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**The Modern Environmental Movement:
Public Opinion, Media Coverage, and the Importance
of Visual Information,**

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Introduction

During the sixties when the nation was entranced with a myriad of social issues, environmentalism was gaining political ground in its third wave of political reform. As civil rights demonstrators marched, ERA proponents chanted, and labor activists rallied, a quiet and polite conservationist movement was taking shape. When the more contentious social movements slowly dissipated, environmentalism emerged as one of the most powerful political forces in all of modern history.

Agenda setting theory will be reviewed as a constructive and integral tool to understanding the influence of media on environmental concern. Most environmental issues are particularly suited for examining the effect media can have on the public precisely because the majority of people do not have direct contact (or do not know they are in direct contact) with widespread environmental problems. Thus, the public turns to media for information about environmental issues.

Indeed, environmentalism has been on the public's mind fairly steadily — if not increasingly — for over forty years. This steadfast persistence in modern politics and the strength of its pervasiveness on the public agenda has led scholars like Dunlap and Scarce to term environmentalism a “second miracle” of public opinion (1991). Yet, how does such an impressive consensus of public opinion form and around what issues does it gain strength? This paper attempts to examine this question by first reviewing public opinion data and then analyzing the role media and other political, social and cultural factors may have played in perpetuating and maintaining environmental public support.

Agenda Setting Theory

Most environmental issues are particularly suited for examining the effect media can have on the public precisely because the majority of people do not have direct contact (or do not know they are in direct contact) with widespread environmental problems. For example, thousands of people swim in polluted water and are unaware of the danger while millions of others unknowingly live in homes infected with lead. Thus, most people learn of environmental issues through media coverage (Nelkin, 1987). This is particularly true of scientific issues or global problems that are remote and thus, are not generally perceivable by the public (Mikami, Takeshita, Nakada & Kawabata, 1995).

First Level Agenda Setting

The agenda setting theory first created by Don Shaw and Maxwell McCombs suggested that the media tell the public what to think about (1972). Through their examination of Chapel Hill voters, these scholars discovered that public salience of an issue reflects the agenda put forth by media. This fundamental discovery has been replicated in hundreds of other studies.

Through agenda setting research (though at the time it was not yet labeled as such) Funkhouser analyzed specific public opinion issues and juxtaposed their ranking to their appearance in media. He found the correlation between the public's notion of issue importance and the amount of news coverage was .78 (1991). Funkhouser also revealed several instances where an issue was showing improvement in reality but was simultaneously showing negative coverage in the media or vice versa.

The news media have also been shown to create crises that did not exist in society or were severely inflated. Gordon and Heath clearly demonstrated that crime during the nineties was exaggerated in the media and later caused unwarranted fear in the public (1991). Historically, strong relationships between the media agenda and the public agenda have largely

been found through a careful examination of media content and an analysis of the Gallup Poll's 'Most Important Problem' question.

Patterns of a Social Movement's Life Cycle

Social movements are believed to have natural life cycles. Indeed, the public generally becomes apathetic to social issues over time for one of many reasons — boredom, lack of media attention or the belief that government is controlling the problem (Sabatier & Mazmanian, 1980; Mauss, 1975). Downs created what has been called the issue attention cycle specifically for environmental issues in order to track the growth and decline of political participation (1972).

Downs writes that environmental problems in particular and most social problems in general follow through five basic stages (1972):

pre-problem stage: a harmful situation exists but has not yet attracted the attention of lawmakers, reporters, or the public

alarmed discovery and euphoric enthusiasm stage: a dramatic event creates public support for solving the problem

realization of the cost of significant progress stage: public support weakens

gradual decline in the intense public interest stage: recognizing the costs and becoming bored with the problem, media attention fades and the public loses interest

post-problem stage: issue is replaced by new problems, but little if any improvement results on initial problem in stage one.

Similarly, Spector and Kitsuse created 'stages in the natural history of social problems' (1977). Their model does not deal specifically with public opinion, but rather official and non-profit organizations. These scholars created the following stages:

first stage: groups make initial claims and recruit support

second stage: official recognition of problem with establishment of governmental agency to assist

third stage: those who made initial claims reemerge and express dissatisfaction with how problem is being handled

fourth stage: (possible) original group loses all confidence in how problem is being handled and create counter-institutions

When merged together it makes logical sense that the first and second stages of Spector and Kitsuse would fall into Downs' second *alarmed discovery and euphoric enthusiasm stage*. The third stage of official and non-profit organizations expressing dissatisfaction would fall into the *realization of the cost of significant progress stage* of public opinion. Finally, the fourth stage of organizational activity would presumably occur during the fourth stage of Down's cycle: *gradual decline in the intense public interest stage*. As widespread public support weakened, smaller alternative groups could be gaining momentum in other areas, which could ultimately lead to a regeneration of Downs' cycle.

These patterns of involvement from the public, government and political movements are important when evaluating any issue in order to ascertain how the movement passed from one stage to another and what can be done at each stage to lengthen the life of a movement or create greater social change. These stages will be used as benchmarks when discussing general public opinion toward environmental issues and movement activity.

Environmentalism Defined

The first issue of *The Journal of Environmental Education* broke down the term 'environmental' into eight facets (1969). These are:

In locus, the fouled, clogged streets of the city quite as much as the scarred countryside.

In scope, a comprehensive, interrelated humankind-environment-technology system.

In focus, global environmental impacts of crisis proportions threatening the well being of an over-populated planet.

In content, tough ecological choices, not easy unilateral fixes.

In strategy, long-range impact analyses and rational planning.

In tactics, grass-roots participation in resource policy formation — in the streets and through institutional channels.

In prospect, a necessary reliance on alternative sources of energy.

In philosophy, a commitment to less destructive technologies and less consumptive lifestyles.

As this sample definition illustrates, 'environmental' is a complex and intricate concept.

However, 'environmentalism' itself has come to have a consensual understanding in this country as a practice of protecting the earth. Indeed, the 1990 Tormont Webster's dictionary defines environmentalism as 'the belief that the natural environment should be protected.'

A History of Environmentalism

Environmentalism first appeared on the political landscape at the turn of the twentieth century. Gifford Pinchot and Theodore Roosevelt first asserted the importance of conservationism for pragmatic human use. However, it was John Muir who proposed environmental care purely for the sake of nature. From his efforts and others, groups such as the Sierra Club and the National Audubon Society were born.

World War I largely deflected any concern about environmental issues (O'Riordan, 1971). However, Franklin Roosevelt ushered in the second wave of environmentalism during the Great Depression and the Dust Bowl. This era focused primarily on the conservation and development of resources for economic stability. Again sidetracked by a massive war — this time, World War II — the next wave of environmentalism didn't strike until the 1950's. What

resulted was called the 'wilderness movement' and focused on saving large scale natural resources like the Grand Canyon and Dinosaur National Monument (McCloskey, 1972).

While these milestones represent significant moments in our country's history, there are specific factors that led to the widespread support of the modern environmental movement during the sixties and seventies. While all of the cultural factors can not be addressed within the scope of this paper, certain social conditions were more pervasive than others. For example, just before 1970 many social movements dissolved and activists from other causes were left searching for other available avenues of change; scientific discoveries were increasing with advances in technology; economic conditions were drastically improved after World War II; already existing environmental groups began to broaden their focus; and people were spending more time outdoors (Dunlap & Mertig, 1992).

