



# American Opinion on Global Warming

## The Impact of the Fall 1997 Debate

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Extensive media attention to global warming and the surrounding debate during the fall of 1997 focused public attention on the issue. Both before and afterward, most Americans believed that global warming exists, is bad for people, and should be combated. But beneath the surface, dramatic changes were taking place: public opinion on global warming became more politicized.

During the fall of 1997, the American media focused a great deal of news coverage on global climate change and the debate being waged over whether the phenomenon poses serious problems or even exists. Kicked off in early October by the White House Conference on Global Climate Change, the media barrage included hundreds of stories on global warming on television and radio and in newspapers and magazines. The surrounding debate about the issue and its implications received further amplification in advertisements, paid for by business and other advocacy groups, as well as radio talk shows and numerous web sites. Coverage and debate continued until the United States and other nations met in Kyoto, Japan, in early December to sign a climate treaty. Afterward, the media turned away from global warming and attended to other issues.

Media focus on the environment at such a pitch has occurred rarely during the last thirty years. In only a few other instances has the concentration of coverage been comparable: in 1969, when both a blowout at an offshore oil drilling platform in Santa Barbara and the first Earth Day heightened environmental consciousness, and then again in 1990, when the *Exxon Valdez* spilled millions of gallons of oil into Prince William Sound.

Did the 1997 media deluge and public debate have any impact on Americans' opinions on global

warming? The traditional approach to answering this sort of question has been to measure the percentage of citizens who hold various views before and after exposure to information on a certain subject. If those percentages stay the same, most analysts conclude that opinions did not change, because (1) people failed to notice the media coverage, (2) the information offered to people lacked either credibility or novelty, and/or (3) people's opinions were so strongly crystallized that they were nearly impossible to budge.

Remarkably, though, this traditional approach to studying public opinion change would lead to exactly the *wrong* conclusion about the impact of the fall 1997 media coverage and debate on global warming. Beneath the surface of seemingly stable public opinion distributions there can be dramatic, interesting shifts in the views of different subgroups of the electorate. But to see those dynamics, one must bring to bear the conceptual and methodological tools of political psychology.

We are political psychologists, and in this article, we outline the findings of our recent survey research studying the impact of the fall 1997 media coverage of the issue of global climate and the debate that surrounded it.

We commissioned the Ohio State University Survey Research Unit (SRU) to conduct telephone interviews with a representative cross-section of 688

American adults between September 1 and October 5, 1997, that is, before the White House held its conference on global climate change. The SRU also interviewed another representative national cross-section of 725 adults between December 20, 1997, and February 13, 1998, that is, after the United States signed the climate treaty in Kyoto.

During the thirty-minute interviews, respondents were asked an extensive range of questions relevant to global warming. This allowed us to understand the contours of public beliefs and attitudes and to see how they changed.

### Opinions in September–October 1997

*Existence of global warming.* Prior to the White House conference, substantial proportions of Americans said that they believed in the existence of global warming. A large majority of people (77 percent) said they thought the world's temperature probably had been rising during the last one hundred years, and 74 percent said the world's temperature will probably go up in the future if nothing is done to stop it.

*Consequences of global warming.* A majority of Americans (61 percent) believed that global warming would be bad; 15 percent thought it would be good; and 22 percent thought it would be neither good nor bad. When asked about a series of specific possible consequences of global warming, most respondents said it would cause undesirable outcomes: more storms (69 percent), reduced food supplies (57 percent), more water shortages (54 percent), rising sea levels (52 percent), and extinction of some animal (52 percent) and plant species (50 percent). When deciding how good or bad global warming would be overall, people placed the most weight on its impact on sea levels, food supplies, and animal species extinction.

*Effort to combat global warming.* When asked how much should be done to combat global warming, majorities of Americans advocated significant effort. Fifty-nine percent said the U.S. government should do “a great deal” or “quite a bit.” Fifty-eight percent said the same about other countries' governments, 59 percent said so about U.S. businesses, and 44 percent said so about average people. However, only very small proportions of respondents believed these various groups were in fact doing “a great deal” or “quite a bit”: 11 percent regarding the U.S. government, 4 percent regarding foreign governments, 7 percent regarding U.S. busi-

nesses, and 5 percent regarding average people.

*Actions needed.* A large majority of Americans (80 percent) believed that reducing air pollution will reduce future global warming. And 88 percent of people said the U.S. government should limit the amount of air pollution that U.S. businesses can produce. Likewise, a substantial proportion of people (71 percent) thought the United States should require countries receiving foreign aid to reduce their air pollution.

