Appendix – Supplemental material for "Shifting public engagement: How media coverage of climate change conferences affects climate change audience segments"

Description: Supplemental material, Appendix, for "Shifting public engagement: How media coverage of climate change conferences affects climate change audience segments"

Table A1: Survey items, descriptives, and reliability of measured concepts

	Wave 1			Wave 2		
	Alpha	M	SD	Alpha	M	SD
Issue beliefs						
Climate change belief (Maibach et al., 2011; Metag et al., 2017)		5.07	1.38		5.01	1.44
Please indicate how convinced you are that climate change is actually occurring.						
Climate change skepticism (adapted from Arlt et al., 2011; Hart and Nisbet, 2012)	0.898	2.97	1.34	0.896	3.01	1.37
It is not at all clear that climate change actually exists.						
Climate change is not as dangerous as we are told.						
Concern about global climate change is unwarranted and no action is needed.						
Perceived threat	0.911	4.94	1.13	0.911	4.84	1.18
How likely or unlikely is it, according to you, that …						
… severe natural disasters will occur more frequently as a consequence of climate change?						
… climate change will result in a situation in the future that is out of control?						
… climate change will get worse in the next years and decades?						
… there will be severe economic damage as a consequence of climate change?						
Internal political efficacy (adapted from Hart and Feldman, 2016; Maibach et al., 2011)	0.845	3.88	1.15	0.859	3.54	1.17
I feel that I have a pretty good understanding of the issue of climate change.						
I think that I am better informed about the topic of climate change than most people.						
I feel I have enough information to help a friend form an opinion about the issue of climate change.						

	Wave 1			Wave 2		
	Alpha	M	SD	Alpha	M	SD
Perceived Consumer Effectiveness (Ellen et al., 1991)	r = .533	4.28	1.32	r = .595	4.29	1.24
As long as other people do not act in environmentally friendly ways, my environmentally friendly behaviors are useless. (R)						
There is not much that any one individual can do about the environment. (R)						
Government efficacy (Arlt et al., 2011)		3.82	1.40		3.80	1.39
The governments of the world will succeed in stopping climate change						
Issue involvement						
Issue importance (see Tenscher, 2013; Yang et al., 2014)	0.846	4.39	1.20	0.848	4.29	1.24
How interested are you personally in the topic of global climate change?						
How much attention do you pay to the topic of global climate change in the media?						
Please indicate how important the issue of climate change is to you personally.						
Attitude strength (see Maibach et al., 2011; Poortinga et al., 2011)	0.857	4.36	1.09	0.881	4.35	1.18
Please indicate how strong your opinions are about the issue of climate change.						
To what extent is your opinion about climate change a reflection of your moral conceptions?						
To what extent is your opinion about climate change is related to your fundamental beliefs of what is good and bad?						
To what extent is your opinion about climate change based on your moral beliefs and principles?						
Environmental concern (Schuhwerk and Lefkoff-Hagius 1995)	0.879	4.39	1.23	0.875	4.30	1.29
I am concerned about the environment.						
The condition of the environment affects the quality of my life.						
I am willing to make sacrifices to protect the environment.						
Issue-specific knowledge (see Hart et al., 2015)		2.48	1.52		2.76	1.59
Who is the current Secretary-General of the United Nations (UN)?						
Who is the current minister of infrastructure and environment?						
What is the international treaty that commits State Parties to reduce greenhouse gas emissions called?						
What gas is produced by the burning of fossil fuels?						
What is the main goal of The United Nations (UN) Climate Change Conference in Paris?						
What is—according to the United Nations (UN)—the maximum amount of warming the Earth can tolerate compared to pre-industrial levels without tipping over into a new, far hotter phase?						

