Predictors of the Perceived Risk of Climate Change and Preferred Resource Levels for Climate Change Management Programs

Jeryl L. Mumpower (Corresponding Author), jmumpower@tamu.edu, (979) 862-8821

Xinsheng Liu, x.liu@tamu.edu, (979) 845-4120

Arnold Vedlitz, avedlitz@tamu.edu, (979) 845-2929

Institute for Science, Technology and Public Policy
The Bush School of Government and Public Service
4350 TAMU
Texas A&M University
College Station, Texas 77843-4350 USA

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ABSTRACT

In a 2013 U.S. national public opinion survey, data were collected from 1,321 adult respondents for five psychometric variables—Dread, Scientists' Level of Understanding, Public's Level of Understanding, Number Affected, and Likelihood—for six threats (sea level rise, increased flooding, and four others) associated with climate change. Respondents also rated Perceived Risk and indicated the Resource Level that they believed should be invested in management programs for each threat. Responses did not vary significantly across the six threats, so they were combined. The survey collected standard demographic information, as well as measuring Climate Change Knowledge (CCK) and environmental values (New Ecological Paradigm, NEP). Psychometric variables predicted Perceived Risk extremely well ($R = .890$, $p < .001$); all five psychometric variables were significant predictors. The results were generally consistent with previous research except that Scientists' Level of Understanding was a positive, rather than negative, predictor of Perceived Risk. Jointly the demographic, knowledge and environmental values variables significantly predicted Perceived Risk ($R = .504$, $p < .001$). Consistent with previous research, significant positive predictors were Age, Democratic Party identification, and NEP score; significant negative predictors were Male gender and White ethnicity. When demographic, knowledge, and environmental values variables were added to psychometric ones, only the psychometric variables were statistically significant predictors. Perceived Risk strongly predicted Resource Level ($r = .772$, $p < .001$). Adding demographic, knowledge and environmental value variables to

Perceived Risk as predictors of Resource Level did not appreciably increase overall predictive ability ($r = .790$, $p < .001$), although White ethnicity emerged as a significant negative predictor and Religiosity, Democratic Party ID, Liberal Political Ideology, and NEP score were significant positive predictors. The results demonstrate that risk perceptions of climate change and policy preferences among climate change management options are highly predictable as a function of demographic, knowledge, environmental values, and psychometric variables. Among these, psychometric variables were found to be the strongest predictors.

Keywords: Risk perception, Climate change, Psychometric variables, Demographic variables, Climate change knowledge, Environmental values

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INTRODUCTION

A substantial amount of research has addressed risk perceptions associated with climate change in the United States, Europe, and elsewhere. O'Connor et al. (1999) found that in the realm of climate change, risk perceptions were strong predictors of behavioral intention. Further, risk perceptions were not simply correlates of environmental beliefs. Based on a nationally representative survey of the U.S. public, Leiserowitz (2005, 2006) reported that Americans have moderate climate change risk perceptions, believe that the impacts will primarily affect geographically and temporally distant people and places, support a variety of national and international policies to mitigate climate change, and generally oppose carbon tax proposals. The study concluded that Americans were strongly influenced by experiential factors, including affect, imagery, and values. These experiential factors were found to be consistently stronger predictors of risk perception and policy preferences than were socio-demographic variables. Based on a national survey, Kellstedt et al. (2008) found that more informed American respondents felt both less personally responsible for global warming and demonstrated less concern for it.

Kahan et al. (2011) used survey and experimental data to investigate the reasons that some members of the public failed to form beliefs consistent with apparent scientific consensus on climate change. The evidence suggests that scientific opinion fails to put an end to societal dispute primarily because culturally diverse persons typically differ in their perceptions of what experts believe. They found that individuals with hierarchical

and individualistic outlooks disagreed significantly with those holding egalitarian and communitarian outlooks about the state of expert opinion on climate change (as well as nuclear waste disposal and handgun regulation).