Beginning the Third Wave

Post-Carson Era (1960-1979)

This was clearly the beginning of the modern environmental movement. Many of the old and new issues coalesced during the sixties with the publication of *Silent Spring* by Rachel Carson in 1962. In a book that tied together pesticides with mother's breast milk, she exposed the complexities of environmental destruction and the pragmatic implications on daily life. Carson's book and the ensuing public support galvanized the third wave of environmentalists into the modern environmental movement (Dunlap & Mertig, 1992). In addition, during this period the "environmental agenda was broadened to include issues affecting humans, a focus on the urban environment, radical environmental activism, and youth involvement in the movement" (Taylor, 2000). In 1970, what many scholars credit as the official beginning of the

modern environmental movement, twenty million people participated in national Earth Day celebration's (Dunlap & Gale, 1972).

The Sixties: Public Opinion

Environmental concern in America was rarely sampled before 1960, indicating its lack of public attention at the time. As this paper has shown, this quickly changed during the later half of the decade due to the political climate, social movements, economic conditions, and scientific discoveries. In an article titled *Trends in public opinion toward environmental issues*, Dunlap exhaustively covered the rising tide of public opinion over the last four decades. Through Gallup data, he summarized that between 1965 and 1970, the percentage of the public who stated that a reduction of air and water pollution was a national problem that should receive more government attention more than tripled from 17% to 53% (1992). This finding is confirmed in a series of Opinion Research Corporation surveys during the same period stating that those who claimed that air and water pollution was a very or somewhat serious problem more than doubled, from 28% to 69% for air pollution and from 35% to 74% for water (see Table 1). Clearly, this period was the beginning of the third wave and is marked as a time of transference between the *pre-problem stage* to the *alarmed discovery and euphoric enthusiasm stage* of Down's movement cycle (1972).

In terms of Gallup's Most Important Problem Facing America question, pollution was ranked ninth by 17% of the public in 1965, but by 1970 53% of the public placed it as the second most important problem. As Erskine wrote, "a miracle of public opinion has been the unprecedented speed and urgency with which ecological issues have burst into American consciousness" (1972, 120). Indeed, Pierce, Beatty and Hagner note that environmental protection had become a pervasive, consensual issue by 1970 (1982).

However, there is conflicting data during this time period — most notably, an analysis of MIP data collected in the Michigan National Election Surveys that found only 2% of the public thought that an environmental issue was a significant problem (Hornback, 1974). In 1970, the percentage jumped to 17% but still does not equal numbers found in other polls (see Table 2). Harris found that 41% of those sampled in a national survey said that environmental problems are one of the “two or three biggest problems” in 1970 (1989). However, national Gallup surveys conducted the same year found answers to the MIP ranging only from 2% to 10% of the country. Yet, overall Dunlap writes that “public concern for environmental quality escalated rapidly in the 1960s and that by 1970 majorities of the public were expressing pro-environment opinions” (1992, 94).

The Seventies: Public Opinion

Unfortunately, many pollsters stopped sampling the nation for environmental indicators during the seventies, which makes it difficult to make any claims as to how the movement was progressing (Dunlap, 1992; Erskine, 1972). From what data is available, it appears that public opinion at the turn of the decade was still relatively high. In an environmentally related issue, Murch reported that 83% of the public felt that pollution was a “serious” or “moderate” problem (1971). However, after the seventies officially arrived, public opinion began to wane. Dunlap reports that MIP questions during this period show the salience of environmental problems declining drastically between 1970 and 1975 (1992). It appeared as if 1970 was the peak of environmentalism in this country.

Indeed, many thought that the environmental movement had already entered the third stage of movement activity — *realization of the cost of significant progress stage*. In fact, Downs himself, the creator of the issue attention cycle, proclaimed that environmentalism had begun its

decline (1972). Lester notes that all of the indicators were present: decreased media attention (Schoenfeld et al., 1979) as well as heavy governmental legislation in the decade before (1989).

The only contributory data concerning public commitment to environmental problems comes from the state of Washington. Two sets of data from this state found that public concern for the state of the environment greatly declined between 1970 and 1975 (Dunlap, 1992). By 1975, it appeared that the environmental movement was moving to the fourth stage of decline in Down's issue attention cycle.

Indeed, several studies done from 1973 until 1980 show that public support was waning for environmental issues. Roper asked whether a person was more supportive of producing energy or more supportive of protecting the environment. In 1973, each side had 37% of the population's support but, but by 1980 there was a 9% difference between those that supported producing energy (45%) and those who supported protecting the environment (36%) (see Table 3). Another Roper question asked whether environmental protection laws have gone too far or not far enough. In 1973, 34% thought that laws had not gone far enough as opposed to 13% who thought laws had gone too far. In 1980, 29% thought laws had not gone far enough and a larger 24% thought laws had already gone too far.

Post-Love Canal/Three Mile Island Era (1980-Present)

This period began with the Three Mile Island nuclear accident in Pennsylvania and the devastation at Love Canal in New York. Taylor has noted that these two events managed to bring back any attention that may have been lost on environmental issues (2000).

The Eighties: Public Opinion

Public support of environmental protection gradually grew during the 1980's (see Figure 1). In 1980, 36% supported protecting the environment while 45% supported having adequate energy. However, by 1982, those saying they protected the environment (46%) grew ten percent and those saying they supported having adequate energy (35%) decreased ten percent (see Table 4). In 1980, Roper reported that 33% of environmental protection laws have not gone far enough while in 1984 that percentage grew to 48%. Furthermore, those who said regulation had gone too far comprised 25% of the population in 1980 and only 14% of the population in 1984.

The National Opinion Research Center (NORC) found that 48% felt that the U.S. was spending too little on improving and protecting the environment in 1980. However, that number grew to 54% in 1983, to 61% in 1987, and to an impressive 71% in 1990. Another study by Cambridge found that 41% said we should sacrifice economic growth rather than environmental quality in 1981 while 53% said the same in 1985 and 64% agreed with that same statement in 1990 (see Table 4).

Another poll done by NYT/CBS found that 45% felt environmental improvements must be made regardless of cost in 1981. This number grew to 66% in 1986 and 74% in 1990. Finally, another study by Cambridge found that 35% felt the amount of environmental protection by government was too little in 1982. This number grew to 56% in 1984 before settling in at 62% in 1990 (see Table 4). Thus, this public opinion data during the eighties seems to suggest that environmental issues were gaining support in the public. Indeed, questions pertaining to public support seem to have gained almost universal acceptance during this decade.

This rise in public support of environmentalism counters Downs' initial suggestion that the environmental movement was on the decline. Environmental issues seem to have held off moving into the *post-problem stage* within the minds of the public. Indeed, Dunlap writes that

public support for environmentalism during the nineties became even stronger than it was in 1970 – the supposed zenith of environmental support. He supports this argument with another Gallup question spanning from 1970 until 1990 that asked whether respondents would be willing to spend slightly more for goods if pollution was controlled. Those answering yes increased from 63% to 79% over the two decades.

While the public was supporting environmental causes more than ever before, they were also convinced that the seriousness of environmental degradation was increasing. In 1980, Roper reported that 68% felt that severe air pollution would be a serious problem 25 to 50 years from now (see Table 5). This number grew to 82 percent eight years later in 1988. Similar results were found for severe water pollution as well (69% in 1980 and 82% in 1988). Roper also found that environmental pollution was viewed as a very serious threat to 44% of citizens in 1984 and later 62% of citizens in 1988. Cambridge reports that 34% said that the overall quality of the environment in their local area was worse than it was five years ago. This number grew to 55% in 1990. Another study by Cambridge found that 28% of the public believed that most or many underground sources of water were contaminated with pollutants in 1981. However, this number later grew to 54% in 1988.

