

Perceptions of Global Warming as a Serious Problem for the Nation: Testing Propositions of the ACE Model

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Roadmap

- 1 Understanding GW seriousness judgments with two longitudinal methods
- 2 Cross Lagged Panel Regressions
- 3 Mediation Analyses with Repeated Cross-Sections
- 4 Key Takeaways

Propositions of the Attitude-Certainty-Existence Model in the domain of global warming (GW)

- The ACE Model proposed that the perception that GW is a serious problem for the nation is caused by ...
 - perception that GW exists (i.e., the global temperature has been increasing)

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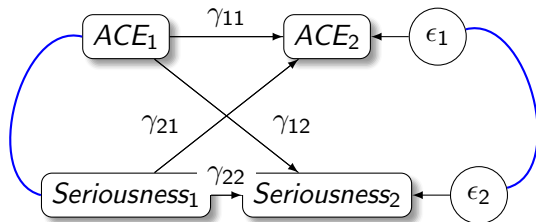
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- *Attitude*: would you say that global warming would be good, bad, or neither good nor bad?
- *Human Cause*: Do you think that the increase in the world's temperature over the past 100 years was caused mostly by things people did, mostly by natural causes, or about equally by things people did and by natural causes?

Cross Lagged Panel Regressions



$$ACE_{i,t} = \gamma_{21} Seriousness_{i,t-1} + \gamma_{11} ACE_{i,t-1} + \epsilon_{1i}$$
$$seriousness_{i,t} = \gamma_{22} Seriousness_{i,t-1} + \gamma_{12} ACE_{i,t-1} + \epsilon_{2i}$$

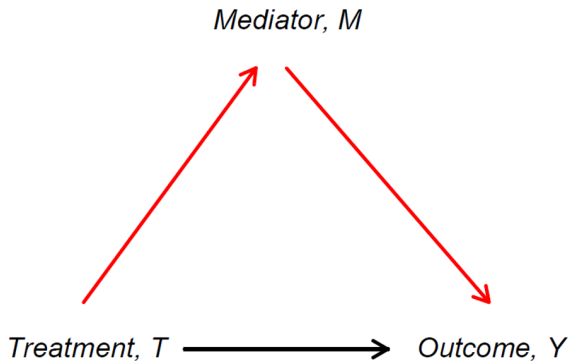
Cross Lagged Panel Regressions

ACE Variable (X)	Cross-lagged Effects		Stability Effects	
	X → Y	Y → X	X → X	Y → Y
Perception that GW is bad	0.16**	0.14*	0.38***	0.41***
Perceived Existence of GW	0.17**	0.11+	0.37***	0.38***
Certainty of existence belief	0.21**	0.07	0.43***	0.36***
Perception that GW is caused by humans	0.16**	0.14**	0.39***	0.43***
Bad x certainty of existence x human cause	0.18**	0.1*	0.52***	0.41***

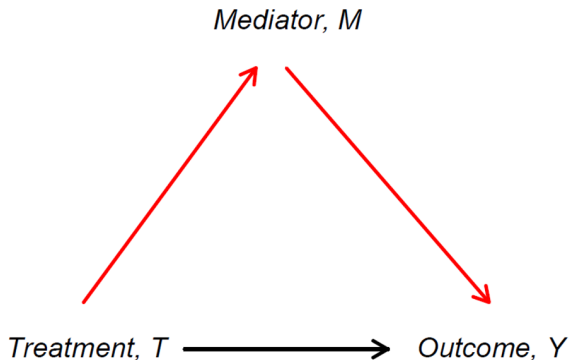
Note: All coefficients standardized;

+ p <.1 * p <.05 ** p <.01 *** p <.001

Mediation Analyses with Repeated Cross-Sections



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$$\text{Seriousness}_i = cT_i$$

$$\text{ACE}_i = aT_i$$

$$\text{Seriousness}_i = c'T_i + b\text{ACE}_i$$

Mediation Analyses with Repeated Cross Sections

Table: ACE variables are predominant causes of perceived seriousness of GW

		Existence	Certainty	Bad	Human	Composite
2009	2013	-0.01	0.01	0.01	.02*	0.01
2009	2015	-0.03	0.01	0.02	.05***	.04***
2009	2018	0.002	.03*	.04**	.05***	.06***
2009	2020	.03*	.07***	.05**	.07***	.09***
2010	2018	0	0.01	0.02	.04***	.05***
2010	2020	0.01	.04***	0.02	.05***	.07***
2012	2018	0.01	.02*	.04***	.04***	.05***
2012	2020	.04***	.05***	.06**	.06***	.09***
2015	2020	.04***	.05**	.03+	0.01	.05***

Note: + $p < .1$ * $p < .05$ ** $p < .01$ *** $p < .001$

Key Takeaways

- The greatest national seriousness is ascribed by people who believe GW is happening and are certain of the belief, perceive it to be bad, and believe humans caused this imminent rise in temperatures.

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- The greatest national seriousness is ascribed by people who believe GW is happening and are certain of the belief, perceive it to be bad, and believe humans caused this imminent rise in temperatures.
- Changes in national seriousness judgments were predicted most often by the belief that humans have been responsible for inducing global warming
- Presenting people with more evidence on human causes for climate change might increase the extent to which they perceive it as a serious problem for the nation.

Thank You!



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