

*Learning about Climate Change Adaptation
and Its Effects on Support for
Climate Change Mitigation*

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**RESEARCH ROUNDTABLE ON CLIMATE CHANGE,
ADAPTATION, AND ENVIRONMENTAL LAW**

Thursday, April 7, 2011 – Friday, April 18, 2011

Memorandum to Roundtable Participants

We attach a copy of a survey instrument we are developing regarding the interplay of climate change information regarding mitigation/prevention and information regarding adaptation on lay (non-expert) attitudes. One of our motivations in approaching this topic is the recognition that adaptation is a crucial, unavoidable subject, and yet there has been hesitation about addressing it out of fear that information regarding adaptation options could detract from support for mitigation. The survey will be conducted via the internet.

We have been considering a number of possible (and conflicting) hypotheses, which we briefly summarize here.

- (1) Adaptation Information Will Make Climate Change More Salient/Available and Hence Increase Support for Mitigation.
- (2) Adaptation Information Will Reduce Self-Reported Fatalism Regarding Climate Change (and hence perhaps also, derivatively, boost support for mitigation)
- (3) Adaptation Information Will Decrease the Perceived Harms from Not Mitigating Climate Change and Hence Reduce Support for Mitigation
- (4) Adaptation Information Will Reinforce Support for Climate Change Mitigation Among Self-Identified Liberals and Environmentalists While Reinforcing Opposition or Disinterest Toward Mitigation Measures Among Self-Identified Conservatives and Non-Environmentalists

We think the answer to the question what difference would adaptation information make may well depend on the framing and content of that information. In the attached instrument, we use highly general, generic descriptions of adaptation and adaptation measures but adaptation inherently is highly local, and that local focus may be a source of salience. For that reason, we hope to do follow-up studies using adaptation scenarios that are localized. We hope to see how particular survey respondents in a given locality are affected by adaptation information geared to their locality.

This is potentially a big project but also one that is just getting going, and we could greatly use your input!

Appendix – Study Materials

Invitation to participate (sent via email)

SUBJECT: You have been randomly chosen to participate in Vanderbilt eLab study #[xx]

Dear {Nickname},

You have been randomly chosen from the Vanderbilt University eLab Panel to be invited to participate in a short anonymous survey about your views towards various health and environmental issues. If you chose to participate, you will be provided with some basic information about an issue and then you will be asked to answer a few questions about your attitudes towards this issue and your support for policies related to it.

This survey will take approximately 10 to 15 minutes to complete. Your participation is voluntary and you are free to withdraw at any time. You must be 18 years or older to participate in this study.

If you do complete this study, you will be entered in a drawing for a cash prize of \$100. Your odds of winning this prize are 1 in 100 or better, depending on how many people complete the study.

You may begin this survey at any time during the next 7 days. We ask that you find a quiet time and location to sign up to the experiment, and to minimize any outside distractions.

To participate, please proceed to the following URL:
[study URL]

Thanks for your help in our research!

Introduction Screen

Thank you for agreeing to participate in this eLab survey. In this study we are interested in Americans' attitudes towards various national issues. You will be given a brief description of two issues currently affecting Americans. You will then be asked a series of questions regarding your attitudes towards this issue and support for various policy measures to deal with it.

This survey will take about 10 to 15 minutes to complete. If you complete the full survey, you will be entered into a drawing for a chance to win a \$100 cash prize. Your odds of winning this money will be 1 in 100 or better.

If you experience any problems or receive an error message, simply click the "Help" button that is located at the top right of each page. If you should have any questions about this study, please feel free to contact the eLab research team (email: elab@owen.vanderbilt.edu), or the principal investigator at amanda.carrico@vanderbilt.edu.

When you are ready to begin, press "proceed".

Survey

Section 1: This section will provide researchers with some basic demographic information relevant to this study.

