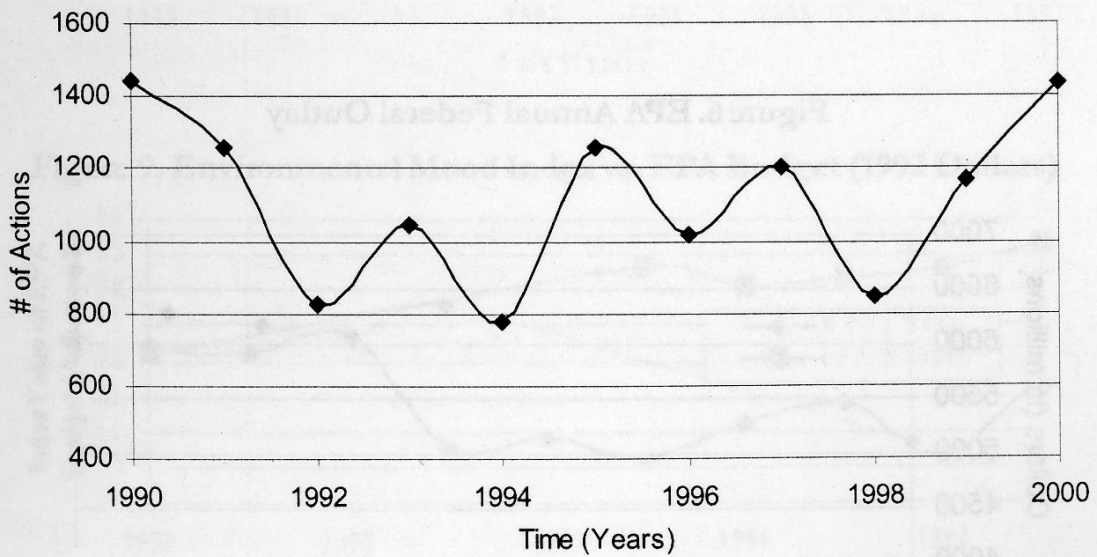


Figure 4. Actions vs. Remarks

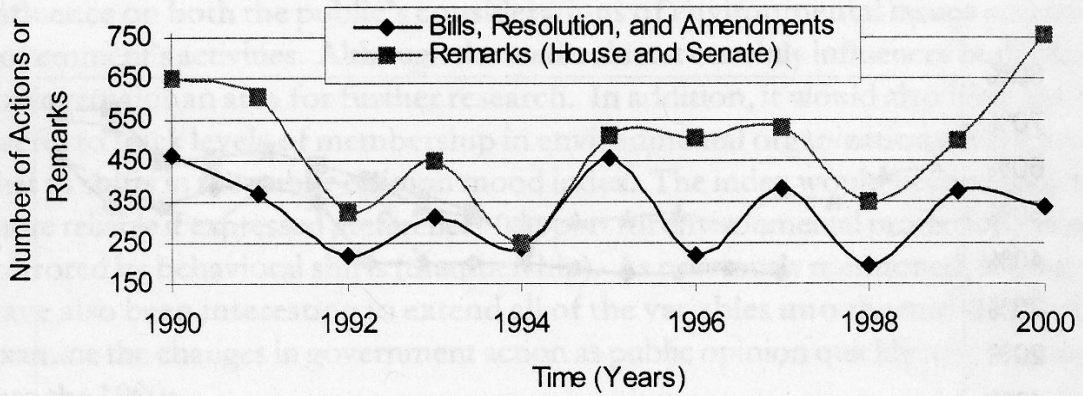


Figure 5. Pages of Environmental Legislation

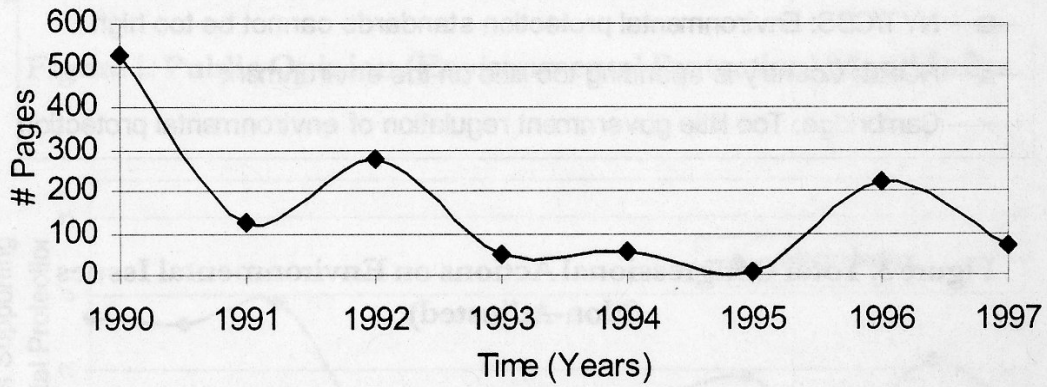


Figure 6. EPA Annual Federal Outlay