Finally, Cambridge found that the environment was volunteered as one of the two most important problems facing the United States by 2% of the people in 1982, 8% of the people in 1988 and 21% of the people in 1990. Thus, the average citizen in the United States was increasingly concerned with the seriousness of environmental destruction. This fact is supported by a Cambridge report from 1987 to 1989 that traced the percentage change of perceived environmental and personal threats from ten different environmental problems (see Table 6). Not one issue had lower than a 6% increase in perception of danger. For example, 47% of those sampled felt that air pollution in general was viewed as a high environmental

threat in 1987 while 67% felt the same way just two years later — a change of 20%. There was a similar change of 20% in the perceived personal threat of air pollution caused by cars and trucks during the same time period.

This data led Dunlap to write that “despite considerable governmental and societal efforts at environmental protection over the past two decades, there is a widespread perception that the quality of the environment — from the local to the global level — is deteriorating” (1992, 112). While this belief was not necessarily new for the public, it was strengthened by an increasing sense that the worsening environmental conditions were becoming threatening to individual’s own personal lives. Indeed, it may have been this insurgent belief that held off the fourth and final stage of Down’s issue attention cycle.

The Nineties: Public Opinion

A continuation of earlier data retrieved from Roper and Gallup was not available for this study. However, another Gallup poll found that during the beginning of the 1990s there was an astounding 76% of the public identifying with the label of ‘environmentalist.’ In addition, this decade saw a general increase in what has been labeled ‘green’ attitudes and ‘green’ behavior, according to Roper Starch Worldwide’s Green Gauge Study. This study, which is based on 2,000 home interviews, has been conducted by Roper yearly since 1990.

The most dedicated within environmentalists are labeled “True-Blue Greens in this study and grew from 11% of U.S. adults in 1990 to 14% in 1993 (Stisser, 1994). This group consistently remained highly educated and socially involved, according to the Roper study. Furthermore, what Green Gauge labels “Sprouts” — those who are in the process of leaving the identification phase into a more active environmental role — grew from 26% in 1990 to 35% in

1993. Their three rankings of environmentalists (True-Blue Greens, Greenbacks and Sprouts) grew to 55% of the U.S. population in 1993.

Media Coverage of the Environmental Movement

Strodthoff, Hawkins and Schoenfeld found a determined diffusion of ideology from the press to the public in their examination of the environmental movement as an entirety in the press (1985). These authors found that there was a clear diffusion of “environmental movement concepts occurring through a progression from early use of specialized channels to subsequent general audience media involvement, and a content emphasis that graduates over time from relevant but unfocused information, to doctrinal content, to related substantive concerns (Strodthoff, Hawkins & Schoenfeld, 1985, 134).” The environmental movement moved through three stages — the disambiguation stage or the period where a movement becomes defined; the legitimization stage where gatekeepers of information recognize an issue is valid for coverage and then the routinization stage when the content is incorporated into the media format regularly (Strodthoff, Hawkins, & Schoenfeld, 1985).

This study was principally derived from articles in the *New York Times*. This newspaper was chosen in particular due to its continued influence on other papers throughout the United States and should undoubtedly give a more accurate summation of what Americans were reading about pollution specifically and environmental problems in general (Shoemaker & Reese, 1996; Reese & Danielian, 1989; Dreier, 1982; Gans, 1979).

The Sixties and Seventies

A Lexis-Nexis study of the *New York Times* found that in 1970, seventy-five articles were retrieved when ‘environment and problem’ were found in the headline or lead paragraph (see

Figure 2). This number gradually dropped to 29 in 1975 and finally 13 in 1979. Over 1,000 articles were found in 1970 if 'pollution' was in the headline or lead paragraph (see Figure 4). This number dropped to 871 in 1975 and to 656 articles in 1979. Finally, when 'air pollution' was the key word found in the headline and lead paragraph, 100 articles qualified in 1970. This number remained constant in 1975, with 107 articles and finally 70 articles were found in 1979.

A study by O'Meara examined found similar results (see Figure 1). Both the Lexis-Nexis study and O'Meara found a peak in coverage in 1970 and a marked decrease in coverage by 1975. However, there is some difference found in the years between these two benchmarks. O'Meara found more evidence of environmental problems in news coverage from 1971-1974 than the Lexis-Nexis study completed for this research. In O'Meara's study, articles from the *New York Times* and the *Chicago Tribune* were sampled from 1962 until 1977. This scholar found that the column inches in the *New York Times* rose from 119 in 1962 to 1259 only eight years later in 1970 only to decline to 683 in 1977. *The Chicago Tribune* produced similar results: 1962 produced 70 column inches whereas 1970 produced 1036 and 1977, 791 column inches of environmental coverage.

The Eighties and Nineties

Continuing the Lexis-Nexis study conducted through the 1960s and 1970s, a *New York Times* database was sampled during the last twenty years as well. In 1980, twenty six articles were found with 'environment and problem' in the headline or lead paragraph (see Figure 2). This number rose steadily to 41 in 1985 and remained somewhat constant at 49 in 1989.

The following decade of the nineties showed more fluctuation in coverage. While 69 articles were retrieved in 1990, only 18 were found in 1993. That number grew to 24 in 1995 and

leveled off at 41 articles found under this heading in 1999. However, the decade did show an overall decreased coverage in environmental problems.

When 'pollution' was in the headline or lead paragraph, 697 articles were found (see Figure 4). This number rose slightly to 742 in 1985 and again rose to 951 in 1989. However, this number dropped to 890 in 1990, further to 515 in 1993 and remained constant from 1995 until 1999 at 542 articles.

Sixty articles were found when 'air pollution' was in the headline or lead paragraph of the *New York Times*. That number grew to 136 in 1985 and to 315 articles in 1989. The new decade saw a slight decrease in articles (308 in 1990), which continued in 1993 with 195 articles. Finally, 1995 saw a slight increase with 223 articles but ended the decade with 167 articles about air pollution in 1999.

Creating the Media Agenda

The Sixties and Seventies

What first brought environmental concerns to the press was unquestionably Rachel Carson's *Silent Spring* in 1962 (Schoenfeld, Meier & Griffin, 1979; Trefethen, 1975). Other major events in the early sixties sparked attention but not to the mass audience that Carson's book reached. In fact, due to time order, it could be argued that it was Carson's book that led to other later events, rather than these other events sparking media attention and public support. For example, Lynton Caldwell published the landmark 'Environment: A new focus for public policy' in 1963. However, this reached only a limited scholarly audience and was published a year after *Silent Spring*. The 'Future environments of North America' symposium in 1965 did the same and the House-Senate colloquium on 'A national policy for the environment' in 1968 received minimal press coverage (Schoenfeld, Meier & Griffin, 1979). Thus, the true initial

agenda setter that appears to have lit the interest of the press, other scholars and the government was indeed Carson's book.

Yet it should be noted that Carson would not have been able to write *Silent Spring* without her newfound knowledge gained from scientific discoveries. Scientific discoveries that led to advances in environmental understanding increased greatly after the International Geophysical Year (1957-1958) and the International Biological Programme (1963-1974) (Caldwell, 1992).

A few years later, two factors in particular gave rise to the unprecedented media coverage and public interest that environmentalism enjoyed in the later portion of the sixties and the early 1970s: Earth Day, 1970 and the moon landing in 1969. In 1970, what many scholars credit as the official beginning of the modern environmental movement, twenty million people participated in national Earth Day celebration's (Dunlap & Gale, 1972). Other scholars suggest that the breathtaking view of earth from the moon is what launched interest in environmental causes (Schoenfeld, Meier & Griffin, 1979; Roth, 1978). The power of this image was summed up as "that sight made much clearer Adlai Stevenson's verbal image a decade before: here we are, partners on a very small planet, with nothing between us and infinity but what we have and make of it" (Schoenfeld, Meier & Griffin, 1979, 43). Indeed, both Earth Day 1970 and the moon landing were visually stunning events in American history and were both perceived as directly immediate to the lives of an American public.

