

The Psychology of Climate Change

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**CLIMATE
CHANGES
MINDS**



**CO2 INCREASE AFFECTS
VOTER DECISIONABILITY
100% INCREASE IN HUNG PARLIAMENTS THIS YEAR**

The Overarching Issue

- Climate change (anthropogenic) -> rise in global sea levels (IPCC, 2007)
- Most Americans do not feel a personal connection to the issue – despite being ‘aware’ of climate change/sea level rise (CC/SLR) (Leiserowitz, 2007, Pew Center, 2009)
- Since 2009, sig. decline in Americans’ beliefs, risk perceptions, trust in messengers of CC (Leiserowitz et al, 2010)
- Why are communications on CC/SLR failing to get public attention?
- What can be done to create sense of urgency required for public discourse & action?
- How can we encourage development of public support for policies that lead to environmental resiliency?



Tidewater Region, Virginia



Case Study: Norfolk, Virginia

- Second only to New Orleans – most vulnerable in the US to SLR (land subsidence + SLR) (Karl, et al, 2009, Boone et al, 2010)
- HRPDC + ODU -> addressing hazards associated with CC/SLR
- QoL survey (SSRC, ODU, 2011) -> 23.5% residents believe that CC is not a serious concern; 11.5% see it as a “hoax”
- What explains this **public (lack of) reaction?**
- **How do people understand & process information, make decisions?**
- Construct & test a social science driven process model of communicating CC/SLR -> **excite public engagement in & support for policies** -> **environmental resiliency**

Methodology

- **Telephone survey** of a representative sample – land lines purchased from Marketing Systems Group
- 600 completed interviews (at least)
- 15 min surveys
- **Four flood zones** defined by HRPDC (1 = highest risk for flooding; 4 = lowest risk for flooding)
- Possible online survey in the near future

Research Questions

1. How do people **understand the risks** imposed by climate change/sea level rise (CC/SLR)?
2. *What are the human behavioral contributions to CC/SLR & the psychological & contextual drivers of these contributions?*
3. What are the **psychosocial impacts** of CC/SLR?
4. How do people **adapt to & cope with** perceived threat & unfolding impacts of CC/SLR?
5. What psychological **barriers** limit CC/SLR action?
6. How can **psychologists assist** in mitigating/adapting to CC/SLR?

How do people understand the risks of CC/SLR?



Understanding risks of CC/SLR

- **Affect (or, emotions)**

1. **“Finite pool of worry” effect** – existence of **other classes of “risks”** – economic recession doesn’t help! – flood zone effect (3&4)

2. **“Spread of affect” effect** – **translation** of one risk to another – flood zone effect (1&2)