1.1. Sex: Male Female

1.2. In what year were you born? _____

1.3. Are you of Hispanic, Latino or Spanish origin? No Yes

- 1.4. How would you describe your race?
- a. White
 - b. Black, African American
 - c. American Indian or Alaska Native
 - d. Asian
 - e. Pacific Islander
 - f. Other

1.5. Level of Education

| | | | | | | |
|--------------------------|-------------|--------------|------------------|-----------------|---------------------|-------|
| Some high school or less | High School | Some College | College Graduate | Graduate Degree | Professional Degree | Other |
|--------------------------|-------------|--------------|------------------|-----------------|---------------------|-------|

1.6. Income (average per year)

| | | | | | | |
|--------------------|----------------------|----------------------|----------------------|--------------------|----------------------|-----------------|
| Less than \$15,000 | \$15,000 to \$24,999 | \$25,000 to \$34,999 | \$35,000 to \$49,999 | \$50,000 to 74,999 | \$75,000 to \$99,999 | Above \$100,000 |
|--------------------|----------------------|----------------------|----------------------|--------------------|----------------------|-----------------|

1.7. What is your zip code? _____

1.8. How would you best describe your political point of view?

- a. Democrat
- b. Republican
- c. Independent
- d. No affiliation
- e. Other (please specify)

1.9. How would you best describe your political orientation when it comes to fiscal issues?

| | | | | | | |
|---------|---|---|----------|---|---|--------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Liberal | | | Moderate | | | Conservative |

1.10. How would you best describe your political orientation when it comes to social issues?

| | | | | | | |
|---------|---|---|----------|---|---|--------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Liberal | | | Moderate | | | Conservative |

1.12. Do you own or have regular access to a vehicle? No Yes

1.13. Have you been diagnosed with heart disease? Yes No

1.14. Do you have a close friend or family member who has been diagnosed with heart disease?

Yes No

1.15. Do you currently or have you in the past held any of the following positions within the medical profession?

- a. Physician
- b. Nurse
- c. Physician's assistant

1.16. Do you smoke? Yes No

Section II: We'd like to know about your attitudes towards the issue of climate change. Please take a few minutes to read the following information and press "proceed" when you are ready.

[Participants will receive 1, 2, or all three of these paragraphs depending on their randomly selected treatment condition]

Communities across the country are beginning to assess the potential impacts that climate change could have in their areas. National and international scientific organizations have warned that over the next 50 years climate change (sometimes referred to as global warming) is very likely to cause increases in flooding, heat waves, and drought in many parts of the United States. A large majority of scientists also believe that climate change is primarily caused by the emissions of greenhouse gases that result from human activity, such as automobile usage and electricity production.

Many experts believe that the worst effects of climate change can still be prevented through mitigation. Mitigation would involve measures directed at reducing the amount of greenhouse gases emitted in the atmosphere to reduce climate change. Mitigation measures could include converting to solar, wind, or nuclear energy; improving the efficiency of power plants; improving the efficiency of vehicles and appliances; reducing driving; and reducing energy use at home and work.

Many experts believe that some of the harm from the effects of climate change in the United States could be lessened through adaptation. Adaptation would involve measures directed at lessening the effects of flooding, heat waves, and drought caused by climate change. Adaptation measures could include building flood walls around rivers and lakes, constructing and reinforcing sea walls, moving homes and businesses inland, shifting crop production to different geographic areas, planting drought-resistant crops, and spending more time indoors to avoid heat.

Section III (screen 1): Please answer the following questions about your attitudes towards climate change.

Comment [ARC1]: Control group receives Paragraph 1, Mitigation group receives P1 and P2, Adaptation receives P1 and P3, Combined group receives all three paragraphs.

F. I take great pride in being an environmentalist.

3.21. Here are some issues now being discussed in Washington D.C. Do you think each of these issues should be a low, medium, high or very high priority for the President and Congress?

