Crafting climate change communications: Do local and adaptation frames help?

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How do we talk about climate change in a way that resonates with diverse audiences?

Connect at a personal level

- Relate to core values
  - Health (Maibach et al 2010, Myers et al 2012))
- Make it locally relevant
  (Spence & Pidgeon 2010; Scannell & Gifford 2013)
- But what about those opposed to mitigation efforts?


Vicki Thomas/WWJ


Katie Levan


Is adaptation a back door to mitigation?
Photo: Sharon Drummond

Study Questions

(1) Mitigation vs. Adaptation

(2) Global vs. “Local” Regional frames

Study design

- Recruited from Midwest (N = 501) & Non-Midwest (N=606)

- Each group randomly assigned to 1 of 4 news stories:
  - Global Mitigation (N = 278)
  - Global Adaptation (N = 277)
  - Local Mitigation (N = 274)
  - Local Adaptation (N = 278)

- All articles described predicted health impacts and city-level action

Distance Framing: Global

Cities Start to Take Action as Climate Change Threatens Health Worldwide

According to the United Nations Intergovernmental Panel on Climate Change (IPCC), there is clear evidence that human activity is altering the earth's climate. While the exact consequences are difficult to predict and will likely vary around the globe, experts are expressing serious concerns about how a changing climate will impact health worldwide.

Climate data indicate that rising average temperatures will likely contribute to an increase in the frequency, severity, and duration of summer heat waves. In European cities such as Paris, heat waves could occur 25% more often. At the same time, the heat wave season could expand by 1 to 2 months across much of southern Europe. Such prolonged periods of extreme heat and humidity increase the risk of heat exhaustion and deadly heat stroke, especially among young children and the elderly. What's more, heat waves can increase the formation of ground-level ozone, a pollutant that can aggravate respiratory conditions like asthma.

Beyond heat waves, climate change threatens to alter precipitation patterns around the globe, which can introduce other health concerns. In northern Europe, precipitation is projected to increase in winter and spring and become more intense throughout the year. Heavy rainfall events can result in flash floods and sewage system failures. In addition to exposing individuals to water-borne diseases and mold, the property damage and dislocation from flooding events can cause significant financial and psychological stress.

Distance Framing: Local

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Communities Start to Take Action as Climate Change Threatens Health in the Midwest

According to the U.S. Environmental Protection Agency, there is clear evidence that human activity is altering the earth's climate. While the exact consequences are difficult to predict and will likely vary around the Midwest, experts are expressing serious concerns about how a changing climate will impact the health of local communities.

Climate data indicate that rising average temperatures will likely contribute to an increase in the frequency, severity, and duration of summer heat waves. In Midwest cities such as Chicago, heat waves could occur 25% more often. At the same time, the heat wave season could expand by 1 to 2 months across much of the Great Lakes region. Such prolonged periods of extreme heat and humidity increase the risk of heat exhaustion and deadly heat stroke, especially among young children and the elderly. What's more, heat waves can increase the formation of ground-level ozone, a pollutant that can aggravate respiratory conditions like asthma.

Beyond heat waves, climate change threatens to alter precipitation patterns in the Midwest, which can introduce other health concerns. In the southern Great Lakes region, precipitation is projected to increase in winter and spring and become more intense throughout the year. Heavy rainfall events can result in flash floods and sewage system failures. In addition to exposing individuals to water-borne diseases and mold, the property damage and dislocation from flooding events can cause significant financial and psychological stress.

Action Framing: Mitigation

What Cities are Doing to Limit Climate Change

As the health impacts of climate change become more apparent, a number of governments around the world have begun preparing climate "mitigation" plans. The goal of mitigation planning is to address the root causes of climate change by reducing greenhouse gas emissions. Cities like Copenhagen in Denmark, for example, have taken steps to set greenhouse gas reduction goals and use renewable energy sources, like wind turbines. Some cities are also trying to reduce vehicle emissions by providing more public transportation options and making cities more walkable and bikeable.