In addition, the Arab Oil embargo of 1973 and 1974 stunned a machine-dependent United States and led to an increase in media attention to environmental issues. This brief upward surge in coverage came to a halt after the embargo but then again was sparked during the eighties due to the political climate and environmental hazards occurring nationally and around the world.

Three Mile Island nuclear accident in Harrisburg, Pennsylvania and the devastation at Love Canal also may have played a factor in public opinion concerning environmental issues as well. Love Canal was declared a federal emergency area by President Carter in the summer of 1978. The area known as Love Canal was in the city of Niagara Falls in New York and had been renovated from a landfill into a fifteen acre neighborhood unbeknownst to most inhabitants. After persistent activism from those who lived in the area, it was found that over 42 million pounds of toxic chemicals were dropped in the area by businesses — most predominately a company named Hooker Chemical. In any case, this gained widespread national attention in the late seventies and early eighties. Furthermore, the nuclear power meltdown at Three Mile Island happened in March of 1979. While no one was killed, it was the first full scale nuclear power meltdown in the United States and to this day it has not been possible to make an accurate measure of how much radiation was released.

The Eighties and Nineties

In 1979, one year before Ronald Reagan took office, the World Climate Conference agreed to examine global warming more closely (Caldwell, 1992). The basic scientific understanding of global warming — that carbon dioxide emissions from fossil fuels (oil, coal etc), methane from agriculture and CFC's found in ozone depleting materials block infrared radiation from escaping the earth — was gaining prominence. Directly relevant to all life on earth, this trapped radiation was found to later increase surface heat on this planet, which then raises temperatures and sea levels (Wilson, 2000). As these discoveries gained more credence, they may have also increased the amount of environmental coverage.

In addition, President Reagan's recurrent themes of environmental deregulation for increased energy production may also have ironically been the impetus for increases in

environmental reporting and environmental action (Portney, 1984). Those previously concerned about environmental issues but complacent due to their belief that government was handling the issue, were suddenly frightened by the destruction a deregulatory government could have on this planet and their own lives.

Several scholars have suggested that the unmistakable environmental deregulation of Reagan, coupled with the non-enforcement of environmental policies by Anne Gorsuch of the Environmental Protection Agency and James Watt of the Department of the Interior led to an increase in environmental participation as well as an increase in media coverage (Cutter et al. 1991; Dunlap, 1987; Milbrath 1984).

Gillroy and Shapiro write that several worldwide incidents managed to keep environmental issues at the forefront of the public's mind during the eighties and nineties as well (1986). Issues surrounding contaminated groundwater; air pollution; nuclear waste disposal; controversy at the Environmental Protection Agency; oil spills such as the Exxon Valdez disaster; the catastrophe in Bhopal, India; wild life degradation and the discovery of asbestos poisoning continued to push coverage about environmental issues. Indeed, accidents may have led to a continuance of coverage during the last forty years simply because there have been so many of them. During the first five years of the eighties alone, there were 7,000 accidents involving toxic chemicals (Diamond, 1985).

The massive accidents in India and Ukraine are particularly important due to their sheer scope in devastation. Bhopal, India suffered through a catastrophic chemical leakage of methyl isocyanate (MIC) gasses from an American pesticide factory named Union Carbide in December of 1984. All told over 8,000 people died and over 500,000 people were injured. Only two years later in April of 1986, the number four reactor in Chernobyl, Ukraine exploded. Thirty people

died immediately while 15,000 people died soon afterwards. In addition, 3.5 million people suffered illnesses because of radioactive contamination.

These events were soon followed by a large-scale accident within the United States borders during March of 1989. An Exxon ship leaked millions of tons of oil into the Alaskan waters, which killed countless animals who lived off or in the ocean. The nation watched hours of videotape showing birds struggling for their last breath in a sea of oil and otters slowly dying in sludge-infested waters. This accident clearly raised the consciousness of Americans to the environmental dangers that can remain in a supposed progressive economy and government.

While most events grabbing media attention during the eighties and nineties were environmental accidents, other factors may have also played into the increasing public support for environmental protection. Namely, the twentieth earth day in 1990 was fairly certain to have increased environmental coverage and public support (Dunlap & Scarce, 1991).

Comparisons between Measurements

Due to the incongruent and inconsistent nature of the public opinion data, it was impossible to conduct any statistical cross tabulation analysis between the variables. Thus, only general statements about relationships could be made. However, there were some interesting findings when comparing the public opinion data, social and cultural events with media coverage.

Environmental Quality

Public opinion of environmental concern wasn't even measured prior to 1960, which gives some indication to its prevalence in society. Indeed, after Carson's *Silent Spring* was published, public opinion and media coverage continuously rose until 1970. Coverage of

environmental problems from the *New York Times* hit an all time high of 75 articles in 1970 (see Figure 2). This corresponds with the work of O'Meara and Spector and Kitsuse in their study of environmental coverage from the *Chicago Tribune* and the *New York Times*. (see Figure 1). Recall that the moon landing occurred in 1969 and the first Earth Day celebration occurred one year later in 1970. Thus, these events may have sparked the initial boom in coverage. Unfortunately, no continuous data concerning environmental public opinion exists until 1973 so it is impossible to make any suggestions as to the relationship between environmental concern from the public and news coverage during this time period.

Coverage of environmental problems continued to decline from 1970 until 1979, when it hit an all time low of 13 articles in the *New York Times*. When one looks at public opinion data about general environmental issues, there is some relationship with media coverage. For example, 61% of the people thought that the U.S. government was spending too little on environmental problems in 1973, but that number dropped to 48% in 1980. There is some conflicting evidence from the data showing that those who believed environmental protection had not gone far enough remained somewhat stable from 1973 until 1979 (34% to 29%). Yet the preponderance of the data does show a decline in public concern during the seventies coupled with a decline in newspaper coverage. This is an interesting finding when one considers the two major environmental catastrophes of the seventies in the United States: Love Canal and Three Mile Island. Thus, while news coverage and public opinion seem to follow the same general trend, these factors did not correlate with environmental catastrophes during the seventies. Therefore, it appears as if mass media — particularly the *New York Times* — was a stronger predictor of public opinion concerning environmental problems in general during the 1970s than environmental hazards.

By 1982, the number of environmental problem articles shot up to 46 where it remained somewhat stable until 1990. From 1979 until 1982, the *New York Times* coverage increased 33% on environmental issues. Public opinion drastically increased during the eighties as well. In 1981, 31% of the people thought that environmental protection had not gone far enough. However, that number increased to 48% in 1983 and 55% in 1989. Furthermore, those who felt that environmental improvements must be made regardless of cost were at 45% of the public in 1981 and then jumped to 74% of the population in 1989. Thus, there does seem to be a relationship between news coverage and public opinion. The high point of public opinion serendipitously occurred with the Exxon Valdez oil spill in 1989. This may have been only one of the social events that spurred increased media coverage.

As it has been noted, environmental coverage greatly increased in the early 1980s and public opinion also showed a marked increase during the same time period. There were no major worldwide catastrophes during these years so the increase could be attributed to the incoming Reagan administration as other scholars have suggested. During the eighties, the Reagan administration cut back environmental protection standards. This happened shortly after the Love Canal disaster and the nuclear meltdown at Three Mile Island during the seventies. Thus, Americans may have felt that this newly-introduced deregulation was somewhat unnerving in the early part of the eighties given the environmental hazards of the seventies. Shortly after this initial small boom in public opinion and media coverage, the tragedies at Bhopal and Chernobyl occurred. While a relatively small number of fatalities came from Three Mile Island and Love Canal, thousands died at both Bhopal and Chernobyl. These devastating events may have led more Americans to want environmental protection at any cost, which the public opinion data showed. The final upsurge in public opinion may have been solidified with the Exxon Valdez oil spill in 1989.