	Wave 1			Wave 2		
	Alpha	M	SD	Alpha	M	SD
Policy preferences						
Mitigation responsibility (Hart, 2011; also see Maibach et al., 2011) For each of the following groups, please indicate how much responsibility each has for addressing global climate change:	0.906	5.48	1.13	0.919	5.39	1.19
The Dutch government						
Governments of other countries						
People like me						
Companies and industry associations						
Mitigation support (adapted from Hart et al., 2011; Maibach et al., 2011) The government should take immediate action to protect the country from the impacts of climate change. The government should limit the amount of greenhouse gases that power plants are allowed to release into the air.	r=.699	5.10	1.16	r=.752	5.05	1.22
Confidence in science and technology (see Maibach et al., 2011)	0.589	4.28	0.90	0.551	4.32	0.89
Most environmental problems can be solved by applying more and better technology.						
Modern science and new technologies will NOT be able to solve our environmental problems. (R)						
We cannot keep counting on science to solve our environmental problems. (R)						
Science and technology will eventually solve our environmental problems.						
Behaviors						
Private behaviors (Arlt et al., 2011; Hart 2011; Maibach et al., 2011; Milfont and Duckitt, 2010)	0.86	4.42	1.23	0.87	4.35	1.22
I am willing to pay more for my electricity every month if that would contribute to cleaner air.						
I am willing to stop buying products from environmentally polluting companies even if that is inconvenient for me.						
I am willing to make personal sacrifices to curtail environmental pollution even if the results are not directly visible.						
I am willing to travel less by plain to protect the environment.						
I am willing to drive considerably less by car to protect the climate.						
I am willing to heat less at home to protect the climate.						
I am willing to pay more taxes so that the government can do more against environmental pollution.						

	Wave 1			Wave 2		
	Alpha	M	SD	Alpha	M	SD
I am willing to sign a petition supporting a goal to protect the environment. I am willing to become a member of an organization that actively campaigns for a better environment.						
I am willing to participate in an demonstration regarding the issue of climate change.						
I would like to be part of an environmental movement and take an active role in this.						
Opinion leadership I am willing to share information about climate change with others via, for instance, social media, email, posters, and flyers.	0.883	3.76	1.59	0.869	3.69	1.50
I am planning to talk about climate change with friends, family and/or colleagues.						
I am planning to seek more information about the topic of climate change.						

References (Table A1)

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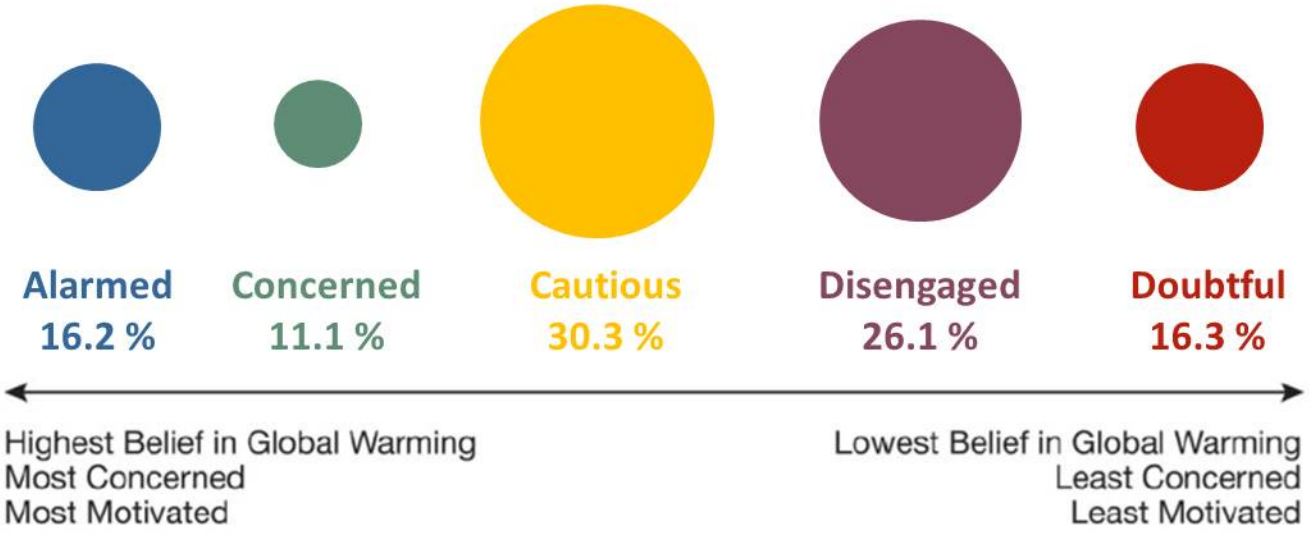

