

Resilience: A Systems Model and Three Longitudinal Surveys that Look at Perceived Risk, Emotional Reactions and Perceptions of National Security

William J. Burns

Decision Research CREATE CSUSM

With Paul Slovic and Ellen Peters

With Robin Dillon and Cathy Tinsley

With Adam Rose, James Giesecke, Tony Barrett, Ergin Bayrak, Michael Suher

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Presentation Objectives

Modeling Dynamics of Public Response

Response to Christmas Day Terrorist Attack

Perceived Risk

Emotional Response

Risk-Related Behaviors

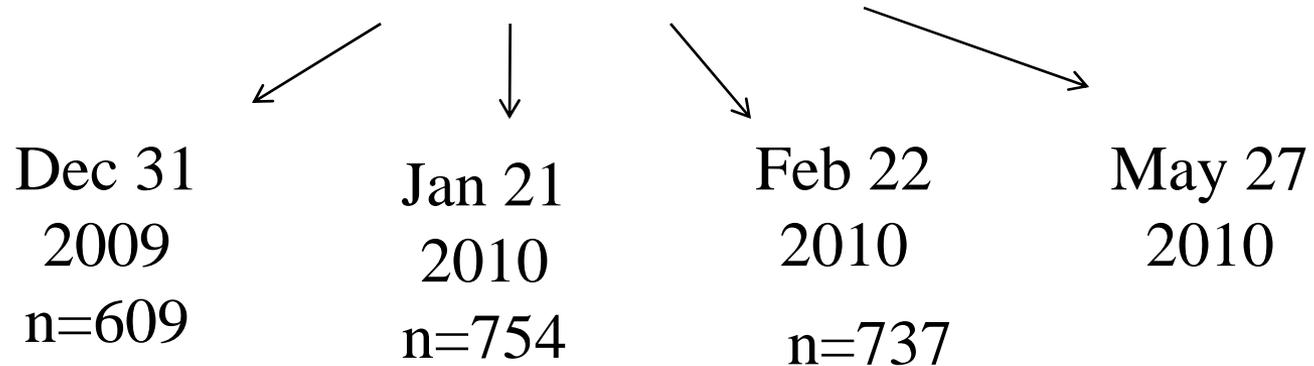
Desired National Security Goals

Perceptions of DHS/TSA

Perceptions of Security Measures

Results from a study of public response to the Financial Crisis and Haiti are included for comparison and context

Research Design



Purpose: To study how risk perception and risk-related behaviors change during and following a crisis

n =507 for all three surveys

A national panel was surveyed on both December 31, January 21 and February 22 about the terrorist attempt on Flight 253 and the earthquake in Haiti. We plan to survey this group on one more occasion. The primary focus of these surveys were as follows:

Risk Perception
Influence of Emotion
Risk-Related Behaviors
Economic Impacts

Perceived Risk

Likelihood in next 12 Months: Somewhat or Very Likely

Nature of Attack	Dec 31, 2009	Jan 21, 2010	Feb 22, 2010
Terrorist Attack on Nation	73.6%	71.6%	66.9%
Terrorist Attack on Family	13.8%	13.0%	16.4%
Terrorist Attack on Family in Airplane	18.0%	15.9%	18.1%

Perceptions, Emotions and Risk Related Behaviors

Perceptions and Risk-Related Behavior	Dec 31, 2009	Jan 21, 2010	Feb 22, 2010
Terrorist Attack on Family in Airplane (Somewhat or Very Likely)	18.0%	15.9%	18.1%
Fearful of Flying Right Now (Moderate to Very)	36.9%	33.2%	28.8%
Postponing Plans to Fly Right Now (Somewhat or Very Likely)	27.4%	21.9%	19.3%

$$\text{Postpone Flying} = .80(\mathbf{Fear}) - .05(\text{Likelihood}) + .01(\text{Severity})$$

$$R^2 = .61$$

$$\text{Postpone Flying} = .26(\mathbf{911-Images}) + .22(\mathbf{AlmostSucessful}) + .08(\text{Weapons})$$

$$- .09(\text{NoSucessfulAttempts}) + .07(\text{VigilantPassengers}) + .01(\text{Lucky})$$