The nineties did not witness any large scale environmental disasters and the news coverage reflected that. Since the height of 1990, news coverage of environmental problems has slowly declined. Unfortunately, there is not any public opinion data available that could suggest a relationship with this reduction in media attention to environmental concern.

Environmental Pollution

In the year of 1969, there were 641 articles about environmental pollution. However, that number skyrocketed to over 1,000 in 1970 and remained stable until 1975 when it dropped only slightly to 871 and then rebounded to over 1,000 articles by 1977. Only one year later, that number plummeted to 501 and then jumped again to 697 articles by 1980. Public opinion seemed to follow the same trajectory. Unfortunately, there is only data until 1970, but the number of respondents who felt that water pollution was a serious problem jumped from 58% in 1968 to 74% in 1970 and there was a similar increase in air pollution as well (55% in 1968 to 69% in 1970). This pivotal year saw the walk on the moon and the first Earth Day in America. Therefore, there seems to be some relationship during the sixties and until 1970 between public opinion about pollution, media coverage and social events in the United States.

There were 656 articles about pollution in 1980. That number increased in 1981 to 800 articles and remained somewhat steady until 1988 when over 1,000 pollution articles appeared. Public opinion concerning environmental pollution was slowly increasing as well. In 1980, 28% felt that most or many underground sources are contaminated with pollutants. However, by 1987 that number slowly increased every year to 54% of the public. Again, the general increase in environmental coverage in 1980 and 1981 could have been due to the incoming Reagan administration as there were no major instances of environmental pollution during this period. However, it is interesting to note that neither coverage nor public opinion greatly increased

until 1988. This finding seems to suggest that distant natural disasters, such as Bhopal and Chernobyl, did not play a large role in setting the media agenda nor the public agenda. However, both public opinion and media coverage increased in 1989, the year of the Exxon Valdez spill in America. Thus, local environmental destruction seems to have played a role in setting both the media agenda and the public agenda rather than international instances of environmental pollution.

The nineties did not witness any large scale environmental disasters and the news coverage has reflected that. Since the height of 1988, news coverage of environmental pollution has slowly declined. Unfortunately, there is not any public opinion data available that correlates with this reduction in media attention to environmental pollution.

Conclusion

Environmental issues both in general and in regards to pollution gained wide and fast public support during the sixties and peaked in 1970. As Dunlap has suggested, environmental declined sharply in public opinion until the later half of the decade when public support continued to decline but at a less rapid pace (1992). However, while public support did subside somewhat during the later half of the seventies, it did not disappear from the public agenda entirely. The eighties saw a general increase in public support as well as a steady increase in environmental coverage from the mass media. There is not any data available concerning public opinion of environmental issues during the nineties, but an examination of environmental media coverage found that it is in fact declining.

Thus, it appears that environmental public opinion is clearly related to newspaper coverage, both in terms of pollution and environmental problems in general. However, there is conflicting results as to the influence of major events such as Love Canal, Three Mile Island,

Bhopal and Chernobyl. From the limited data available, it is simply impossible to discern the impact these important events have had on public opinion and newspaper coverage. Yet, it does seem as if massive international incidents, such as Bhopal and Chernobyl, and earlier environmental destruction in the United States, such as Three Mile Island and Love Canal, did not have as strong of an agenda setting effect on public opinion and media coverage as the local Exxon Valdez oil spill. Furthermore, it appears as if the moon landing and Earth Day 1970 had a strong impact on public opinion and media coverage.

The relatively small impact of international incidents on American public opinion and media coverage may be due to the reduced perceived threat of immediacy in this country. Three Mile Island and Love Canal may not have shifted public opinion or media coverage because there were no striking visible effects of these two incidents. Surely, they both caused extreme environmental destruction, but the results were not as apparent as wildlife dying in the oil-saturated waters off of Alaska's coast. The impact of visual communication and perceived immediacy may also be the cause behind the strong agenda setting effects of the moon landing and Earth Day 1970. Both of these incidents were extremely visual (like the Exxon Valdez spill) and were also perceived as immediate in the personal lives of Americans.

Finally, it is impracticable to tell if any recent declines in newspaper coverage or public opinion is an indicator of the decline of the environmental movement. However, one thing is certain — the environmental movement has not already moved into the later stages of Downs' issue attention cycle, as earlier research has suggested. Indeed, contrary to earlier reports, it appears as if the environmental movement continues to remain in the second stage of Down's issue attention cycle: *the alarmed discovery and euphoric enthusiasm stage*. While public opinion did decline during the seventies, it quickly rebounded in the next decade. The nineties have shown a slight decrease in public opinion and news coverage, yet it is not enough to warrant an

official 'decline of the movement' — particularly when some indicators of public support are above those during 1970, the supposed zenith of environmentalism in this country. More time is needed to discover whether the movement has moved into the next stage or not.

Clearly, much more work in this area is needed if a better understanding of the relationship between public opinion, news coverage and actual events is to take place. Much more work is needed to examine what or who set the media agenda of environmental issues during the last forty years. Unfortunately, at this time all of the data needed for a thorough analysis (sequenced public opinion data, newspaper coverage and social events) is not available. However, through further research and collaborative efforts with other scholars, this data may come to fruition and thus, emit some new understanding in this area.