*Willingness to pay to reduce air pollution.* When asked whether they would be willing to pay any more money each month in higher utility bills in order to reduce the amount of air pollution resulting from some electricity generation, 77 percent of people said they would.

*Summary.* In sum, the American public largely shared the views put forward by President Clinton before the concentrated media coverage and related debate began in the fall of 1997. Majorities of people believed in the existence of global warming, believed it would be undesirable, felt efforts should be made to combat it, and supported federal legislation and personal sacrifice as mechanisms for doing so.

### Did the Media and Debate Attract the Public's Attention?

*More exposure to news stories.* In September–October, 48 percent of respondents said they had seen either a newspaper or television news story about global warming during the prior four months, and this figure rose significantly to 56 percent among people interviewed in December–February. These figures suggest that media focus on global warming did indeed catch the attention of readers, viewers, and listeners.

*More thinking about global warming.* When asked in September–October how much thinking they had done about global warming, 54 percent of respondents said either “a lot” or a “moderate amount.” When asked this question in December–February, 65 percent of people gave one of these two answers, again a statistically significant increase.

*Faster reaction time.* Psychologists gauge how crystallized a person's opinion is on an issue partly by how long it takes him or her to report that opinion when asked. The longer it takes to retrieve the opinion from memory and/or to build the opinion from miscellaneous considerations that come to mind, the less

crystallized the opinion is considered to be. People were significantly quicker at reporting their attitudes toward global warming during the December–February interviews (2.9 seconds on average) than they had been during the September–October interviews (3.3 seconds on average). These figures suggest that the thinking people did about the issue during the fall led them to crystallize their opinions on it.

**Higher certainty.** In line with this conclusion, 28 percent of respondents said they were extremely or very sure of their opinions on global warming in September–October, and this figure rose significantly to 34 percent in December–February.

**Summary.** From all these indicators, it appears the barrage of news coverage of global warming and the accompanying discussions did indeed reach people. But did they change opinions?

### Opinion Change?

When examined on the surface, American public opinion seems to have remained largely unaltered. In December–February, 79 percent of people said global warming had been occurring; 75 percent said they thought it would occur in the future if nothing was done to stop it; 58 percent said it would be bad for people; 57 percent said the U.S. government should do a great deal or quite a bit to combat global warming; and 79 percent said they believed reducing air pollution would reduce global warming. These figures are not appreciably different than the comparable measurements made in September–October.

Statistically significant movement did appear on some dimensions, though, suggesting more public support for legislative solutions and *less* support for personal sacrifices to combat global warming. For example, 91 percent of people in December–February said the U.S. government should limit air pollution by U.S. businesses, up somewhat from 88 percent in September–October. Likewise, 80 percent of people in December–February said the United States should require air pollution reductions from countries to which it gives foreign aid, up from 71 percent in September–October. Yet *fewer* people were willing to pay higher utility bills to reduce air pollution: 72 percent in December–February, as compared with 77 percent in September–October.

These changes in opinion distributions are not huge, leaving unchallenged the general conclusion

that public opinion was largely stable. But political psychologists are always suspect of conclusions reached by such means, for a couple of reasons. First, when contentious debates between politicians and policy experts unfold as occurred on the issue of global warming, the public often takes its cues from the few political leaders they trust most. If different groups of citizens look to different leaders for cues, many people’s opinions can move, but in opposite directions. These changes are masked when the public as a whole is examined. Second, all citizens are not equally likely to be moved by public debates of this sort. People with strong attitudes and beliefs will remain steadfast, while those with weak preferences and perceptions are most likely to look to trusted leaders for cues as to what to believe. So we must examine the attitudes of these latter citizens if we are to detect any changes.

As the media widely reported during the fall of 1997, President Clinton and Vice President Gore championed the notion that global warming was a potential problem that Americans need to address, while many prominent Republicans and conservatives expressed skepticism. Thus, Democratic/liberal citizens might be expected to have moved toward the administration’s point of view at the same time that Republican/conservative citizens moved away. And indeed, this is exactly what occurred. In September–October, the gap between self-identified strong Democrats and strong Republicans was relatively small, and it grew substantially by December–February.