- **Experiences** – moderate affective reactions

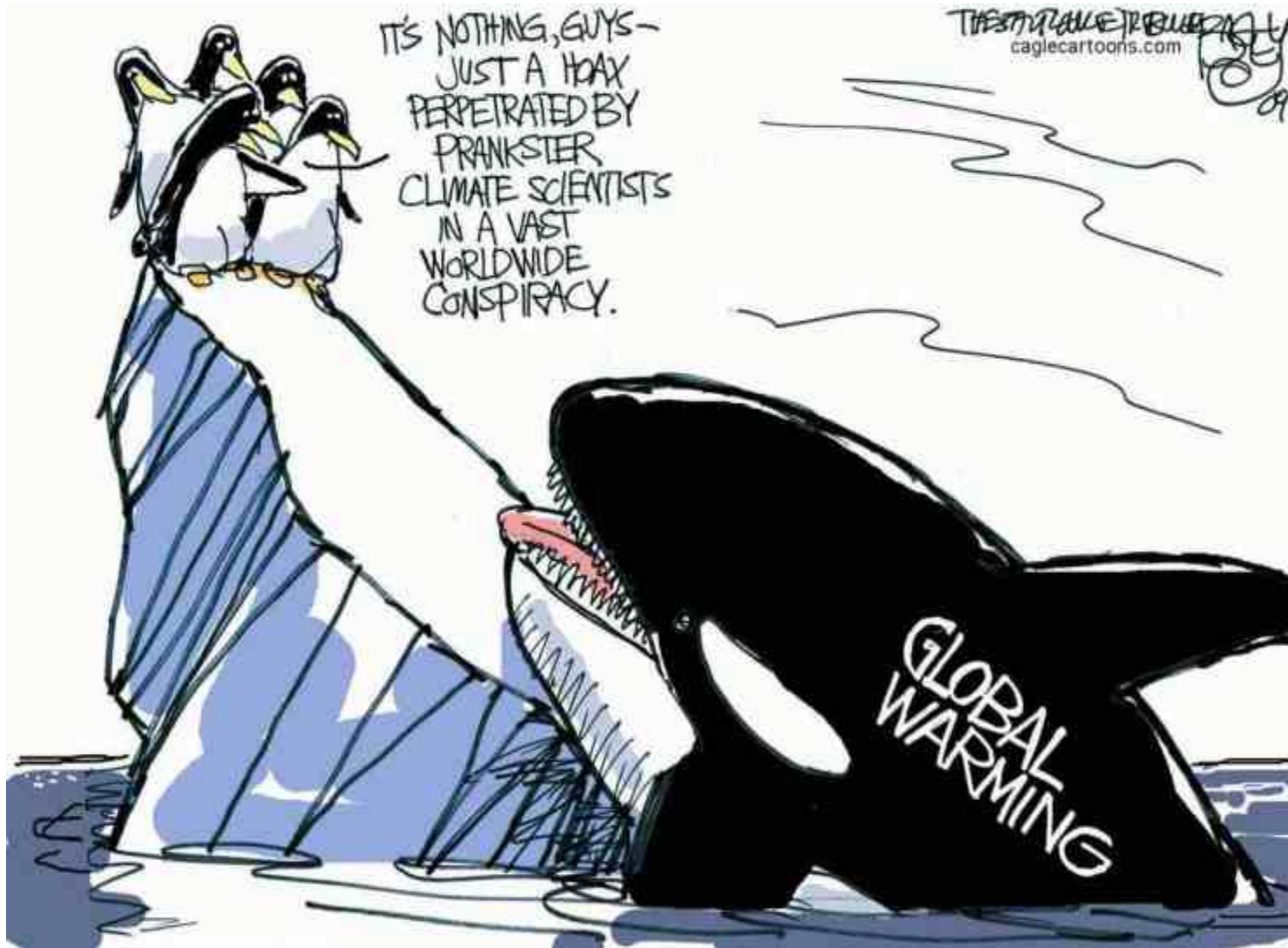
- **Social identity/identification** with sub-cultural groups – resident of “Hampton Roads” vs. “resident of particular neighborhood” – flood zone effect

- shifting population problem

- **Familiarity** – inversely proportionate to perceived riskiness!

- **Gender** – women more concerned

What are the psychosocial impacts of CC/SLR?



Psychosocial Impacts

- **Mental health issues** – loss, PTSD, depression, anxiety, drug & alcohol abuse, elevated risk of child abuse – greater vulnerability for preexisting mental health conditions – Hurricane Katrina effect
- **Stress & emotional issues** – phases – disbelief, shock, denial, outrage – altruistic feelings -> disillusionment, anger & disappointment (can last years) – flood zone effect (1&2)
 - – disruption of social support networks lasting decades – mediated by socioeconomic conditions
- **Uncertainty & despair**
 - Barriers from expressing emotions/environmental loss – fear of being seen a morbid, unpatriotic, **ignorant, defeatist**

How do people **adapt to & cope** with the perceived threat & unfolding impact of CC/SLR ?



Adaptation & Coping

Responses to chronic anxiety due to ecological & social consequences

Unconscious Denial

Gratification through material acquisition

Haves vs. Have-nots

Flood zone effect

Green Consumerism

More thoughtful, but without major lifestyle changes

Heightened Consciousness

Lifestyle changes, stimulate change in others

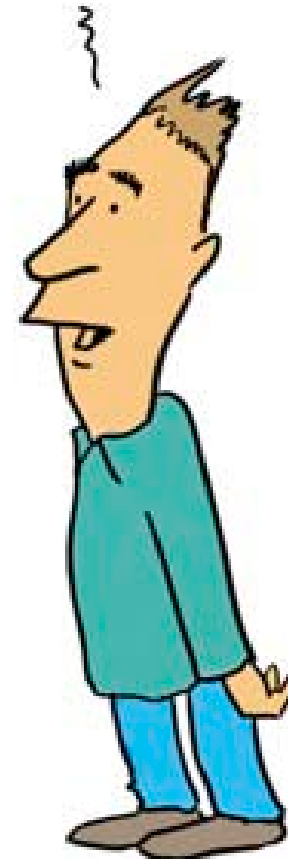
What **psychological barriers** limit CC/SLR action ?