Emotional Reaction: Terrorism, Haiti and the Financial Crisis

Emotion Terrorism	Dec 31, 2009	Jan 21, 2010	Feb 22, 2010
Worried about Terrorism Yesterday	68.0%	85.3%	88.4%
Very Sad	22.5%	18.5%	12.5%
Very Anxious	8.2%	6.3%	4.7%
Very Angry	33.7%	25.6%	21.1%
Very Fearful	8.6%	8.1%	6.5%
Very Worried	9.3%	5.9%	6.1%
Very Stress	4.1%	3.4%	3.3%

Emotion	Sept 29, 2008	Dec 31, 2009	Jan 21, 2010	Feb 22, 2010	Jan 21, 2010	Feb 22, 2010
	Financial	Financial	Financial	Financial	Haiti	Haiti
Very Sad	40.6%	28.5%	29.2%	26.6%	56.3%	41.9%
Very Anxious	35.8%	17.8%	20.5%	18.4%	9.9%	4.3%
Very Angry	41.2%	26.2%	28.7%	27.9%	6.7%	2.4%
Very Fearful	33.3%	16.3%	19.6%	18.2%	7.5%	3.5%
Very Worried	40.1%	20.4%	23.1%	20.3%	13.1%	6.3%
Very Stressed	23.7%	14.0%	16.0%	14.1%	3.4%	3.3%

The Nation's Security Goals and Tradeoffs

Terrorism versus Tradeoffs	Dec 31, 2009	Jan 21, 2010	Feb, 22 2010
Completely Prevent Terrorist Attack with Minimal Consideration of Tradeoffs (e.g. costs, civil liberties)	33.3%	28.3%	23.5%
Greatly Reduce Chance of Terrorist Attack with Some Consideration of Tradeoffs (e.g. costs, civil liberties)	43.3%	52.6%	55.0%
Somewhat Reduce the Chance of Terrorist Attack with Equal Consideration of Tradeoffs (e.g. costs, civil liberties)	23.4%	19.2%	21.5%

Perceptions of Security Measures

(with Bruce Schneier)

Likely to Prevent Terrorist Attack: Moderate to Certain

Security Measures	Dec 31, 2009	Jan 21, 2010	Feb 22, 2010
Restricting Last Hour of Flight	30.5%	33.4%	33.4%
X-Raying Shoes	38.0%	41.4%	42.2%
Restricting liquids on Board	41.7%	43.0%	41.5%
Securing the Cockpit Door	52.9%	57.0%	64.5%
Full Body Imaging (Somewhat or Strongly Support)	79.7%	78.9%	79.5%
Full Body Imaging if Less Than 100% Effective (Somewhat or Strongly Support)		68.6%	70.7%

TSA Motivations: Safety versus “Security Theatre”

Make Air Travel Safer	Dec 31, 2009	Jan 21, 2010	Feb 22, 2010
Restricting Last Hour of Flight	24.2%	20.7%	23.0%
X-Raying Shoes	38.1%	32.5%	34.8%
Restricting liquids on Board	41.0%	36.8%	35.4%
Securing the Cockpit Door	52.8%	52.1%	51.7%

Make Air Travel <i>Feel</i> Safer	Dec 31, 2009	Jan 21, 2010	Feb, 22 2010
Restricting Last Hour of Flight	36.7%	40.2%	45.3%
X-Raying Shoes	37.3%	36.1%	38.2%
Restricting liquids on Board	32.7%	34.6%	36.5%
Securing the Cockpit Door	31.7%	31.6%	34.2%

Make the TSA Look Competent	Dec 31, 2009	Jan 21, 2010	Feb, 22 2010
Restricting Last Hour of Flight	39.1%	39.2%	31.7%
X-Raying Shoes	24.7%	31.3%	27.0%
Restricting liquids on Board	26.3%	28.7%	28.1%
Securing the Cockpit Door	15.5%	16.4%	14.1%

$$\text{TrustDHS} = .58(\text{Obama}) + .19(\text{Effective}) + .08(\text{Security Measures}) - .12(\text{Attack Severity}) - .12(\text{Balanced Goals}) - .12(\text{Security Theatre})$$