Other mitigation measures are focused on making municipal buildings more energy efficient. This may involve installing high-efficiency lighting and heating and cooling systems. Some city governments have also revised residential building codes to ensure that new construction is more energy efficient.

While these efforts are a step in the right direction, groups such as the World Health Organization (WHO) are quick to point out that minimizing the health impacts of climate change will require management on many fronts. For countries to become truly climate-ready, greater coordination will be needed across institutions and governments at all levels – including efforts to engage local citizens.

Action Framing: Adaptation

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What Cities are Doing to Prepare for Climate Change

As the health impacts of climate change become more apparent, a number of governments around the world have begun preparing climate "adaptation" plans. The goal of adaptation planning is to reduce vulnerability to climate change by preparing for its potential consequences. Cities like Copenhagen in Denmark, for example, have taken steps to develop early warning systems for extreme weather events and to improve emergency response plans. Some cities are also preparing for potential heat waves by adding more green space and shade trees to counter the heat-trapping effects of asphalt.

Other adaptation measures are designed to reduce the impacts of heavy rainfall and flooding. This may involve upgrading protective structures such as dams, drainage systems, and flood barriers. Some city governments have also revised residential building codes to ensure that new construction is less susceptible to flood damage.

While these efforts are a step in the right direction, groups such as the World Health Organization (WHO) are quick to point out that minimizing the health impacts of climate change will require management on many fronts. For countries to become truly climate-ready, greater coordination will be needed across institutions and governments at all levels – including efforts to engage local citizens.

Key Outcome Measures

Thoughts after reading – open ended response

Reaction to article

- Was the story relevant, interesting, worrisome, hopeful?

Personal engagement:

- Did they want to learn more? Take action? Want their community to act?

Support for local action

- Would they support local government action to mitigate climate change?

Most common thoughts after reading article

Global Mitigation	Global Adaptation	Local Mitigation	Local Adaptation
Support article (26%)	Support article (24%)	Support article (28%)	Support article (17%)
Support action on climate change (9%)	Need to prevent not just prepare (17%)	Good start but not enough (9%)	Need to prevent not just prepare (13%)
Want U.S. to do more (8%)	Support action on climate change (12%)	Connect to weather events (8%)	Concern about climate change impacts (11%)
Good start but not enough (9%)	Surprised about impacts (8%)	Support action on climate change (8%)	Surprised about impacts (8%)
Surprised about impacts (7%)	Climate change is happening (7%)	Concern about climate change impacts (7%)	Connect to weather events (8%)