Figure A1: The Dutch climate change audience segments.

The following Tables, A2 and A3, depict the logistic regression models: for positive change the models with the two least engaged segments (doubtful: model 1.1 and 1.2; disengaged: model 2.1 and 2.2) and for negative change the models with the two most engaged segments (alarmed: 3.1 and 3.2; concerned: 4.1 and 4.2) as reference categories are shown.

Table A2: Logistic regression models of positive changes to more engaged segments

	Model 1.1		Model 1.2		Model 2.1		Model 2.2	
Predictor	Exp(B)	95% CI	Exp(B)	95% CI	Exp(B)	95% CI	Exp(B)	95% CI
Constant	0.470		0.406		0.254		0.251	
Age	1.016*	(1.001, 1.032)	1.017*	(1.001, 1.033)	1.016*	(1.001, 1.032)	1.017*	(1.001, 1.033)
Female	0.964	(0.651, 1.425)	0.968	(0.652, 1.439)	0.964	(0.651, 1.427)	0.968	(0.651, 1.440)
Education	1.105	(0.960, 1.273)	1.110	(0.962, 1.280)	1.105	(0.959, 1.273)	1.110	(0.962, 1.281)
Political interest	1.042	(0.912, 1.192)	1.064	(0.927, 1.221)	1.042	(0.911, 1.192)	1.064	(0.927, 1.221)
Left-right orientation	0.903**	(0.832, 0.980)	0.903**	(0.831, 0.982)	0.903**	(0.831, 0.980)	0.903**	(0.831, 0.982)
COP exposure	0.972	(0.937, 1.009)	0.888*	(0.800, 0.986)	0.972	(0.937, 1.009)	0.963	(0.905, 1.024)
Concerned	0.280**	(0.130, 0.601)	0.317**	(0.143, 0.702)	0.518	(0.247, 1.088)	0.514	(0.242, 1.092)
Cautious	0.338*	(0.203, 0.561)	0.410**	(0.237, 0.708)	0.626	(0.382, 1.027)	0.665	(0.401, 1.102)
Disengaged	0.539*	(0.327, 0.889)	0.617	(0.357, 1.066)				
Doubtful					1.854*	(1.124, 3.058)	1.622	(0.937, 2.807)
Concerned * exposure			1.097	(0.973, 1.237)			1.011	(0.927, 1.103)
Cautious * exposure			1.173*	(1.034, 1.330)			1.081	(0.981, 1.192)
Disengaged * exposure			1.085	(0.964, 1.221)				
Doubtful * exposure							0.922	(0.819, 1.038)
Nagelkerke R Square		0.076		0.090		0.076		0.090

Note. The Alarmed segment was excluded resulting in $n = 731$. The reference category for model 1.1 and 1.2 was the Doubtful segment, for model 2.1 and 2.2 the Disengaged segment. * $p < .05$, ** $p < .01$, *** $p < .001$

Table A3: Logistic regression models of negative changes to less engaged segments