Figures

Figure 1

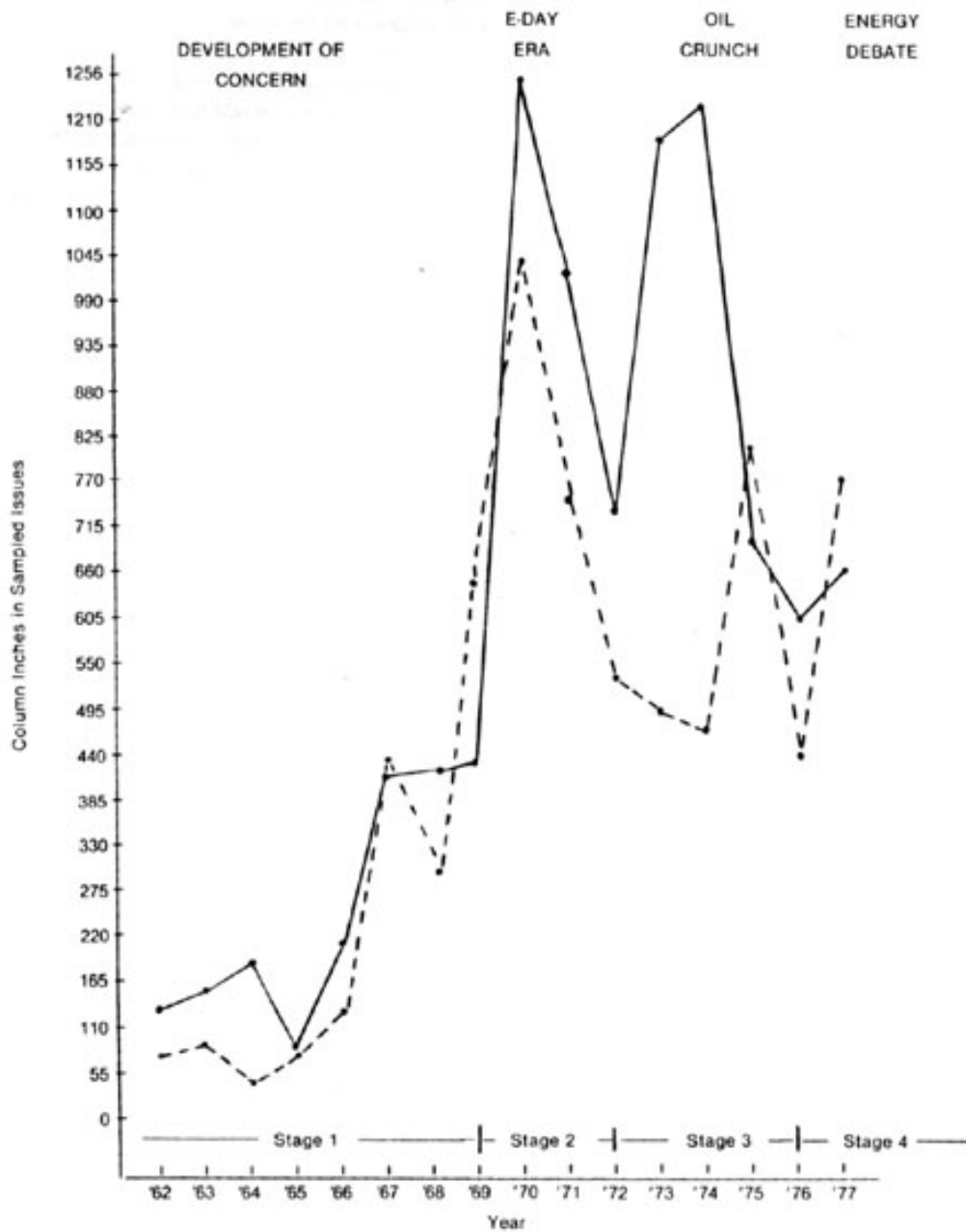


FIGURE 1

Trends in environmental reportage for the Chicago Tribune (---) and the New York Times (—) (from O'Meara, 1978), plotted against "stages in the natural history of social problems" (Spector and Kitsuse, 1977).

Source: Dunlap, R. E. & Scarce, R. (1991). The polls — poll trends: environmental problems and protection. *Public Opinion Quarterly*, 55, 651-672.