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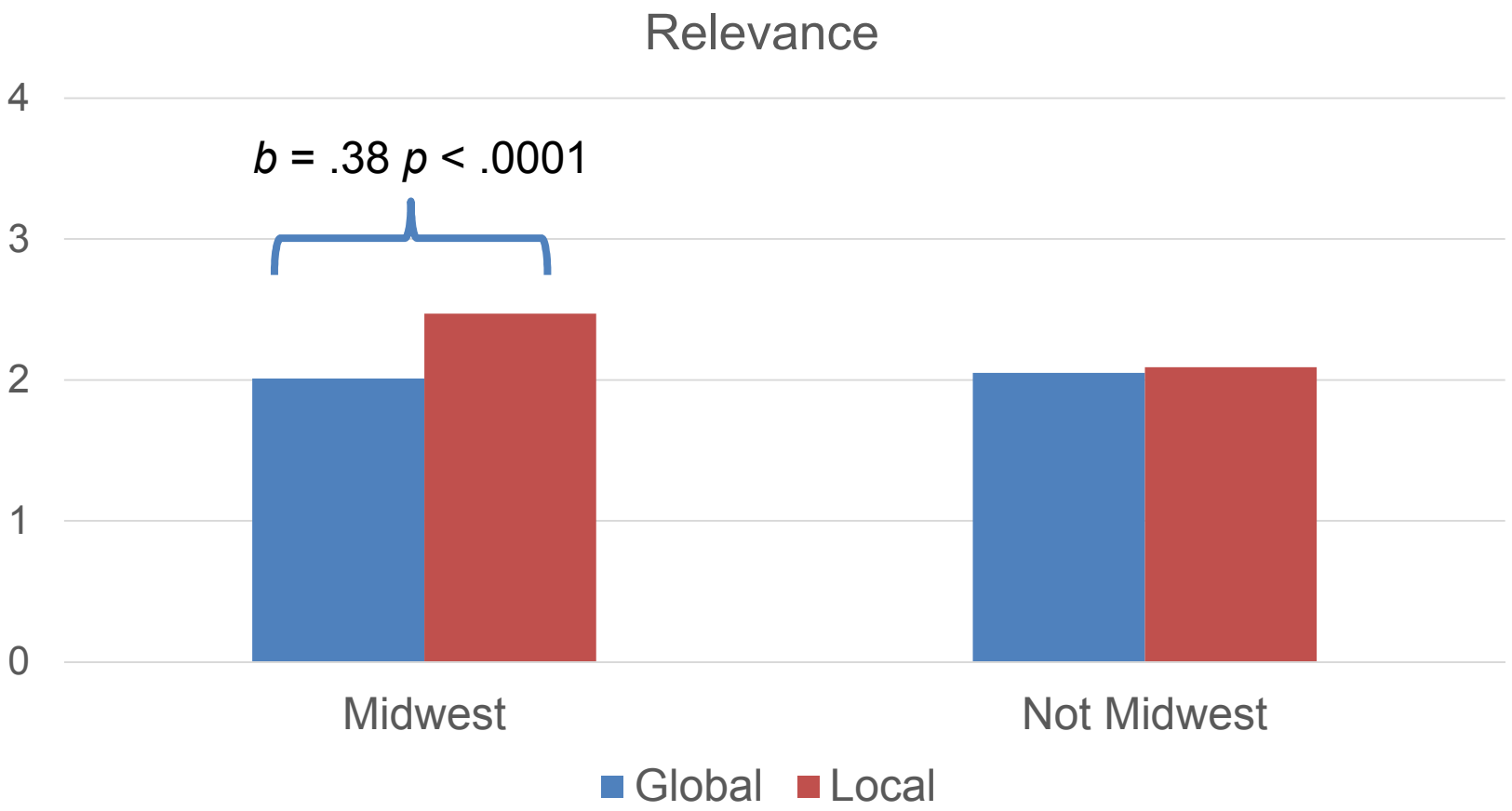
Results across sample

- People were more worried after Adaptation framings
  (b = .18, p = .01)
- Local framings perceived as more relevant
  (b = .23, p < .001)