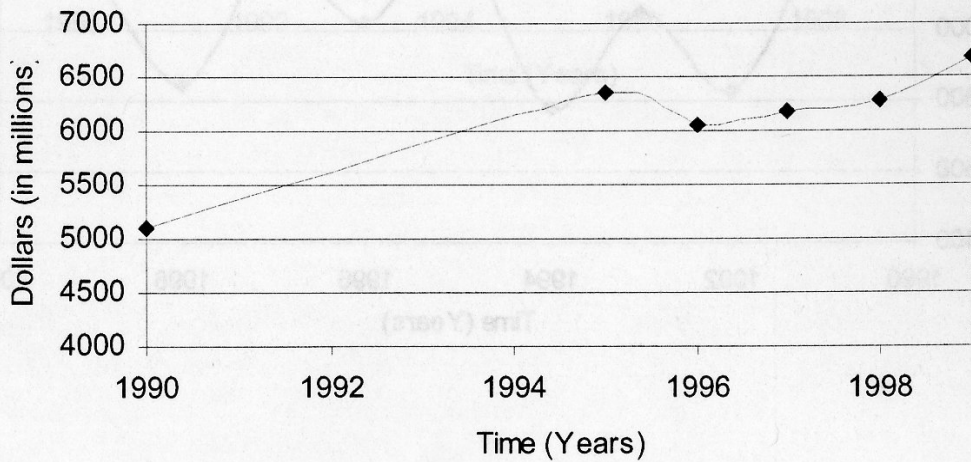


Figure 7. Environmental Mood Index and Congressional Actions

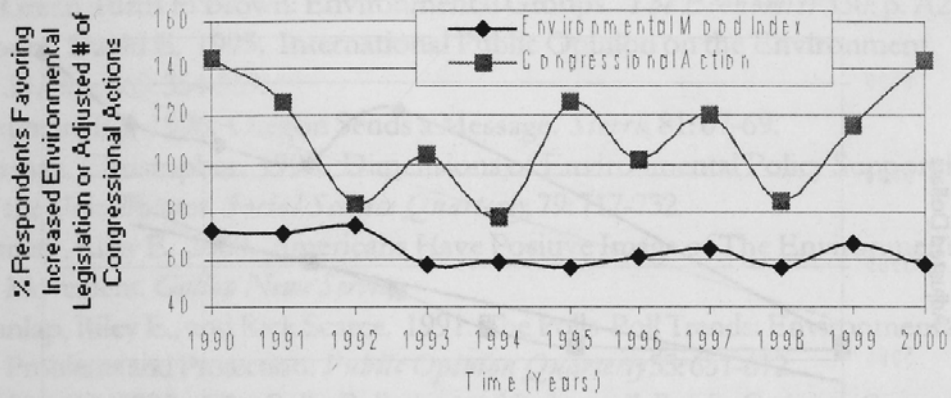


Figure 8. Environmental Mood Index vs. Adjusted Pages of Legislation in the U.S. Statutes at Large