For example, in September–October, 72 percent of

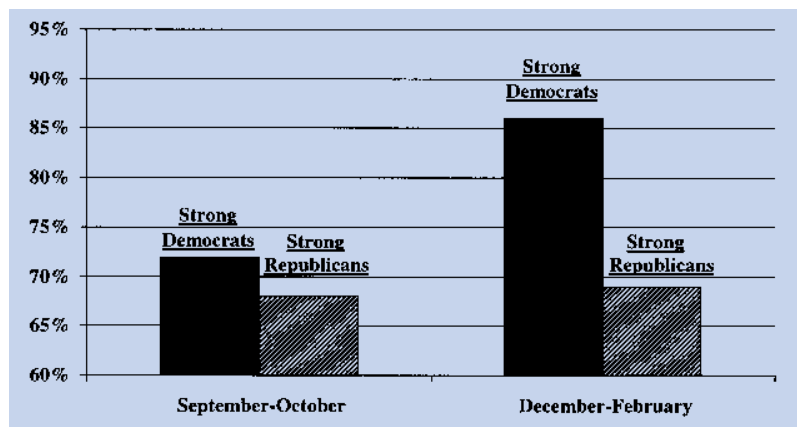


Figure 1. Polarization of opinions about whether global warming has probably been happening.

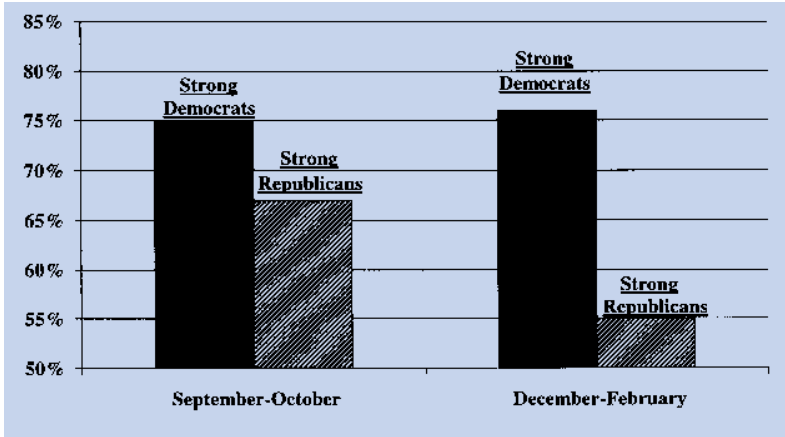


Figure 2. Polarization of opinions about whether global warming will happen in the future.

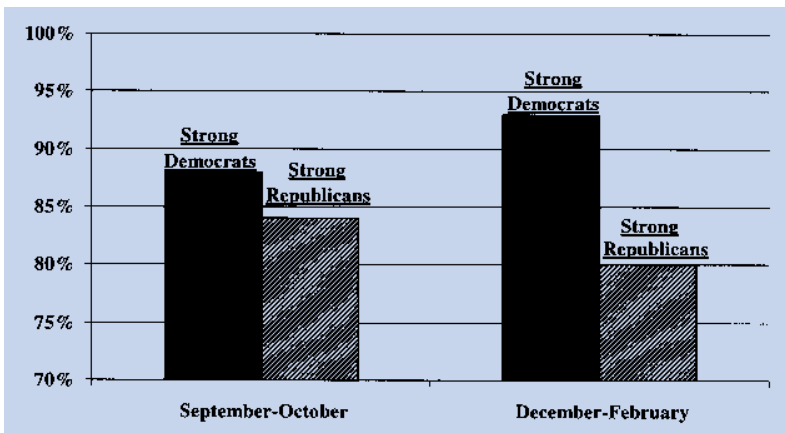


Figure 3. Polarization of opinions about whether the U.S. government should limit air pollution by U.S. businesses.

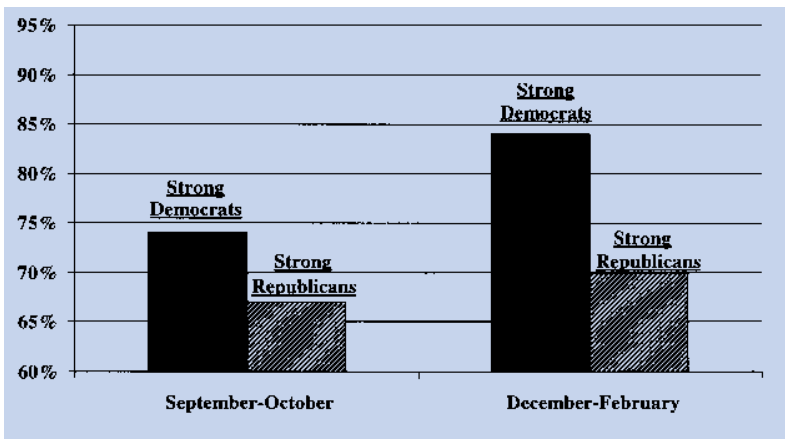


Figure 4. Polarization of opinions about whether the U.S. government should require recipients of foreign aid to reduce air pollution.

