

# **REFLECTING ON 1 OCTOBER**

Using Research to Inform Public Policy  
and Heal Our Community

**WEDNESDAY, NOVEMBER 14, 2018**

**6:00 - 7:30 PM**

**GREENSPUN HALL AUDITORIUM**

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# **The Unobservable Costs of Gun Violence in America: Lessons from the New Science of Well-Being**

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November 2018

BROOKINGS

# Exploring the Psychological and Other Costs of Mass Shootings via Metrics of Well-Being (and Ill-Being)

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- Ninety six Americans are killed daily by firearms. The toll includes the 133 individuals recently killed in Las Vegas, Nevada; Orlando, Florida; Sutherland Springs, Texas; and other mass shootings. Gun violence is a marker of U.S. life.
- The U.S. has lower average levels of life satisfaction (and more stress) than other countries of comparable and even lower income. Part of this is due to unequal opportunities and the decline of blue collar jobs and associated “deaths of despair”; could part be due to gun violence?
- How can we measure and evaluate the unobservable costs to society? We use subjective well-being measures – life satisfaction, stress, and worry – gathered in daily Gallup polling data to provide insights, focusing on mass shootings: Orlando, October 1, Sutherland Springs in 2017. We explore:
  - » Local effects – are the costs of mass shootings worse for people living in close proximity to the shootings?
  - » Sympathy effects – are the costs higher for populations that have recently experienced a mass shooting?
  - » Adaptation: has the U.S. population become accustomed to the carnage and death associated with mass shootings as they become more frequent?

# A new science: a word about the metrics

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- Well-being measurement - from a nascent collaboration between economists and psychologists to an entire new approach in the social sciences
- Can answer questions as diverse as the effects of commuting on well-being, why cigarette taxes make smokers happier, and why the unemployed are less unhappy with higher local unemployment rates
- Method well-suited for understanding situations where individuals do not have the *agency* to make choices and/or when consumption decisions are *not* the result of optimal choices, such as:
  - » a) macro/institutional arrangements individuals cannot change (like inequality)
  - » b) behaviors driven by imposed norms, addiction or self-control problems
  - » c) high levels of violence and death caused by random gun violence/mass shootings