…Especially for Midwesterners



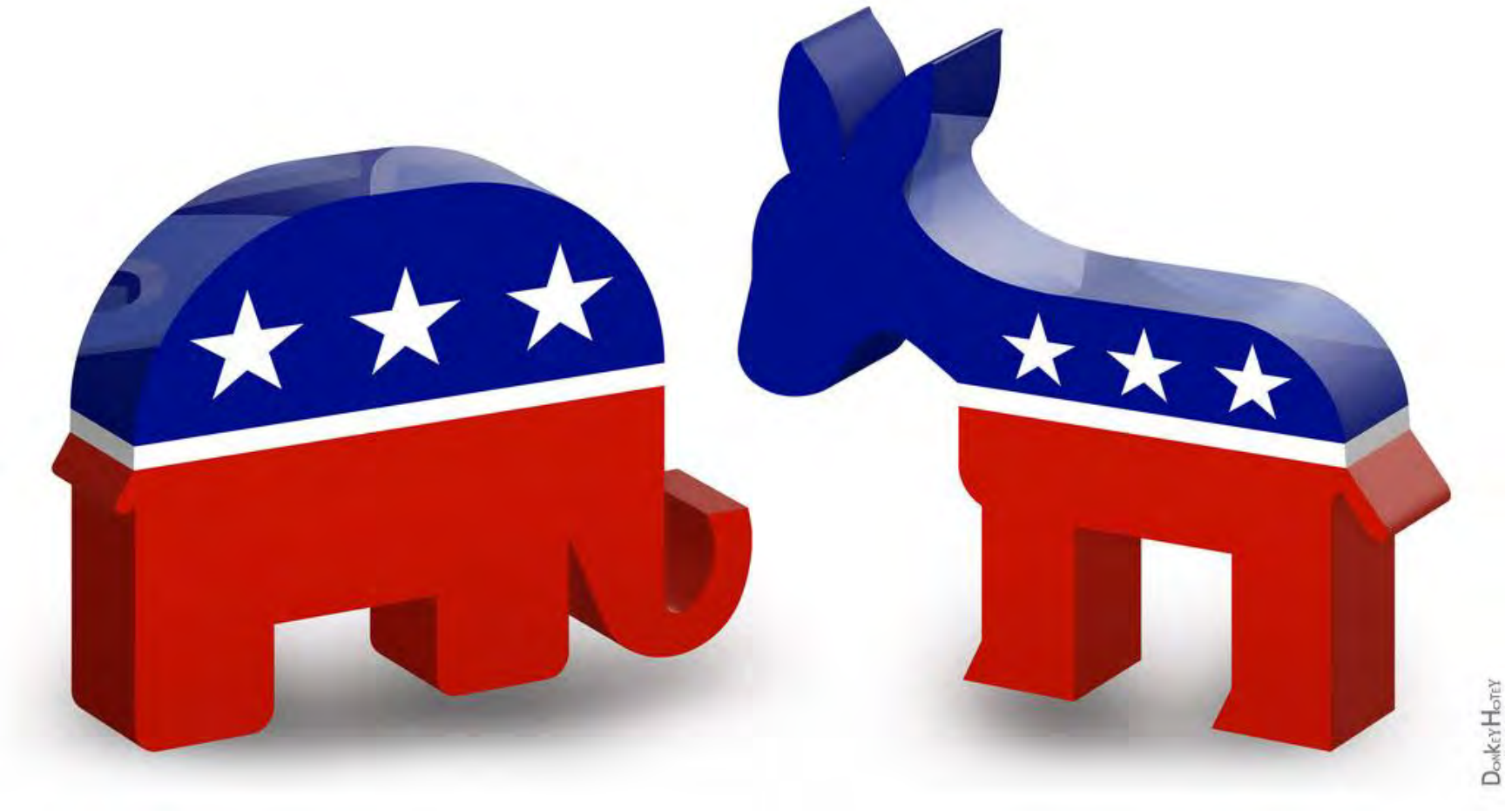
Local x Midwest: *b* = .39, SE = .18, *p* =.03