	Model 3.1		Model 3.2		Model 4.1		Model 4.2	
Predictor	Exp(B)	95% CI	Exp(B)	95% CI	Exp(B)	95% CI	Exp(B)	95% CI
Constant	0.738		0.668		0.842		0.934	
Age	0.982*	(0.967, 0.997)	0.981*	(0.966, 0.996)	0.982*	(0.967, 0.997)	0.981*	(0.966, 0.996)
Female	0.588**	(0.401, 0.863)	0.637*	(0.431, 0.944)	0.588**	(0.401, 0.863)	0.637**	(0.431, 0.944)
Education	0.798**	(0.699, 0.912)	0.798**	(0.697, 0.914)	0.798**	(0.699, 0.912)	0.798**	(0.697, 0.914)
Political interest	1.025	(0.891, 1.179)	1.013	(0.878, 1.167)	1.025	(0.891, 1.179)	1.013	(0.878, 1.167)
Left-right orientation	1.019	(0.946, 1.098)	1.006	(0.932, 1.086)	1.019	(0.946, 1.098)	1.006	(0.932, 1.086)
COP exposure	0.987	(0.963, 1.012)	1.040	(0.991, 1.092)	0.987	(0.963, 1.012)	0.937*	(0.888, 0.989)
Alarmed					0.876	(0.490, 1.567)	0.715	(0.392, 1.305)
Concerned	1.141	(0.638, 2.041)	1.398	(0.766, 2.551)				
Cautious	0.676	(0.416, 1.098)	0.745	(0.455, 1.218)	0.592	(0.349, 1.004)	0.533*	(0.311, 0.914)
Disengaged	0.118***	(0.061, 0.227)	0.124***	(0.064, 0.242)	0.103***	(0.053, 0.200)	0.089***	(0.045, 0.174)
Alarmed * exposure							1.110**	(1.034, 1.192)
Concerned * exposure			0.901**	(0.839, 0.967)				
Cautious * exposure			0.993	(0.915, 1.078)			1.103*	(1.012, 1.202)
Disengaged * exposure			0.932	(0.853, 1.017)			1.034	(0.943, 1.134)
Nagelkerke R Square		0.165		0.189		0.165		0.189

Note. The Doubtful segment was excluded resulting in $n = 730$. The reference category for model 3.1 and 3.2 was the Alarmed segment, for model 4.1 and 4.2 the Concerned segment. * $p < .05$, ** $p < .01$, *** $p < .001$