those who identified themselves as strong Democrats thought global warming had been occurring, compared with 68 percent of self-identified strong Republicans, a gap of 4 percent. In December–February, these figures were 86 and 69 percent, revealing an increased gap of 17 percent (see Figure 1).

Likewise, in September–October, only 75 percent of strong Democrats thought global warming would occur in the future, compared with 67 percent of strong Republicans, an 8-percent gap. In December–February, these figures were 86 and 55 percent, respectively, representing a 21-percent gap (see Figure 2).

Politicization was also apparent in opinions about whether the U.S. government should limit the amount of air pollution that U.S. businesses discharge. Eighty-eight percent of strong Democrats and 84 percent of strong Republicans said the government should so limit air pollution by businesses in September–October (a 4-percent gap), whereas 93 percent of strong Democrats and 80 percent of strong Republicans said so in December–February (a 13-percent gap; see Figure 3). And when asked whether the United States should require recipients of foreign aid to reduce pollution, 74 percent of strong Democrats and 67 percent of strong Republicans agreed that they should in September–October, a 7-percent gap. In December–February, 84 percent of strong Democrats and 70 percent of strong Republicans expressed this view, a gap of 14 percent (see Figure 4).

Although this growth of the partisan gap is clearly sizable, it appears even more dramatically when we focus only on those citizens most likely to take cues from partisan leaders: people who say they knew little about global warming in the fall of 1997. In terms of beliefs about whether global warming had been occurring, the difference between strong Democrats and strong Republicans grew from 1 percent in September–October to 20 percent in December–February among people who said they knew “little” or “nothing” about global warming, a change of 19 percent (see Table 1).

But among people who said they knew “a lot” or “a moderate amount” about global warming, the difference between strong Democrats and strong Republicans increased only very slightly, from 9 to 11 percent, a change of only 2 percent. For beliefs about whether global warming will happen in the future, the

**Table 1. Growth in the Difference Between Democrats and Republicans Was Greatest Among the Least Knowledgeable Citizens**

Belief	Respondents Who Knew "A Little" or "Nothing"	Respondents Who Knew "A Moderate Amount" or "A Lot"
Global warming has been happening	19%	2%
Global warming will happen in the future	29%	12%
U.S. government should limit air pollution by U.S. businesses	12%	2%
U.S. government should require recipients of foreign aid to reduce air pollution	25%	-20%

*Note:* The cell entries are the change in the gap between strong Republicans and strong Democrats. Positive numbers indicate that the gap grew between September–October and December–February, and negative numbers indicate that the gap shrank.

partisan gap grew by 29 percent among people who said they knew little or nothing about global warming, and shrank by 12 percent among people who said they knew "a lot" or a moderate amount.


Similarly, for beliefs about whether the United States should limit pollution by U.S. businesses, the gap grew by 12 percent among people who said they knew little or nothing about global warming, and only 2 percent among people who said they knew a lot or a moderate amount. Finally, for beliefs about whether the United States should require recipients of foreign aid to reduce pollution, the gap grew by 25 percent among people who said they knew little or nothing about global warming, and shrank by 20 percent among people who said they knew a lot or a moderate amount.

### Conclusion

The extensive media coverage that occurred in the fall of 1997 and the debate surrounding it did focus public attention on the issue of global warming. Modest changes in the distributions of opinions occurred for the nation as a whole. But underlying these modest shifts were more sizable, crosscutting

changes that reflected polarization of strong Democrats and Republicans, especially among that segment of the electorate least knowledgeable about the issue. Despite this polarization, however, large majorities of Americans continued to believe that global warming had been happening, would occur in the future if nothing was done to stop it, would be bad for people, and that the U.S. government, American businesses, and foreign governments should take significant steps to combat the problem.

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 To download a copy of the authors' related report "The Impact of the Fall 1997 Debate About Global Warming on American Public Opinion" access <http://www.rff.org>. Copies may also be ordered by mail; see page 18.