Results across sample

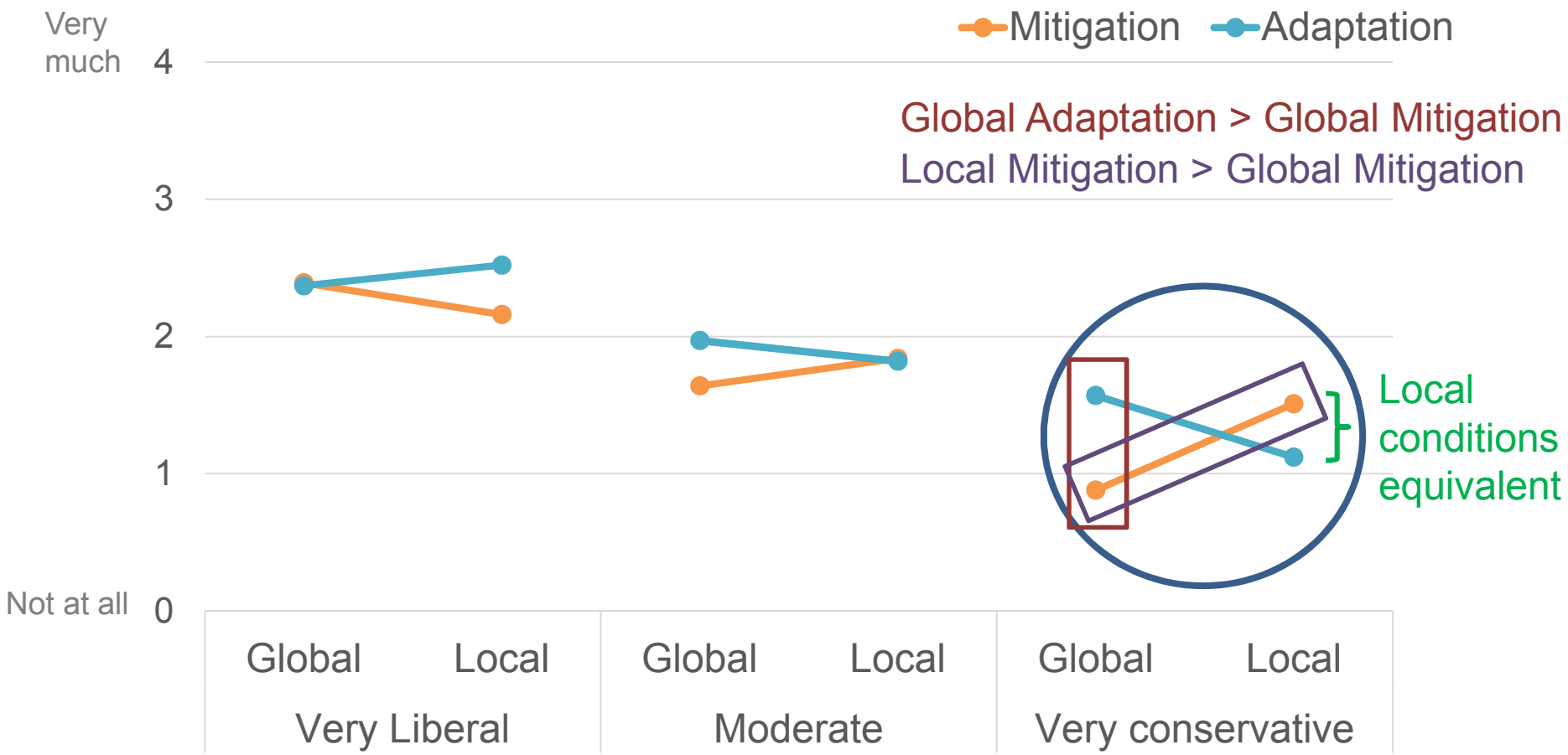
- People were more worried after Adaptation framings
  (b = .18, p = .01)
- Local framings perceived as more relevant
  (b = .23, p < .001)

- **No differences** in terms of:
  Personal engagement or Support for local action

But, does everyone respond the same?