Based on nationally representative samples, Akerlof et al. (2010) reported that a majority of respondents in the United States, Canada, and Malta believed that climate change posed significant risks for health and well-being, with a majority or sizeable minority in each country indicating that they believed people are already being harmed. Reiser et al. (2012) found that members of the Australian and British public were quite similar to one another with respect to their climate change risk perceptions, despite the vast differences in location and experience in the two countries. Both nationalities generally accepted the reality of climate change and were concerned about both local (more so the Australian respondents) and global implications.

A recent special collection in the journal *Risk Analysis* focused on links between climate change risk perception and risk communication. Pidgeon (2012) identified the key topics addressed in this collection of papers (Johnson, 2012; Milfont, 2012; Rabinovich & Morton, 2012; Roeser, 2012; Safi et al., 2012; Smith & Leiserowitz, 2012; Spence et al., 2012). These included climate uncertainties, images and the media, communication and public engagement, uncertainty transfer in climate communication, the role of emotions, localization of hazard impacts, and longitudinal analyses of climate perceptions.

Risk perceptions and behavioral intentions to address climate change are also associated with and mediated by individuals' climate change knowledge. Knowledge is important for assessing risks and considering various policy options (Bord et al., 2000).

Studies show that individuals with greater levels of climate change knowledge report higher levels of perceived risk of climate change (Stoutenborough & Vedlitz, 2014; see also Malka et al., 2009) and demonstrate stronger support for climate policy options (O'Connor et al., 2002).

Researchers have long been interested in the values basis of environmental concerns and risk perceptions (Dunlap & Van Liere, 1984; Dunlap et al., 2000; Leiserowitz, 2006; Liu et al., 2014; O'Connor et al., 1999; Stern & Dietz, 1994; Stern et al., 1995). Several recent studies apply the New Ecological Paradigm (NEP) scale (Cordano et al., 2003; Dunlap et al., 2000) to assess individuals' fundamental beliefs and values regarding human-environmental relationships. These studies show that public climate change risk perceptions and individual citizens' support for climate policies correlate significantly with their NEP values (Kellstedt et al., 2008; Liu et al., 2014; Stoutenborough et al., 2014).

The present study has four primary motivations. First, we test the psychometric model of risk perception in the context of a representative national survey focused on climate change. This extends our previous work that tested the psychometric model using data from a national survey data focused on extreme terrorist threats (Mumpower et al., 2013). Formal definitions of risk generally encompass two dimensions: probability and magnitude of harm. Research has repeatedly shown that the risk perceptions of lay persons are not adequately captured by this two-dimensional model (Bostrom, 1997; Slovic, 1987). Research by Slovic and colleagues (e.g., Slovic, 1987; 2000) has identified a number of qualitative elements that influence risk perception, including voluntariness, catastrophic potential, and dreaded consequences, among others. Factor

analyses have identified two fundamental factors influencing lay risk perceptions (Fischhoff et al., 1978), a result that has been repeatedly and consistently supported by subsequent research. The first is *dread* risk, which is associated with dreaded consequences, catastrophic potential, inequitable distribution, increasing risk, lack of control, and fatal consequences. The second is *unknown* risk, which is associated with unknown exposure, unknown to science, delayed consequences, unobservability, and novelty. Some studies have found evidence of a third significant factor related to the number of persons exposed or affected (Slovic, 1987, 2000). The present study provides an opportunity to assess the degree to which psychometric factors are able to predict the perceived risk of climate change. Previous research (Mumpower et al., 2013) found that psychometric variables afforded a strong level of predictive capability with respect to the perceived risk of terrorism. The psychometric model appeared to be so robust that even a single question tapping relevant psychometric variables could still provide substantial predictive capability.

Second, the present study offers an opportunity to continue our study of how well risk perceptions, in this case of climate change, can be predicted by socio-demographic variables and to compare the predictive ability of models based on socio-demographic variables with the predictive ability of models based on psychometric variables. Few studies have directly compared the predictive power of demographic variables with those of psychometric variables, but in those that do, psychometric variables have typically been found to be stronger predictors than demographic ones (Mumpower et al., 2013; Sjöberg, 2005).