Figure 2

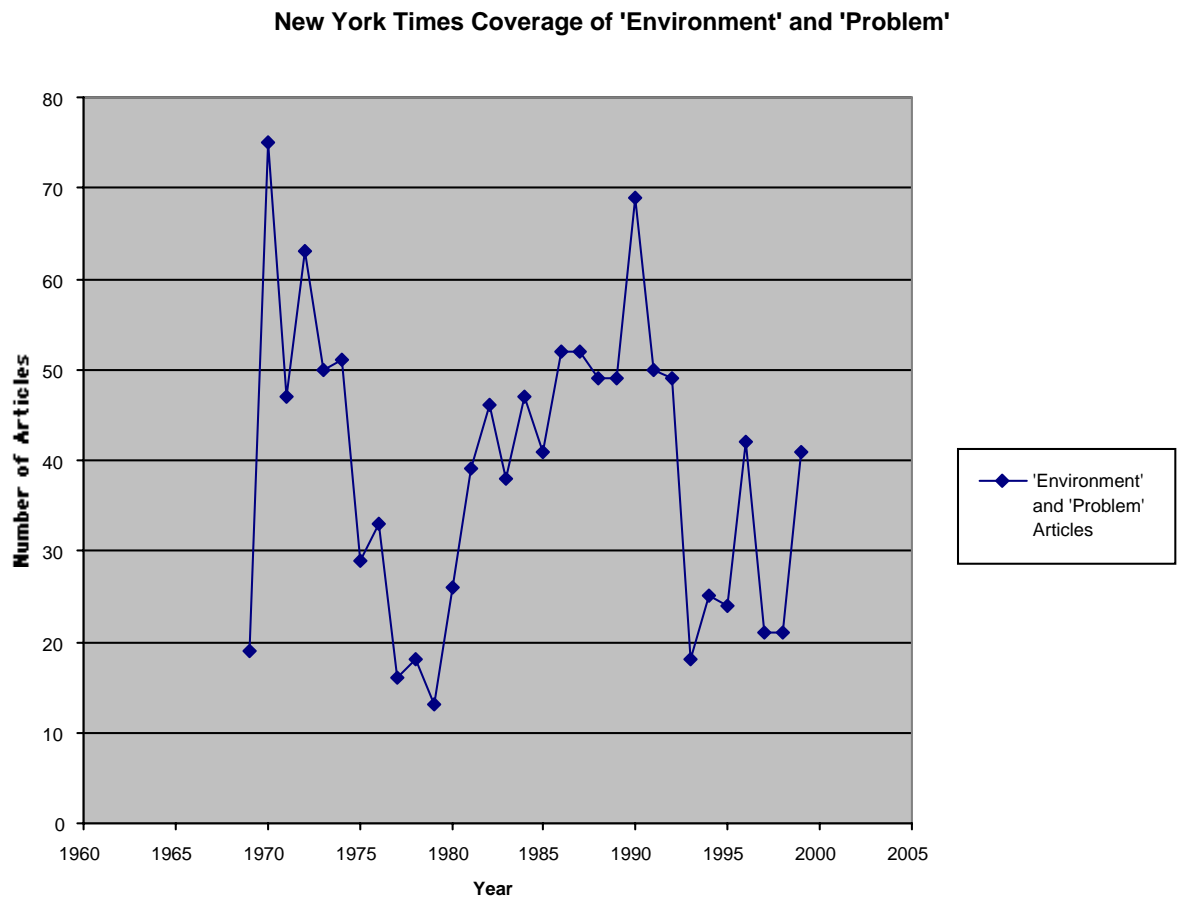


Figure 3

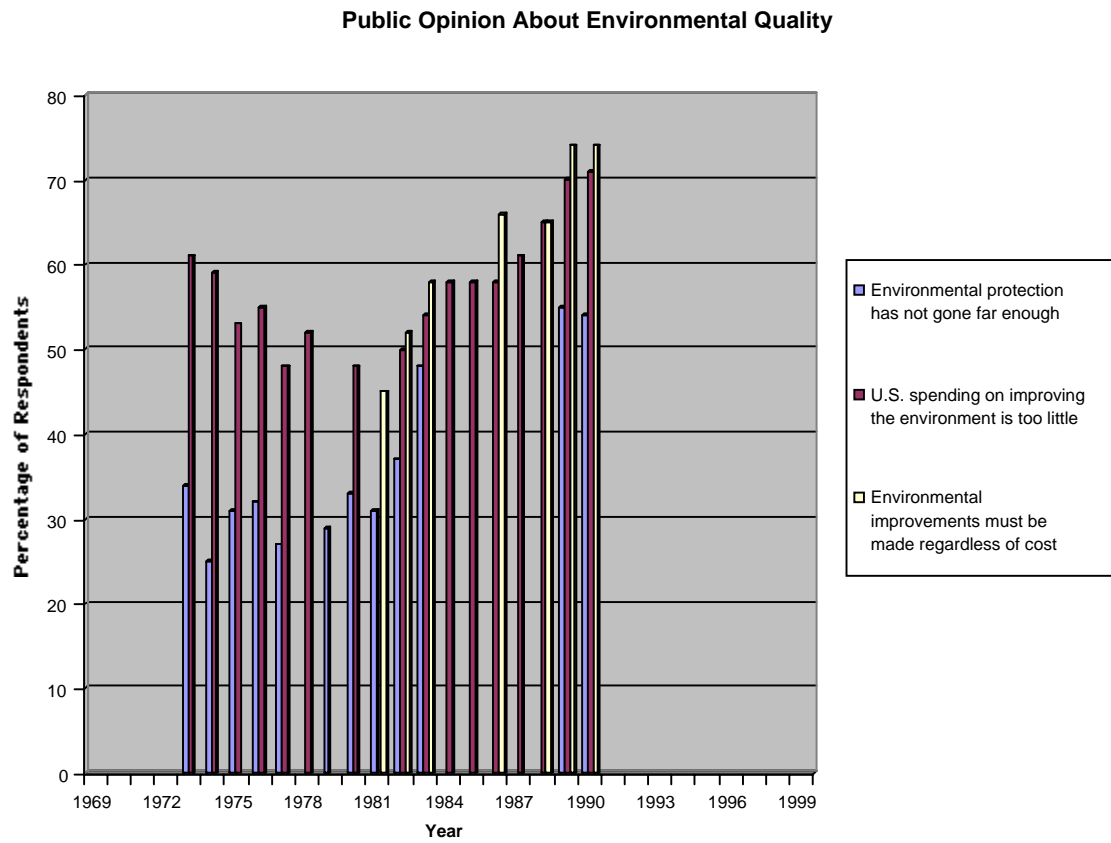
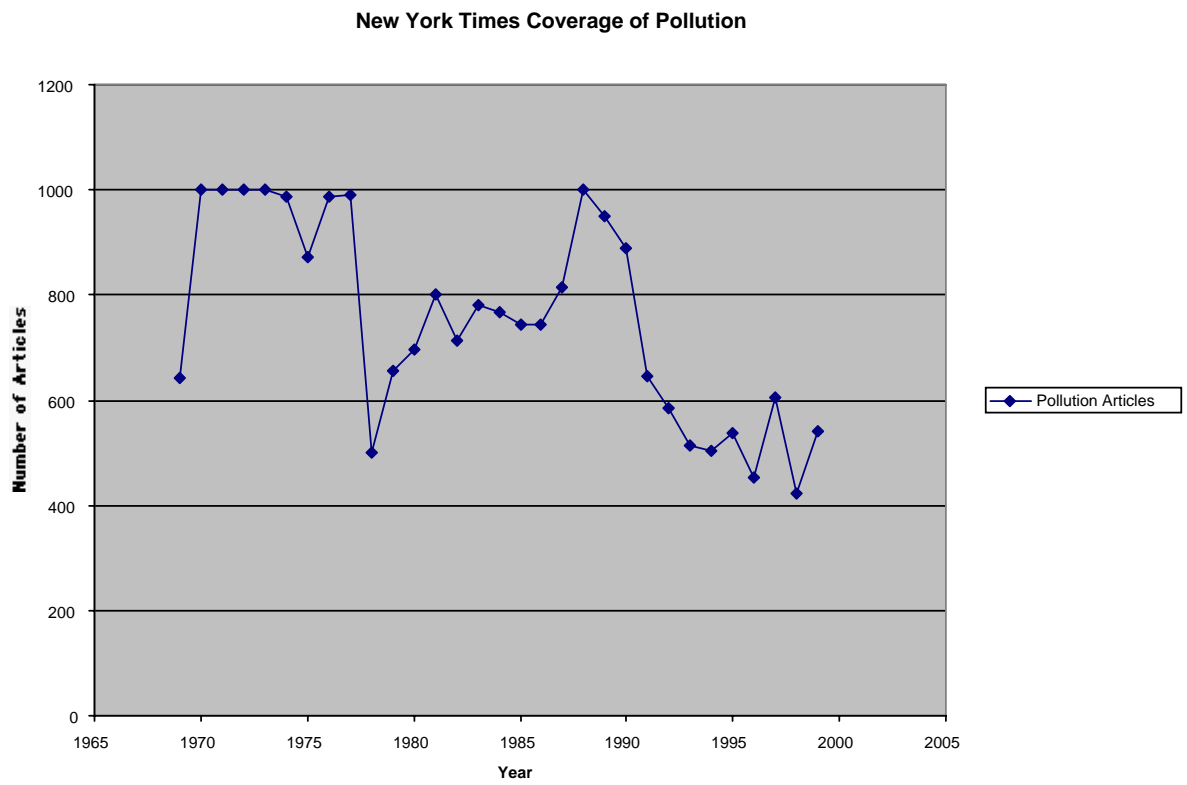


Figure 4



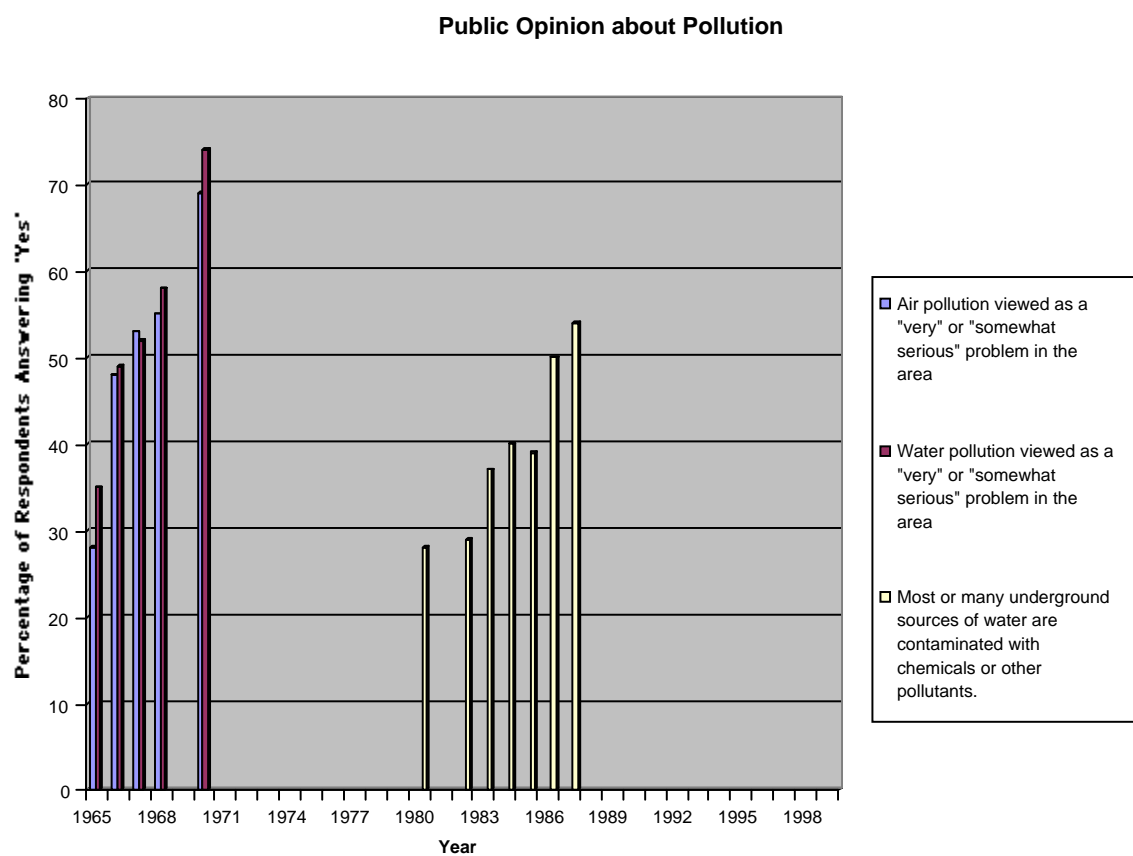


Figure 5

Tables

Table 1

Trends in Public Concern for Environmental Quality (mid 1960s to 1970)

National Survey	Question	65	66	67	68	69	70
Gallup	"Reducing pollution of air and water" selected as one of three environmental problems that should receive attention of government	17	-	-	-	-	53
Opinion Research Corp.	Air/ water pollution viewed as "very or somewhat serious" in the area:						
	a. air pollution	28	48	53	55	-	69
	b. water pollution	35	49	52	58	-	74
Louis Harris	"A lot" or "some" air pollution to thought to exist in the area			56	-	-	70
Louis Harris	Willing to pay \$15 a year more in taxes to finance air pollution control program			44	-	-	54
Louis Harris	"Pollution control" selected as government spending area "least like to see cut"					38	55

Source: Dunlap, R. E. (1992). Trends in public opinion toward environmental issues: 1965-1990. In R. E. Dunlap & A. G. Mertig (Eds.), *American environmentalism: The U.S. environmental movement, 1970-1990* (pp. 89-116). New York, NY: Taylor & Francis.