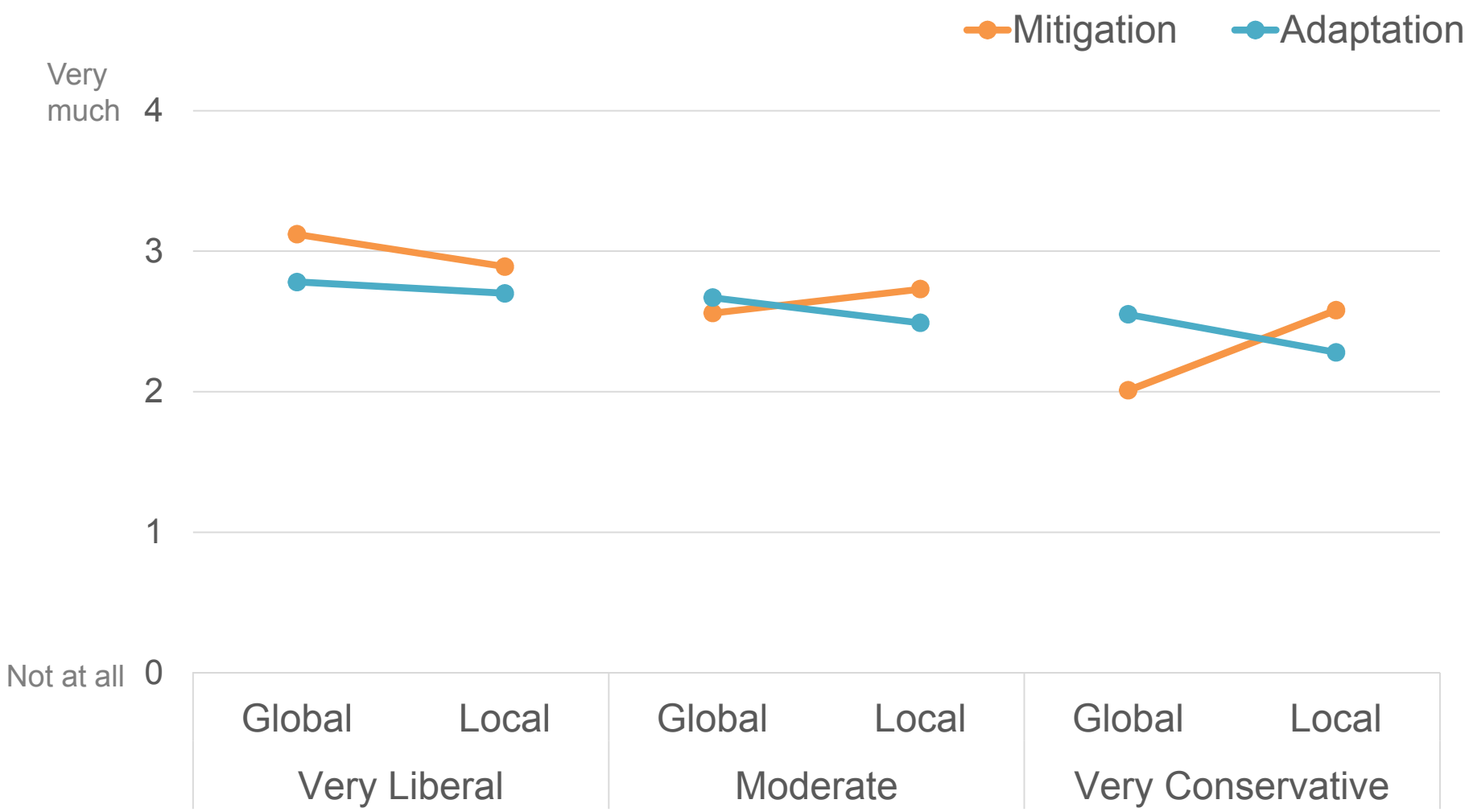


Worry after reading article

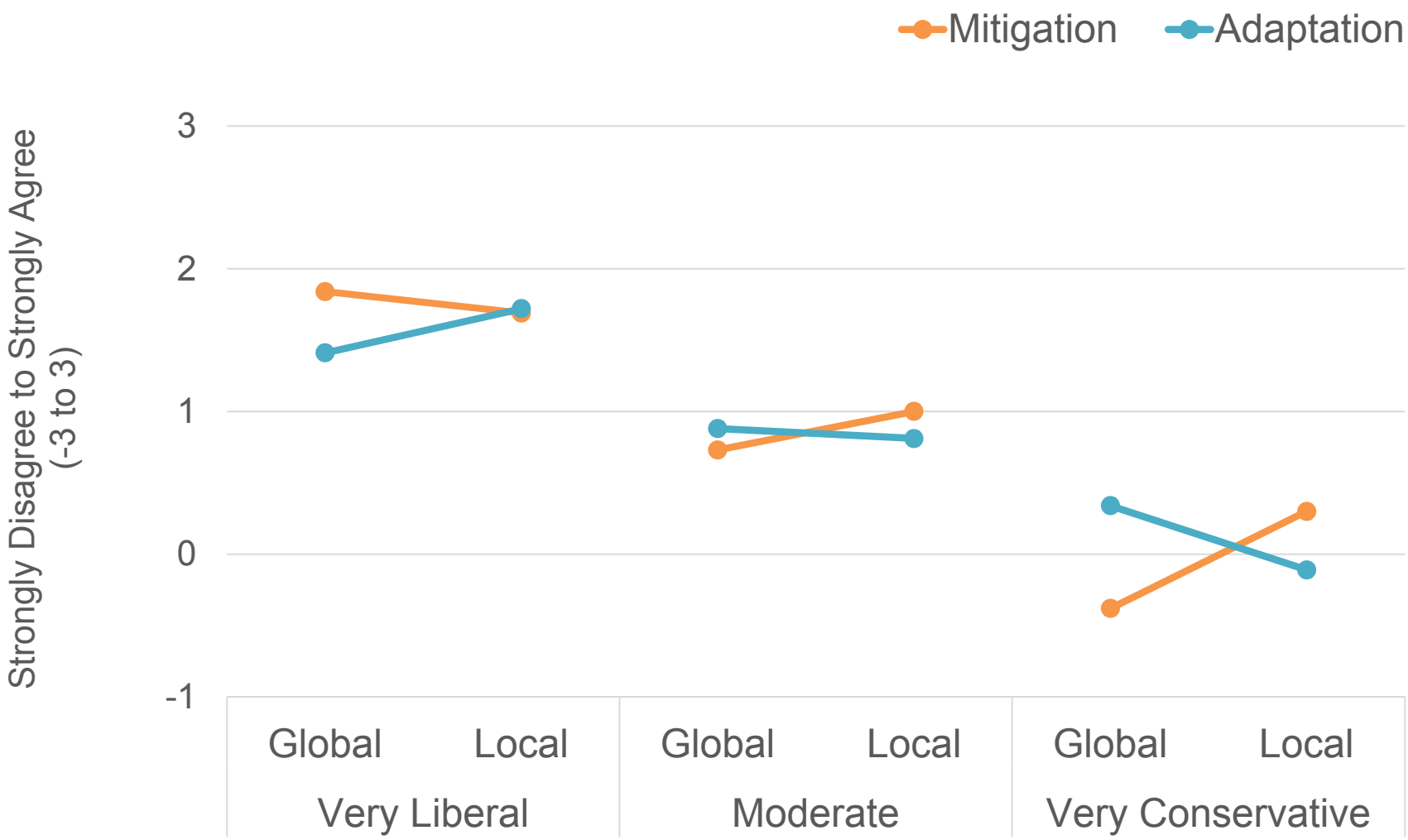


This trend holds across multiple outcomes

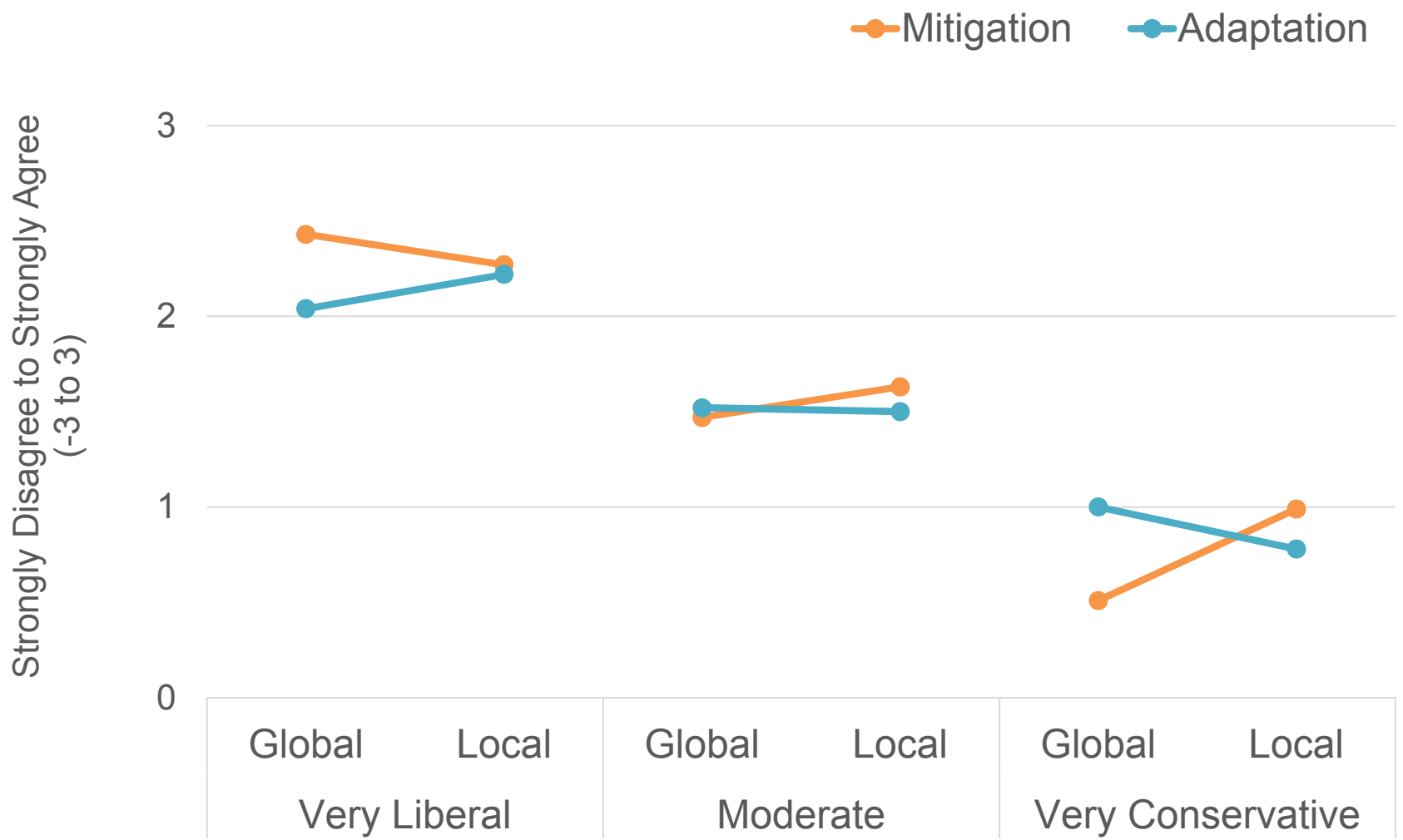
Interest in Article



Personal Engagement



Support for Local action on Climate change



Liberals

- Messages were generally equivalent
  - May reflect pre-existing concern

Conservatives

- 'Global mitigation' frame performs worst
  - "Same old story"
- Local/Regional messages are more effective
- Adaptation frame may help when discussing distant impacts
  - Novelty may draw attention
  - May increase salience of risk

Implications

First, a caveat: One-time intervention with paid participants

Still, modest intervention suggests:

- **Target conservatives.** Unlikely to turn off liberals

- **Go local.** Find concrete examples of local/ regional U.S. impacts.

- **Be careful with Adaptation**
- Gets attention of conservatives when discussing global impacts
  - **BUT:**
    - No difference at a local level
    - It made people feel more worried. Does it signal we're giving up?

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