Third, the present study offers an opportunity to assess the predictive value of climate change knowledge and environmental values variables in the context of and in comparison with psychometric and demographic variables. To the best of our knowledge, this study represents the first time that psychometric, demographic, climate change knowledge, and environmental values variables have been studied simultaneously in the context of a single study design.

The fourth objective is to assess the degree to which the perceived risk of climate change predicts the expressed willingness to invest in management programs addressing the potential effects of climate change. Attitudinal expressions of willingness-to-invest can provide useful information about the relative degree of public support for risk management programs. Previous research addressing this question (Mumpower et al., 2013) indicated that perceived risk is a powerful predictor of the willingness to invest in risk management programs, at least in the context of terrorism risk management programs, although the ability to predict willingness-to-pay was significantly enhanced by adding psychometric and demographic predictors to measures of perceived risk. Brox et al. (2003) found that socio-demographic variables such as household income, presence of children within the home, education, and identification with the issue were significant predictors of willingness-to-pay for programs to improve water quality.

STUDY DESIGN AND DATA

Data were from a U.S. national public opinion survey conducted during November 2013. The sample was drawn from KnowlegePanel®, a probability-based web panel designed to be representative of the United States for adults age 18 and over. The

median survey completion time was about 24 minutes. The response rate of 55.9 percent yielded 1,321 completed surveys.[i]

For six potential threats associated with global climate change, each respondent was asked to rate (a) how dreadful or terrible the consequences would be for the American people; (b) scientists' understanding of the consequences of these threats; (c) the public's understanding of the consequences of these threats; (d) the number of people who are likely to be affected; and (e) the likelihood of the threats during the next 10 years. Respondents were then asked to rate (a) the Perceived Risk associated with the threat and the Resource Level they believed the U.S. government should invest to address each threat. The six threats were (a) sea level rise; (b) increased flooding; (c) increased drought; (d) rising temperature/heat waves; (e) increased wildfires; and (f) strong storms/hurricanes. With respect to potential psychometric predictor variables, the design was similar to that employed in Mumpower et al. (2013), except that the climate change survey included a question regarding perceptions of the degree to which the public understood the consequences of the various threats. This item was included in the battery because some research (Kellstedt et al., 2008; Stoutenborough & Vedlitz, 2014) suggested that the relationship between understanding and knowledge (or beliefs about the degree to which hazardous phenomena were understood or the degree of knowledge one had regarding such hazards) and perceived risk might be less straightforward than has heretofore been appreciated. Respondents replied using a scale of 0 to 10, with 0 corresponding to very low levels and 10 corresponding to very high levels for each question.

Data were also collected to score respondents in terms of Climate Change Knowledge (CCK) and New Ecological Paradigm (NEP). The CCK scale is assessed by respondents' correct answers to the following 10 true-false items regarding climate change and global warming: (a) the major cause of increased atmospheric concentration of greenhouse gases is human burning of fossil fuels (T); (b) nitrous oxide is a greenhouse gas (T); (c) aerosols are airborne particles that are known to contribute to the formation of clouds and precipitation (T); (d) the greenhouse effect refers to gases in the atmosphere that trap heat (T); (e) climate often changes from year to year (F); (f) ocean currents carry heat from the equator to the north and south poles (T); (g) the US emits the largest total amount of carbon dioxide (F); (h) the energy in fossil fuels originally came from the fossilized remains of plants and animals (T): (i) the average yearly temperature of the Earth's surface is currently above 65 degrees Fahrenheit (F); and (j) the Earth's climate is warmer now than it has ever been before (F).