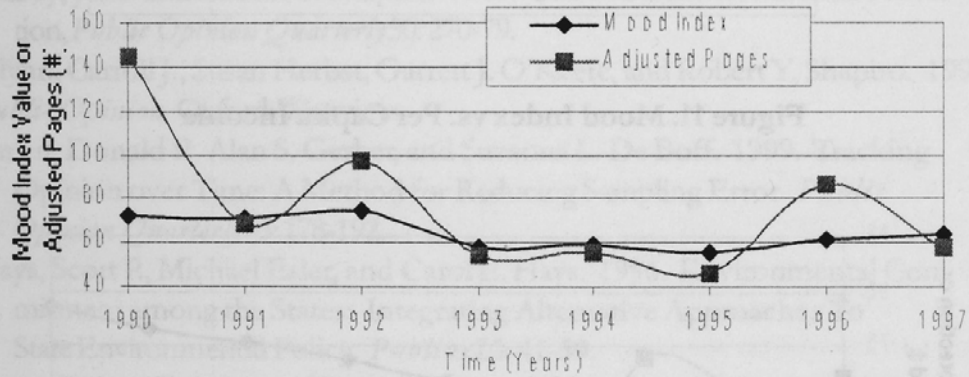


Figure 9. Environmental Mood Index vs. EPA Budget (1992 Dollars)