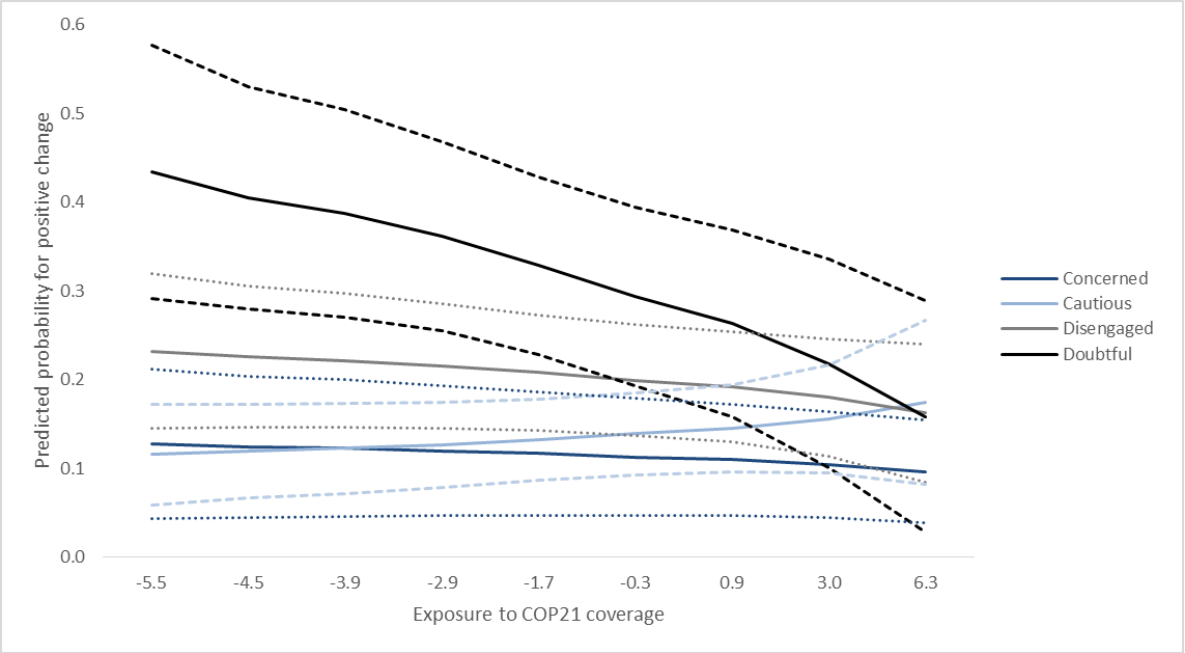

Figure A2: Predicted probabilities and 95% confidence intervals of changes to more engaged segments for different levels of exposure to COP21 coverage per audience segment (based on model 1.2 in Table A2, n = 731, the Alarmed segment excluded).

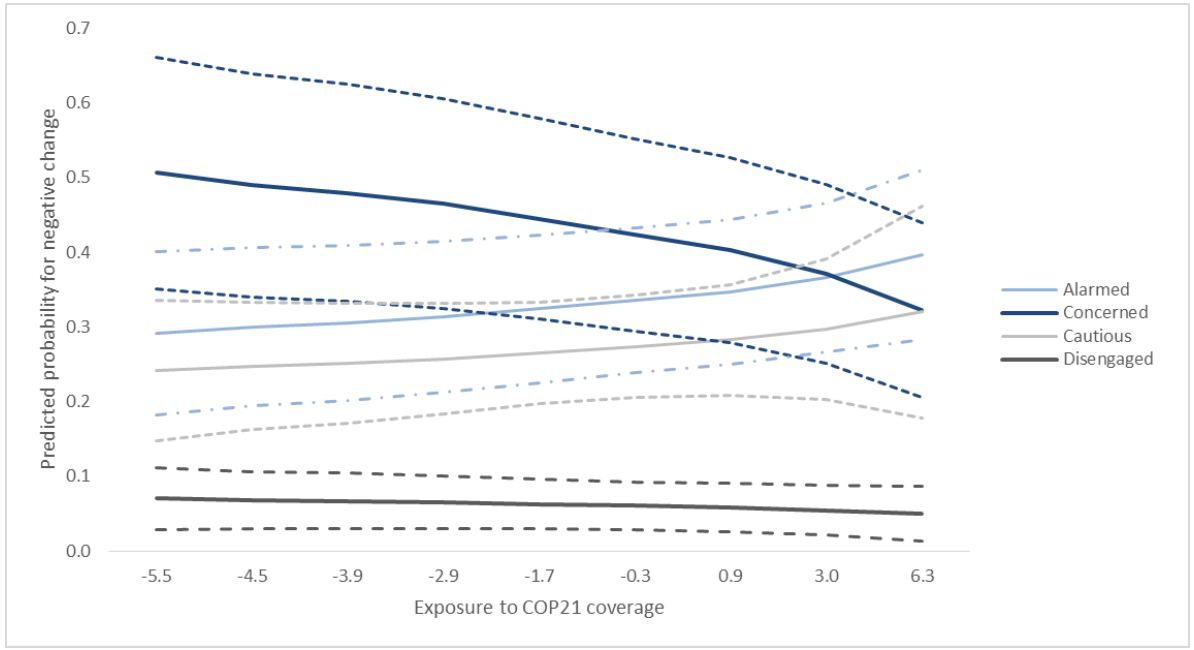

Figure A3: Predicted probabilities and 95% confidence intervals of changes to less engaged segments for different levels of exposure to COP21 coverage per audience segment (based on model 4.2 in Table A3, n = 730, the Doubtful segment excluded).