The 7-item NEP scale represents an adaptation of the scale developed by Dunlap et al. (2000), which has been widely used to measure foundational ecological-environmental values or beliefs. The original NEP scale (Dunlap et al., 2000) includes fifteen questions. We opted for a shortened, yet still valid, version with fewer questions to measure individual citizens' ecological-environmental values (see Hawcroft & Milfont, 2010; see also, Cordano et al., 2003; La Trobe & Acott, 2000; Liu et al., 2014). In the shortened NEP version, we asked respondents to indicate their opinion (strongly agree = 4, agree = 3, disagree =2, or strongly disagree =1) about the following statements regarding human-nature relationships: (a) we are approaching the limit of the number of people the earth can support; (b) when humans interfere with nature it often produces

disastrous consequences; (c) plants and animals have as much right as humans to exist; (d) the earth is like a spaceship with limited room and resources; (e) the balance of nature is very delicate and easily upset; (f) humans were meant to rule over the rest of nature (reversely coded); and (g) if things continue on their present course, we will soon experience a major ecological catastrophe. We used the mean of the seven items to measure respondents' NEP Scale score. Reliability test (Cronbach's Alpha = 0.834, N=1,120) indicates that these seven question items are highly inter-correlated and internally consistent, primarily measuring the same latent construct.

Finally, standard demographic data were also collected. The survey collected data for demographic variables measuring Age, Gender, Ethnicity, Religiosity, Party Identification, Political Ideology, Household size and composition, Marital Status, Geographic location, Employment status, and Internet Access.

A depiction of the theoretical model guiding the data analysis appears in Figure 1. For threats associated with climate change, we constructed ordinary least squares (OLS) regression models predicting Perceived Risk as a function of (a) psychometric variables only, (b) demographic variables plus CCK and NEP scores, and (c) psychometric and demographic variables, plus CCK and NEP. We then used Perceived Risk of Climate Change to predict the Resource Level that respondents believed should be invested in climate change management programs. We also tested a competing variant of the basic hypothesized model, predicting Resource Level as a simultaneous function of Perceived Risk, plus psychometric and demographic variables, climate change knowledge, and environmental values.

FIGURE 1 ABOUT HERE

RESULTS

Constructing a Measure of Perceived Risk and Level of Risk across Threats

The responses from survey participants strongly indicated that they did not discriminate sharply among the various threats with respect either to Perceived Risk or Resource Level. The intraclass correlation coefficient for Perceived Risk was .87; the intraclass correlation coefficient for Resource Level was .86. Because respondents made little discrimination among the hazards in terms of the Perceived Risk associated with them or the Resource Level that they believed should be invested to address them, we collapsed the responses into summative scales that provided a single measure of Perceived Risk (Cronbach's Alpha = .98; No. of Items = 6; N=1,265) and Resource Level (Cronbach's Alpha = .97; No. of Items = 6; N=1,260) across all six threats.

Predicting Perceived Risk

The results of an OLS regression analysis predicting Perceived Risk on the basis of psychometric variables appear in Table 1. The results indicate a high level of predictability; R = .89, R^2 = .79, Adjusted R^2 = .79, for a model using the five psychometric variables as predictors of Perceived Risk. All five psychometric variables are independently significant positive predictors at the .05 level. There is little indication of multicollinearity among the independent variables, as no variance inflation factors (VIFs) are found to be above 3 (Fox, 1991).

TABLE 1 ABOUT HERE

The results for an OLS regression analysis predicting Perceived Risk on the basis of the nine demographic variables – Gender, Age, Education , Ethnicity, Household

Income, Religiosity, Party ID, Political Ideology, and Environmental Group Membership – plus the scores for Climate Change Knowledge (CCK) and environmental values (NEP) variables – appear in Table 2. The results indicate a highly significant level of predictability (although the amount of variance accounted for is substantially less than in the previous analysis involving only psychometric predictors); R = .50, R^2 = .25, Adjusted R^2 = .25. Significant predictors of Perceived Risk at the .05 level are Gender (lower levels for Males); Age (higher levels for older respondents); Ethnicity (lower levels for White Respondents); Party ID (higher levels for Democrats); and, NEP score (higher levels of Perceived Risk are associated with higher NEP scores). The multicollinearity statistics are well within acceptable ranges (VIFs < 2).