# Terminology: From Bentham to Aristotle

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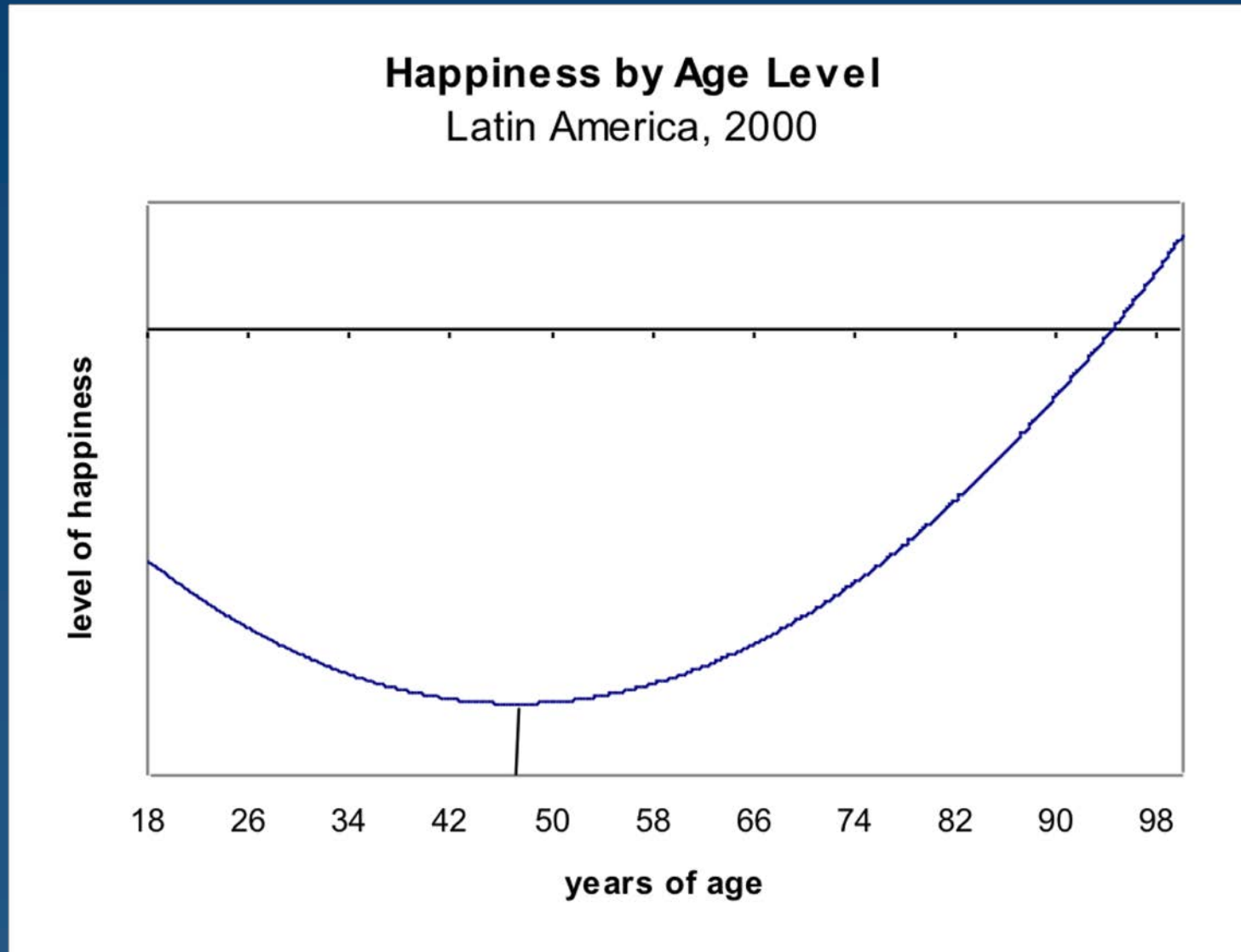
- “Happiness,” “well-being”, “subjective well-being”, and “life satisfaction” often used interchangeably; yet important differences in meaning.
- **Happiness** attracts the most public attention; in the U.S. Declaration of Independence. Attempts to gauge how happy respondents feel about their lives; does not impose definition of happiness
- **Hedonic well-being** – measures how people *experience their daily lives* – their mood (positive or negative/smiling or worried yesterday) as they do different things, like commuting, spending time with friends, or working (Benthamite)
- **Life satisfaction (evaluative well-being)** – correlates more closely with income than general happiness; respondents evaluate their *life circumstances as a whole*
- **Eudemonic** metrics measure life purpose/fulfillment explicitly (Aristotelian)

# How We Measure Happiness and Well-Being

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- ONLY ONE EQUATION FOR ONE SECOND!
- $W_{it} = \alpha + \beta x_{it} + \varepsilon_{it}$
- $W$  is the reported well-being of individual  $i$  at time  $t$ , and  $X$  is a vector of demographic and socio-economic characteristics. Unobserved traits are captured in the error term
- Remarkably consistent patterns in determinants of life satisfaction around the world ( e.g. income, age\*\*, health, employment, social relationships, marriage)
- The ONLY THING to remember: we do not ask people if particular things make them happy or unhappy