These new Climate Change Glasses are just marvelous! Everything is so rosy and warm!



...er, no, not a thing

Can you see anything?



Josh'10

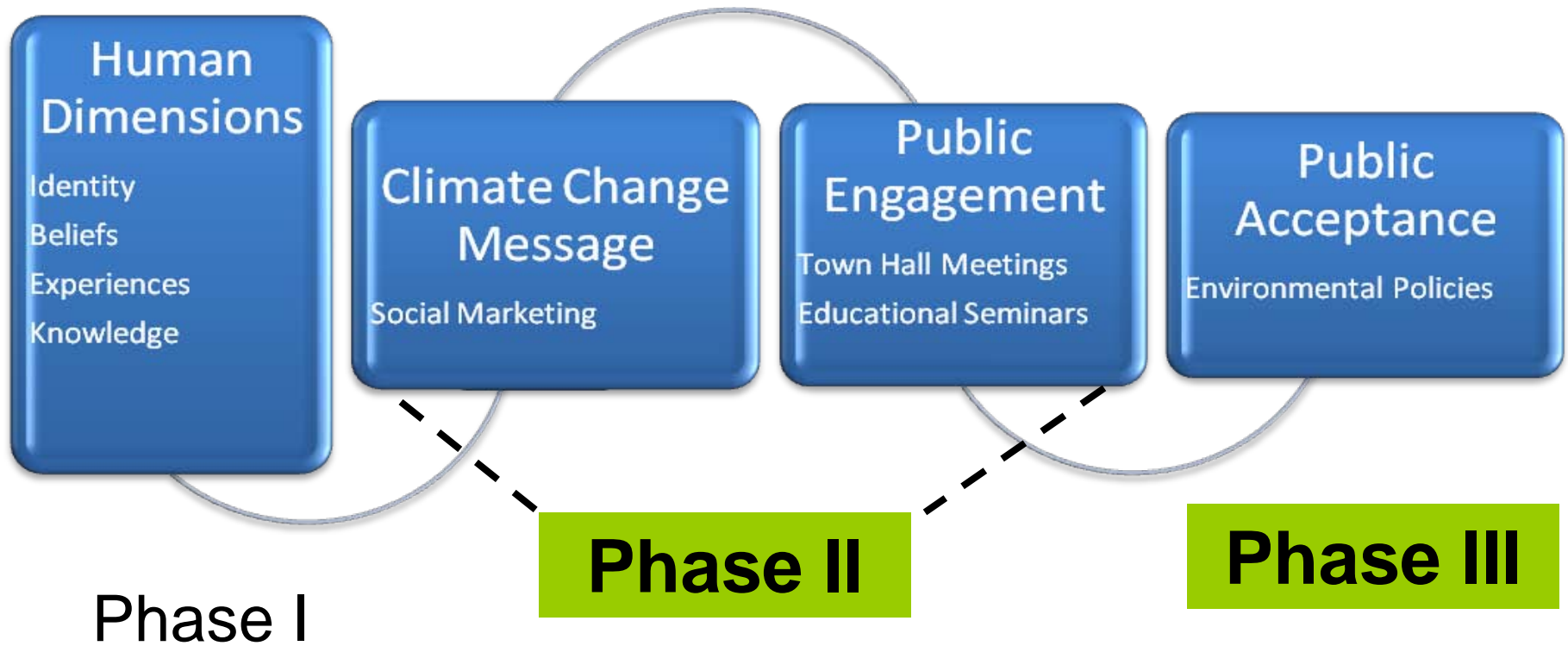
Psychological Barriers

- **Ignorance** – not of the problem, but of solutions – communication issue?
- Uncertainty
- **Mistrust & reactance** – scientists OR government; change involves a cost
- Denial – don't seem to “mind” doing something as long as it doesn't come out of their pockets!
- **Judgmental discounting** – undervaluing distant/future risks
- **PLACE ATTACHMENT** – geographical mobility, social identity – controversial topic in Tidewater region
- **HABIT** – “behavioral momentum” – “cognitive misers” – do not want to make the changes
- **PERCEIVED BEHAVIORAL CONTROL** – learned helplessness - communication issue?
- **Perceived risks from behavioral change** – functional, physical, financial, social, psychological
- **TOKENISM** – tend to favor easy/low-cost solutions even if they have less value
- **Rebound effect** – go overboard & undo effects of behavioral change – e.g., drive farther with a more energy-efficient vehicle

How can psychologists **assist in** **adapting/encouraging resiliency** to **CC/SLR**?