TABLE 2 ABOUT HERE

The results of an OLS regression analysis predicting Perceived Risk on the basis of psychometric and demographic variables, plus CCK and NEP appear in Table 3. The results indicate a high level of predictability; R = .88, R^2 = .78, Adjusted R^2 = .78. (Because of missing data, the number of cases is not precisely the same for all OLS analyses predicting Perceived Risk). All five psychometric variables are statistically significant predictors of Perceived Risk at the .05 level; none of the demographic variables, CCK, or NEP are statistically significant predictors. Again, there is little indication of a multicollinearity issue (VIFs<3).

TABLE 3 ABOUT HERE

Predicting Resource Level

The results of an OLS regression analysis predicting the Resource Level that respondents believe should be invested in climate change risk management programs on

the basis of a single variable -- Perceived Risk -- appear in Table 4. As can be seen, Resource Level can be predicted quite well on the basis of Perceived Risk (R = .77, R^2 = .60, Adjusted R^2 = .60.)

TABLE 4 ABOUT HERE

Finally, we conducted an analysis that tested an alternative model to that specified in Figure 1. Specifically, we examined the possibility that the preferred Resource Level for investments in climate change management programs might be influenced by other variables in addition to Perceived Risk. This possibility was suggested by results from previous work (Mumpower et al., 2013) which found that including certain demographic variables in addition to Perceived Risk improved the ability to predict willingness to pay for terrorist risk management programs. We therefore conducted an analysis predicting Resource Level as a function of Perceived Risk, Demographic Variables, CCK and NEP. The results appear in Table 5. Adding demographics as well as CCK and NEP variables to Perceived Risk as predictors of Resource Level did not appreciably improve overall predictive ability (R = .79, R^2 = .62, Adjusted R^2 = .62.), but several demographic variables and NEP emerged as statistically significant predictors. White ethnicity was a significant negative predictor and Religiosity (measured by self-reported frequency of religious service attendance, with lower values corresponding to more frequent attendance), Democratic Party ID, Liberal Political Ideology, Environmental Group Membership, and NEP score were significant positive predictors at the .05 level.

TABLE 5 ABOUT HERE

DISCUSSION

The present research shows that psychometric variables predict Perceived Risk extremely well; all five psychometric variables were independent, significant predictors. As found in previous work on terrorism risk perception (Mumpower et al., 2013), psychometric variables afford a strong level of predictive ability in comparison to typical outcomes for survey and attitudinal research. Moreover, the basic psychometric model is sufficiently robust that a single question tapping important psychometric variables provides substantial predictive capability.

These results are generally consistent with previous research, with two caveats. First, Scientists' Level of Understanding was a positive, rather than negative, predictor of Perceived Risk. This runs contrary to virtually every previous study within the psychometric paradigm, in which perception of lack of scientific understanding has been indicative of higher values on the Unknown factor and, thus, higher levels of Perceived Risk. Perhaps this result is attributable to the fact that, for most hazards, lack of scientific understanding suggests that outcomes may be even worse than conventional wisdom suggests. In the case of climate change, however, high levels of perceived scientific understanding may reinforce the perception that things will indeed be as bad as the majority of scientists predicts. Further research will be required to clarify this point. In the meantime, the results offer a caution against overly simplistic interpretations of the association between perceived level of understanding and perceived level of risk.