# Consistent Patterns around the World - Happiness and Age!



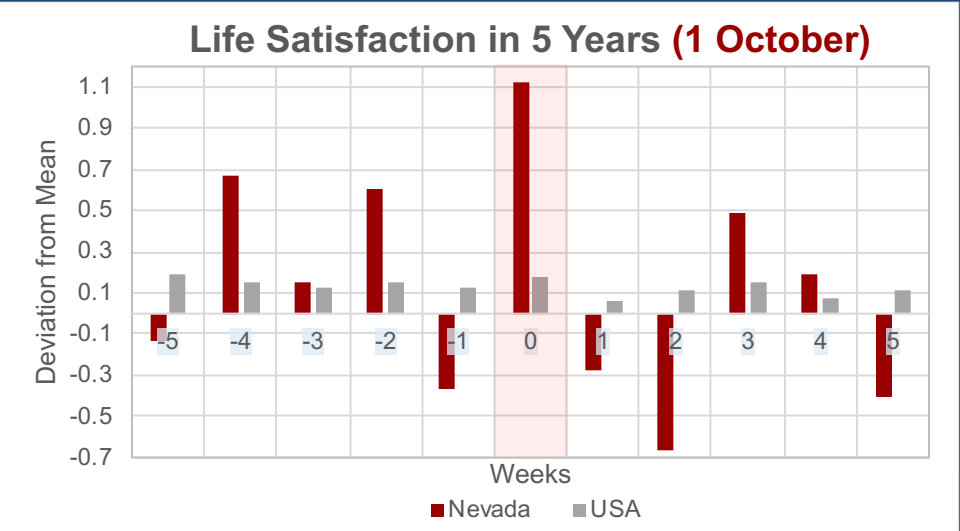
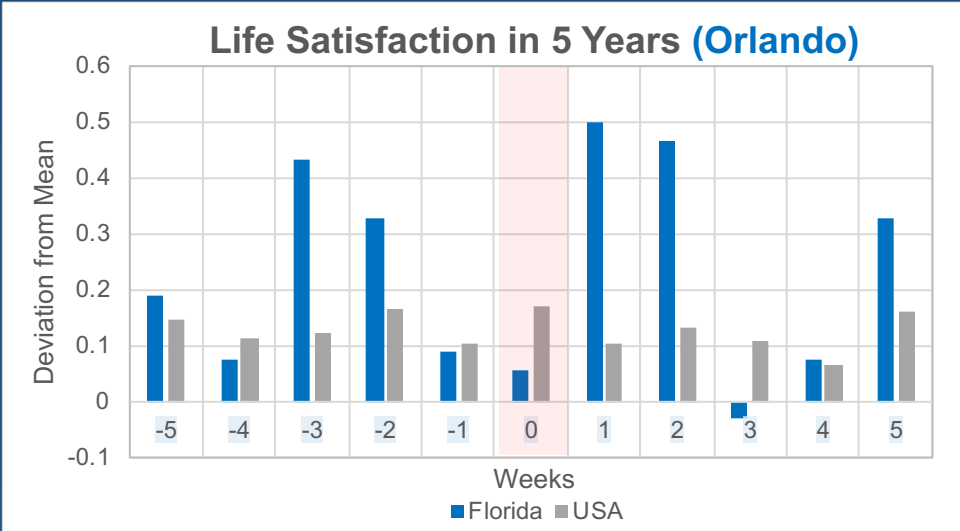
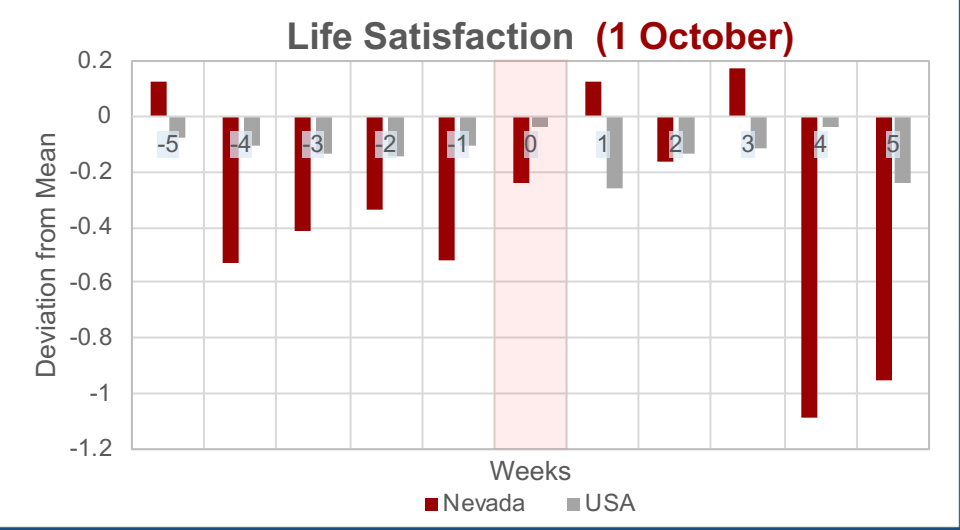
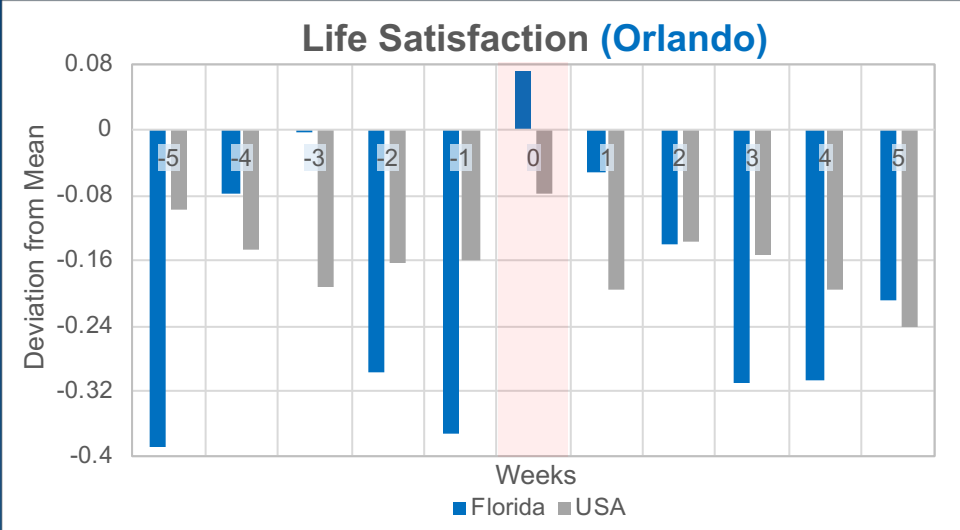
# Question 1: Local Effects?