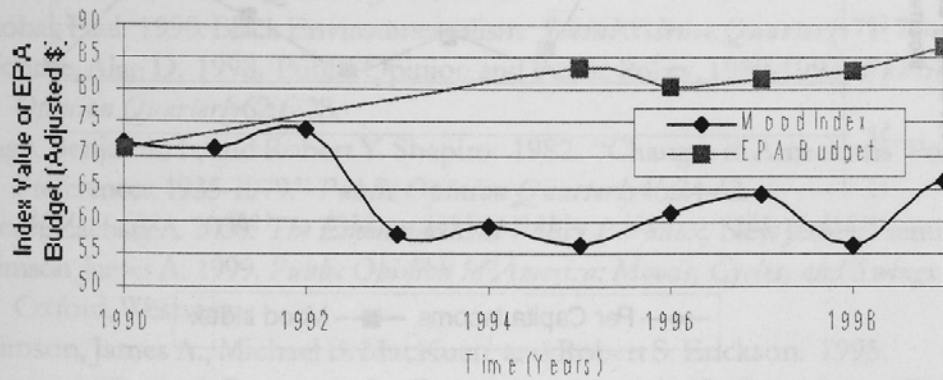




Figure 10. EPA Budget vs. Per Capita Income

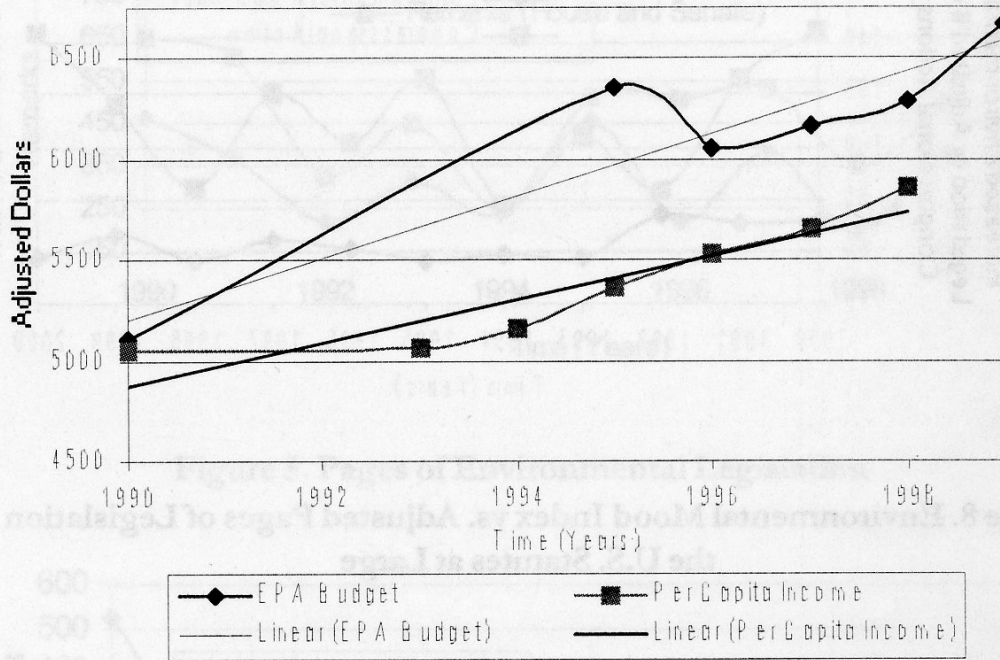
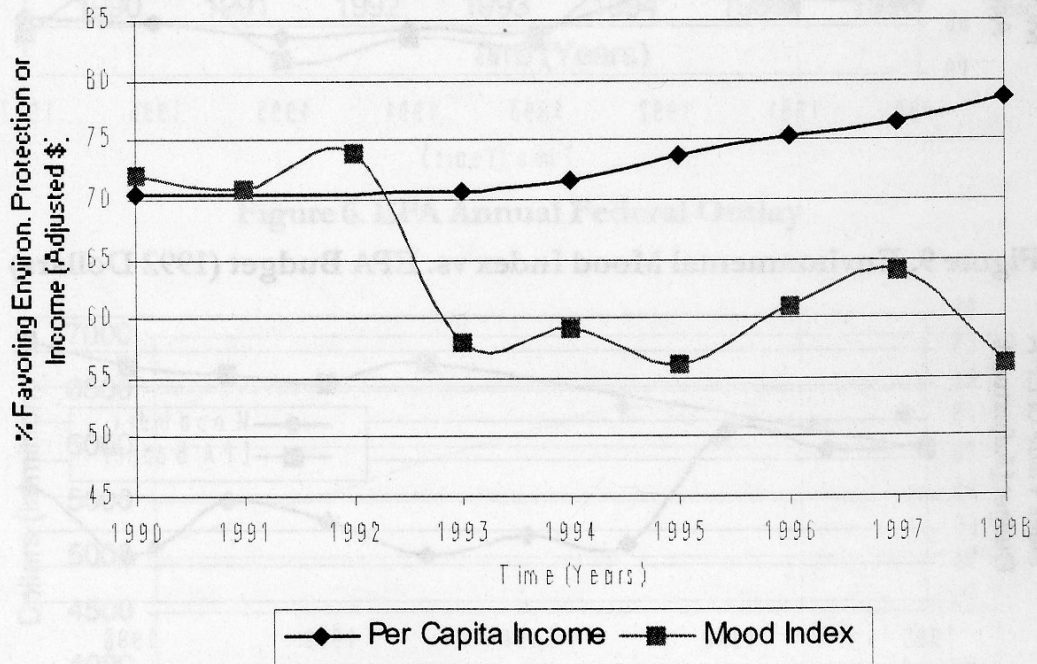


Figure 11. Mood Index vs. Per Capita Income



Michael S. Pulia is a 2001 graduate of Illinois Wesleyan University with a Chemistry and Political Science double major. Honors awarded to him include membership in Pi Sigma Alpha and Phi Eta Sigma, and publications in *the Journal of Organic Chemistry* and *the Journal of the American Society of Hematology*. Beginning in Fall 2001, Pulia will attend the Stritch School of Medicine at Loyola University.

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