Second, to the best of our knowledge, this is perhaps the only study to have included both measures regarding perceptions of Public's Level of Understanding, as well as perceptions of Scientists' Level of Understanding, as potential predictors of Perceived Risk. The two variables appear to measure different underlying dimensions, as

indicated by the fact that they are only modestly correlated ($r = .36$; $n = 1,287$) and that they are both independent, statistically significant predictors of Perceived Risk. As was the case for Scientists' Level of Understanding, we found that perception regarding the Public's Level of Understanding was a positive predictor of Perceived Risk. Again, further research will be required to refine our understanding of the relationship between perceptions about the degree to which scientists or the public understand a hazard and its degree of perceived risk. Perhaps the relationship between perceptions of degree of understanding and perceived risk is mediated by whether lack of understanding is interpreted as meaning that risks may be even greater than estimated or, conversely, is interpreted as suggesting that the putative risks of potential hazards are known with greater certainty.

Demographic and environmental values variables significantly predicted Perceived Risk, although they did so less well than did psychometric ones. Consistent with previous research, significant positive predictors were Age, Democratic Party identification, and NEP score; significant negative predictors were Male gender and White ethnicity. When demographics variables as well as CCK and NEP were combined with psychometric ones, however, only the psychometric variables were statistically significant. This does not necessarily mean that the association between demographic variables, CCK, and NEP with Perceived Risk is unimportant, simply because the relationship between psychometric variables with Perceived Risk is stronger. It is to be hoped that future research will establish clearer links between demographic variables and psychometric ones.

The results showed that Perceived Risk strongly predicts preferred Resource Level. Adding demographic variables, CCK, and NEP to Perceived Risk as predictors of Resource Level did not appreciably increase overall predictive ability but did suggest a more nuanced picture. Perceived Risk was clearly the strongest resource predictor, but, consistent with previous research (e.g., Finucane et al., 2000; Mumpower et al., 2013), White ethnicity was a significant negative predictor and Religiosity, Democratic Party ID, Liberal Political Ideology, Environmental Group Membership, and NEP were significant positive predictors.

Overall, results from this study show that risk perceptions of climate change, as well as policy preferences regarding climate change management, are highly predictable on the basis of psychometric variables. They are also quite predictable on the basis of demographic variables in combination with NEP scores. Psychometric variables are much stronger predictors than the others, however.

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[i] GfK Custom Research, LLC administered the survey of adults 18 years and older. The survey was in the field from November 13, 2013 through November 26, 2013 and was offered in English.

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Figure 1. Conceptual Model for Predicting the Perceived Risk of Climate Change and Preferred Resource Levels for Climate Change Management Programs