Table 2

Longitudinal Studies of Public Concern for Environmental Quality
(mid 1960s to mid 1970)

Survey	Question	68	69	70	71	72	73	74	75	76
Michigan National Election Survey (National)	Pollution, ecology, etc., volunteered as one of the country's "most important problems"	2	-	17	-	10				
Louis Harris (National)	Pollution, ecology, etc., volunteered as one of "the two or three biggest problems facing people like yourself"			41	-	13	11	9	6	
Wisconsin (State)	Environmental problems volunteered as one of two most important facing the state	17	-	40	-	15	-	10		
Washington (panel)	Favor government spending "more money" on			70	-	-	-	32		
	a. pollution control			52	-	-	0	37		
	b. protection of natural resources									
Washington (trend)	"Reducing air and water pollution" selected one of two or three most serious problems in:									
	a. state			44	-	-	-	-	-	18
	b. respondents' community			23	-	-	-	-	-	15

Source: Dunlap, R. E. (1992). Trends in public opinion toward environmental issues: 1965-1990. In R. E. Dunlap & A. G. Mertig (Eds.), *American environmentalism: The U.S. environmental movement, 1970-1990* (pp. 89-116). New York, NY: Taylor & Francis.

Table 3

Trends in Public Concern for Environmental Quality
(Early 1970s to 1980)

National Survey	Question	73	74	75	76	77	78	79	80
Roper	More on the side of:								
	a. protecting the environment	37	39	39	44	35	-	38	36
	b. having adequate energy	37	41	40	33	43	-	43	45
Roper	Environmental protection laws and regulations have gone:								
	a. not far enough	34	25	31	32	27	-	29	33
	b. too far	13	17	20	15	20	-	24	25
NORC	U.S. spending on improving and protecting the environment:								
	a. too little	61	59	53	55	48	52	-	48
	b. too much	7	8	10	9	11	10	-	15
Cambridge	Sacrifice environmental quality or sacrifice economic growth								
	a. sacrifice economic growth				38	39	37	37	-
	b. sacrifice environmental quality				21	26	23	32	-
Roper	Will be a "serious problem" 25 to 50 years from now:		68						68
	a. severe air pollution		69						69
	b. severe water pollution		53						57
	c. shortage of water supplies								

Source: Dunlap, R. E. (1992). Trends in public opinion toward environmental issues: 1965-1990. In R. E. Dunlap & A. G. Mertig (Eds.), *American environmentalism: The U.S. environmental movement, 1970-1990* (pp. 89-116). New York, NY: Taylor & Francis.

Table 4

Trends in Public Concern for Environmental Quality
(1980 to 1990)

National Survey	Question	80	81	82	83	84	85	86	87	88	89	90
Roper	More on the side of:											
	a. protecting the environment	36	40	46	-	-	-	-	-	-	57	52
	b. having adequate energy	45	39	35	-	-	-	-	-	-	24	24
Roper	Environmental protection laws and regulations have gone:											
	a. not far enough	33	31	37	48	-	-	-	-	-	55	54
	b. too far	25	21	16	14	-	-	-	-	-	11	11
NORC	U.S. spending on improving and protecting the environment:											
	a. too little	48	-	50	54	58	58	58	61	65	70	71
	b. too much	15	-	12	8	7	8	6	6	5	4	4
Cambridge	Sacrifice environmental quality or sacrifice economic growth											
	a. sacrifice economic growth	41	41	42	42	53	58	57	52	52	64	
	b. sacrifice environmental quality	26	31	16	27	23	19	23	19	21	15	
NYT/CBS	Environmental improvements must be made regardless of cost:											
	a. agree	45	52	58	-	-	66	-	65	74	74	
	b. disagree	42	41	34	-	-	27	-	22	18	21	
Cambridge	Amount of environmental protection by government:											
	a. too little			35	44	56	54	59	49	53	58	62
	b. too much			11	9	8	10	7	12	12	9	16

Source: Dunlap, R. E. (1992). Trends in public opinion toward environmental issues: 1965-1990. In R. E. Dunlap & A. G. Mertig (Eds.), *American environmentalism: The U.S. environmental movement, 1970-1990* (pp. 89-116). New York, NY: Taylor & Francis.

Table 5

Trends in Perceived Seriousness of Environmental Problems
(1980 to 1990)

National Survey	Question	80	81	82	83	84	85	86	87	88	89	90
Roper	Will be a "serious problem" to 50 years from now:	25										
	a. severe air pollution	68				70				82		
	b. severe water pollution	69				71				82		
	c. shortage of water supplies	57				53				66		
	d. the 'greenhouse effect'	-				37				65		
	e. overpopulation	52				56				61		
Cambridge	"Overall quality of the environment around here" worse than five years ago				34	33	-	32	32	46	49	55
Cambridge	"Most" or "many" underground sources of water are contaminated with chemicals or other pollutants	28	-	29	37	40	39	50	54			
Cambridge	"Quality and safety of your drinking water" is worse than five years ago						31	31	34	45	45	46
Cambridge	Feel the 'greenhouse effect' is a "very" or "somewhat" serious problem		43	-	-	-	63	-	71	75		
Roper	"Environmental pollution" viewed as "very serious threat" to citizens					44	-	-	-	62		
Cambridge	Environment volunteered as one of "the two most important problems" facing the U.S. today		2	-	-	-	-	5	8	16	21	

Source: Dunlap, R. E. (1992). Trends in public opinion toward environmental issues: 1965-1990. In R. E. Dunlap & A. G. Mertig (Eds.), *American environmentalism: The U.S. environmental movement, 1970-1990* (pp. 89-116). New York, NY: Taylor & Francis.

Table 6

Perceived Environmental and Personal Threats from Various Problems
Cambridge Reports, Inc.
(1987 and 1990)

Problem	High Environmental Threat			High Personal Threat		
	87	89	Change	87	89	Change
Disposal of hazardous waste material	65	71	+6	62	69	+7
Contamination of underground water supplies	52	67	+15	47	65	+18
Air pollution (general)	47	67	+20	-	-	-
Pollution of our rivers, lakes, and oceans	54	67	+13	46	60	+14
Using additives and pesticides in our food supply	49	55	+6	49	60	+11
Depletion of the ozone layer in the atmosphere	42	61	+19	39	58	+19
Air pollution caused by business and industry	-	-	-	37	58	+19
Air pollution caused by cars and trucks	-	-	-	32	52	+20
The greenhouse effect	26	52	+26	20	48	+28
Acid rain	38	53	+15	33	43	+10

Source: Dunlap, R. E. (1992). Trends in public opinion toward environmental issues: 1965-1990. In R. E. Dunlap & A. G. Mertig (Eds.), *American environmentalism: The U.S. environmental movement, 1970-1990* (pp. 89-116). New York, NY: Taylor & Francis.

Table 7

Social and Political Events
(1960-1990)

1962	Rachel Carson's <i>Silent Spring</i>
1969	Moon Landing
1970	Earth Day
1973-1974	Arab Oil Embargo
1978	Love Canal
1979	Three Mile Island
1979	Global Warming Theory Confirmed
1980	Ronald Reagan Becomes President
1984	Bhopal, India
1986	Chernobyl
1989	Exxon Valdez Oil Spill
1990	Earth Day 20 th Anniversary

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