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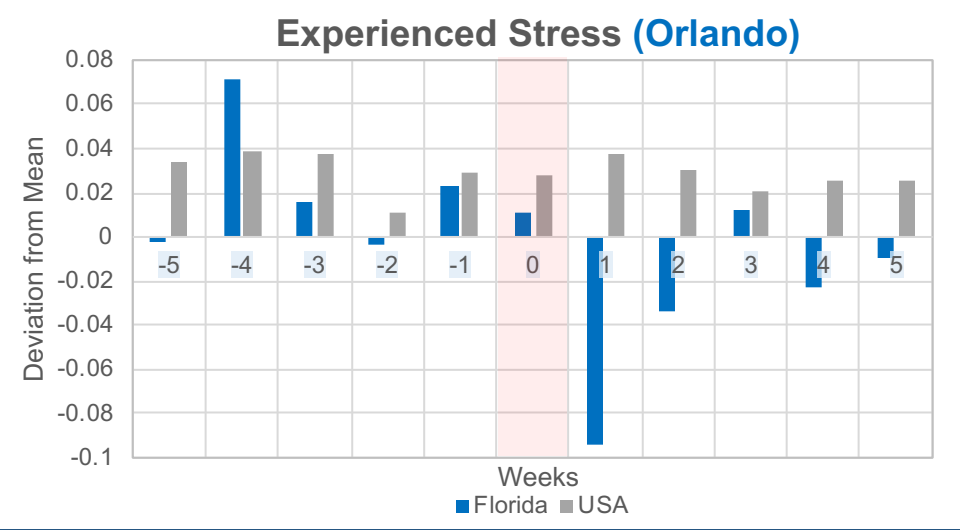
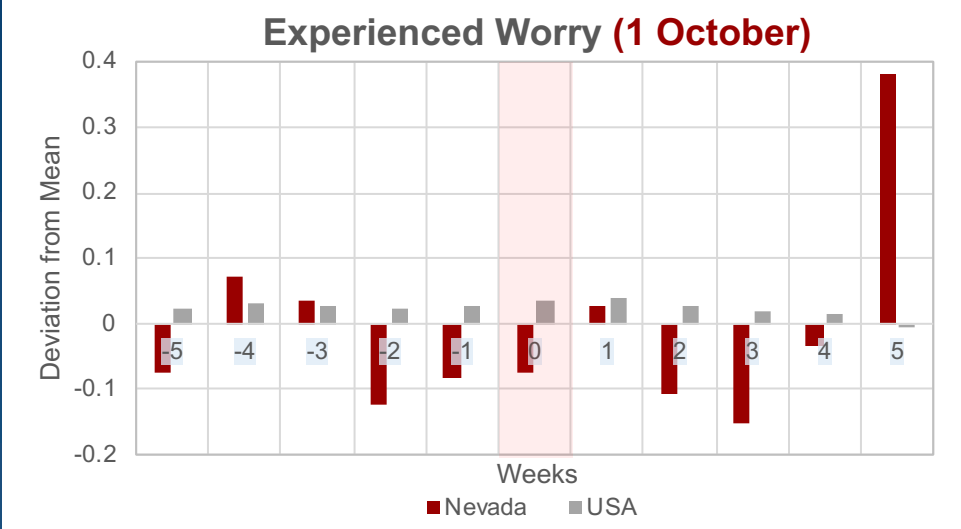
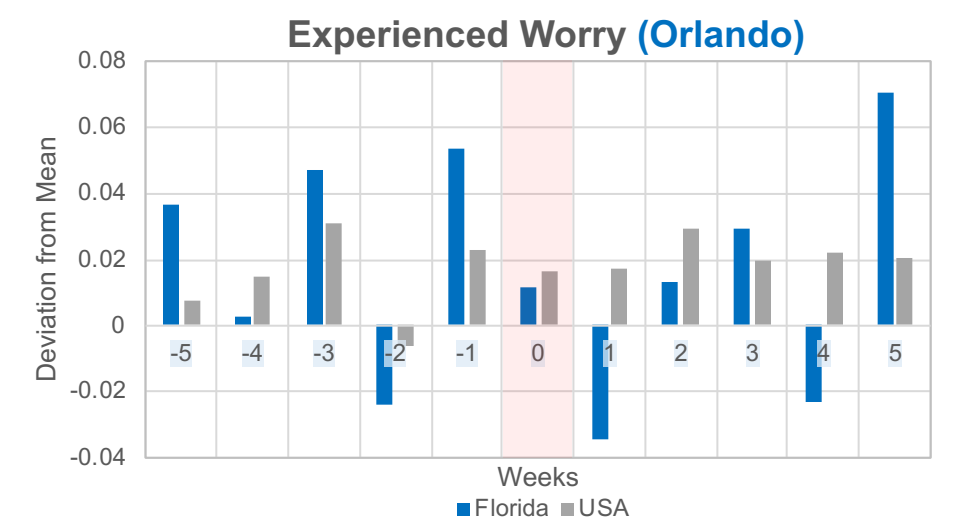
- Do people near or in close proximity to the community where a mass shooting occurs experience higher costs?
- Do these vary by the size/severity of the shooting?