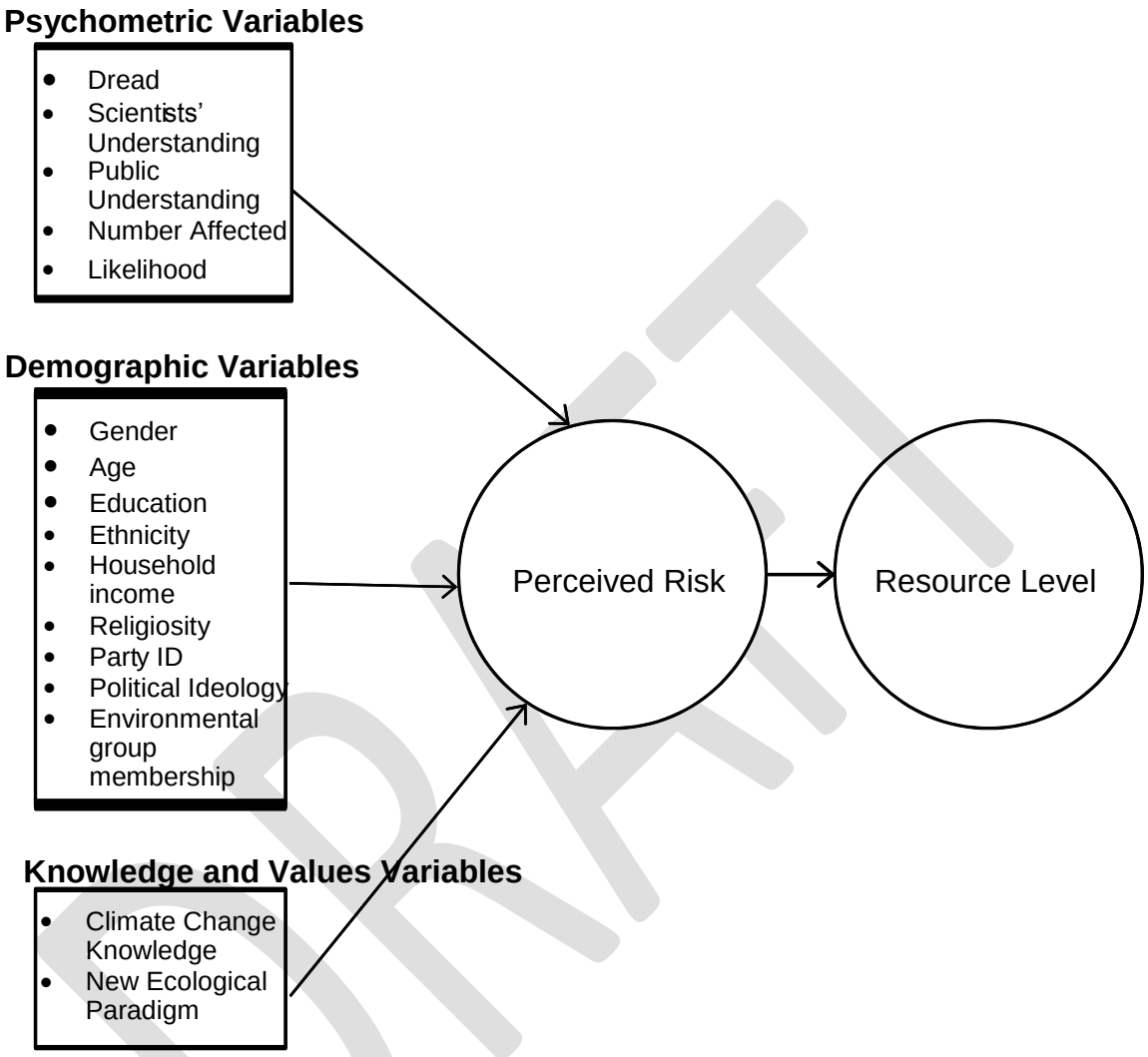

Table 1. Predicting Perceived Risk with Psychometric Variables

	B	**SE**	**Beta**	***t***	**Significance**	**Tolerance**	**Variance Inflation Factor (VIF)**
Constant	-.55	.14		-4.01	.000		
Psychometric Variables							
Dread	.12	.03	.10	4.22	.000	.38	2.63
Scientist's Understanding	.04	.02	.04	2.05	.041	.50	2.01
Public's Understanding	.05	.02	.05	2.87	.004	.80	1.25
Number Affected	.31	.03	.26	11.90	.000	.40	2.52
Likelihood	.56	.02	.58	30.25	.000	.53	1.90

Note: R =.89; R Square =.79; Adjusted R Square =.79; F = 812.62; N =1,069

Table 2. Predicting Perceived Risk with Demographic Variables plus CCK and NEP

	B	**SE**	**Beta**	***t***	**Significance**	**Tolerance**	**Variance Inflation Factor (VIF)**
Constant	1.25	.73		1.72	.087		
Demographic Variables							
Gender (Male)	-.35	.14	-.07	-2.59	.010	.97	1.03
Age	.01	.00	.06	2.11	.035	.94	1.06
Education	.02	.04	.02	.55	.580	.79	1.27
Ethnicity (White, Non-Hispanic)	-.48	.18	-.08	-2.72	.007	.87	1.15
Household Income	-.03	.02	-.05	-1.54	.123	.81	1.23
Religiosity	.03	.04	.02	.67	.504	.86	1.17
Party ID	.16	.04	.14	3.81	.000	.60	1.66
Political Ideology	.01	.06	.01	.21	.833	.59	1.69
Environmental Group Membership	.14	.36	.01	.39	.695	.97	1.03
Knowledge and Values Variables							
Climate Change Knowledge (CCK)	-.03	.05	-.02	-.72	.473	.86	1.16
New Ecological Paradigm (NEP)	1.44	.11	.42	13.72	.000	.84	1.20