1 2 3 4
low medium high very high

- A. Economy
- B. Federal deficit
- C. War in Iraq & Afghanistan
- D. Health care
- E. Terrorism
- F. Social security
- G. Education
- H. Tax cuts
- I. Illegal immigration
- J. Global warming
- K. Abortion

3.22. Personally, do you think that you are well-informed or not about each of the following?

1 2 3 4 5 6 7
Not at all Somewhat Very much

- A. The different causes of climate change
- B. The different consequences of climate change
- C. Ways in which we can mitigate or reduce climate change
- D. Ways in which we can adapt to climate change

3.23. What are the first three thoughts or images that come to mind when you think of climate change?

- a. _____
- b. _____
- c. _____

3.24. After you list your responses, please click the circle to the right of your response that best represents your feelings about each thought or image you provided.

- 2 = Very negative
- 1 = negative
- 0 = neutral
- +1 = positive
- +2 = very positive

Section IV: Now we'd like to know about your attitudes towards the issue of heart disease. Please take a few minutes to read the following information and press "proceed" when you are ready.

[Participants will receive 1, 2, or all three of these paragraphs depending on their randomly selected treatment condition]

Heart disease is the leading cause of death in the U.S. and has become a major concern for physicians. Heart disease occurs when fatty plaque builds up inside the small blood vessels that supply blood and oxygen to the heart. Heart disease can cause heart attacks, heart failure, and sudden death. Symptoms of heart disease include chest pain or discomfort, fatigue, shortness of breath, and weakness. Diabetes, high blood pressure, smoking, alcohol abuse and a sedentary lifestyle are among the list of risk factors for developing heart disease.

Many doctors believe that the worst effects of heart disease can be prevented with certain behaviors or lifestyle changes. These preventive actions would involve measures directed at avoiding the development of heart disease or reducing the severity of the disease. Preventive actions may include things such as a restricted diet, engaging in thirty minutes of daily exercise, reducing stress, limiting alcohol consumption to no more than 1-2 drinks a day and not smoking.

Many doctors believe that individuals can limit the impact of heart disease on their lives by adapting to some of the effects associated with this condition. Adaptation actions would involve measures directed at dealing with the consequences and symptoms of heart disease. Adaptation actions may include things such as taking medication each day, avoiding strenuous activity, monitoring blood sugar, eating a modified diet, minimally invasive heart surgery and coronary artery bypass.

Section V (screen 1): Please answer the following questions about your attitudes towards heart disease.

5.1. In general, do you think people have an obligation to take action to prevent heart disease?

1 2 3 4 5 6 7
Not at all Somewhat Very much

5.2. Several specific behaviors have been proposed that people could adopt to help prevent heart disease. Please rate how willing you are to engage in each of these behaviors in order to prevent heart disease?

1 2 3 4 5 6 7
Not at all Somewhat Very much

- A. Eating a low-salt diet
- B. Eating a low-sugar diet
- C. Eating a low-fat diet
- D. Exercising 30 minutes each day
- E. Taking measures to reduce stress
- F. Not smoking
- G. Limit alcohol consumption to 1-2 drinks per day

5.3. In general, do you think that people with heart disease have an obligation to take actions to adapt to heart disease effects?

1 2 3 4 5 6 7
Not at all Somewhat Very much

5.4. Several specific behaviors have been proposed that people could adopt to adapt to heart disease. Please rate how willing you would be to do each of the following if you had heart disease.

Not at all

Somewhat

Very much

- A. The different causes of heart disease
- B. The different consequences of heart disease
- C. Ways in which I can prevent or reduce the threat of heart disease
- D. Ways in which I can adapt to heart disease if I develop it

5.12. What are the first three thoughts or images that come to mind when you think of heart disease?

- a. _____
- b. _____
- c. _____

5.13. After you list your responses, please click the circle to the right of your response that best represents your feelings about each thought or image you provided.

- 2 = Very negative
- 1 = negative
- 0 = neutral
- +1 = positive
- +2 = very positive