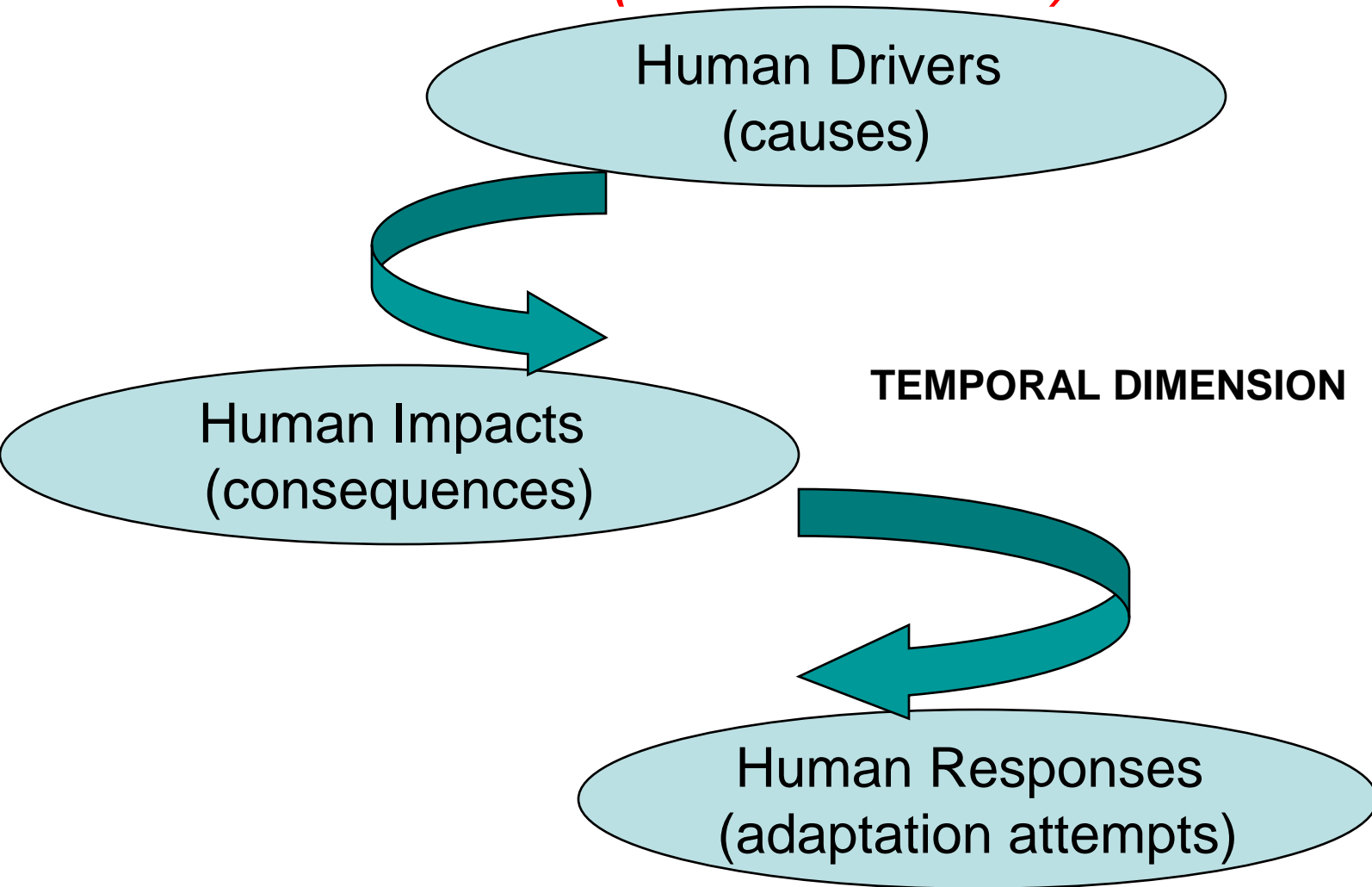


Assist in limiting/adapting to CC/SLR



Human Dimensions of SLR

(short version)



THANK YOU