Note: R =.50; R Square =.25; Adjusted R Square =.25; F = 30.098; N = 982

Table 3. Predicting Perceived Risk with Psychometric, Demographic, CCK, and NEP Variables

	B	SE	Beta	*t*	Significance	Tolerance	Variance Inflation Factor (VIF)
Constant	-.78	.44		-1.65	.099		
Psychometric Variables							
Dread	.14	.03	.12	4.39	.000	.38	2.61
Scientist's Understanding	.05	.02	.05	1.98	.048	.51	1.94
Public's Understanding	.05	.02	.04	2.19	.029	.74	1.35
Number Affected	.28	.03	.24	9.53	.000	.41	2.42
Likelihood	.55	.02	.574	24.19	.000	.47	2.11
Demographic Variables							
Gender (Male)	.08	.08	.02	1.02	.307	.95	1.05
Age	.00	.00	.02	1.14	.255	.92	1.09
Education	-.02	.02	-.01	-.74	.462	.77	1.30
Ethnicity (White, Non-Hispanic)	.06	.11	.01	.52	.606	.83	1.20
Household Income	-.01	.01	-.02	-1.35	.179	.81	1.24
Religiosity	.02	.03	.02	.95	.343	.84	1.20
Party ID	.02	.03	.02	.97	.334	.59	1.70
Political Ideology	.06	.04	.03	1.54	.125	.60	1.67
Environmental Group Membership	-.06	.21	-.01	-.29	.770	.94	1.06
Knowledge and Values Variables							
Climate Change Knowledge (CCK)	-.04	.03	-.03	-1.43	.153	.84	1.20
New Ecological Paradigm (NEP)	.04	.07	.01	.55	.580	.63	1.58

Note: R =.88; R Square =.78; Adjusted R Square =.78; F = 182.61; N = 844

Table 4. Predicting Resource Level with Perceived Risk

	B	**SE**	**Beta**	***t***	**Significance**
Constant	.76	.13		5.86	.000
Perceived Risk	.80	.02	.77	42.52	.000

Note: R =.77; R Square =.60; Adjusted R Square =.60; F = 1808.30; N =1,226

Table 5. Predicting Resource Level with Perceived Risk, Demographic, Knowledge and Value Variables

	B	**SE**	**Beta**	***t***	**Significance**	**Tolerance**	**Variance Inflation Factor (VIF)**
Constant	1.33	.55		2.44	.015		
Perceived Risk	.68	.02	.65	28.00	.000	.75	1.33
Demographic Variables							
Gender (Male)	-.15	.102	-.03	-1.50	.134	.96	1.04
Age	.01	.00	.03	1.45	.147	.93	1.07
Education	-.02	.03	-.02	-.84	.402	.79	1.27
Ethnicity (White, Non-Hispanic)	-.56	.13	-.09	-4.25	.000	.87	1.15
Household Income	.00	.01	.01	.22	.827	.81	1.24
Religiosity	-.07	.03	-.05	-2.24	.026	.86	1.17
Party ID	.11	.03	.09	3.48	.001	.60	1.68
Political Ideology	-.14	.05	-.08	-2.99	.003	.59	1.69
Environmental Group Membership	.46	.28	.03	1.65	.098	.97	1.03
Knowledge and Values Variables							
Climate Change Knowledge (CCK)	-.06	.04	-.04	-1.73	.084	.86	1.16
New Ecological Paradigm (NEP)	.44	.09	.12	5.10	.000	.71	1.42

Note: R =.79; R Square =.62; Adjusted R Square =.62; F = 129.91; N = 954