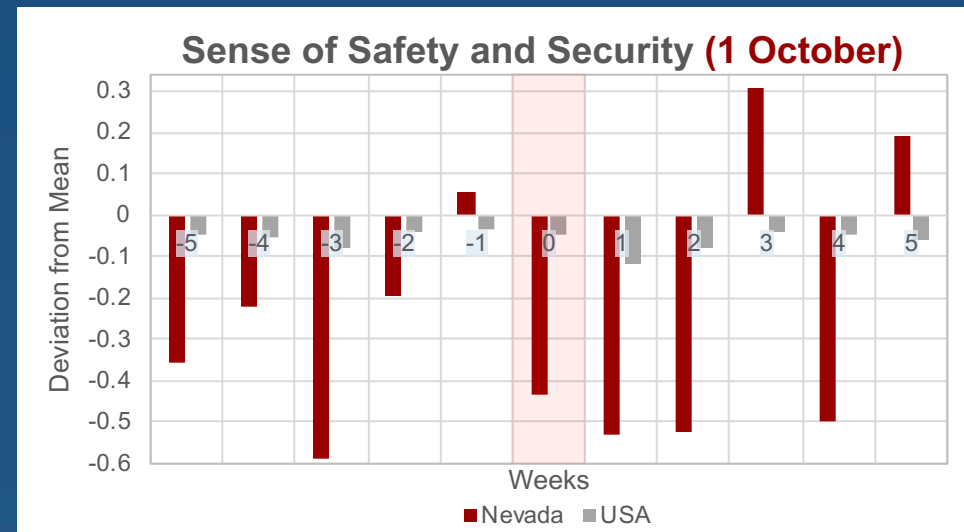
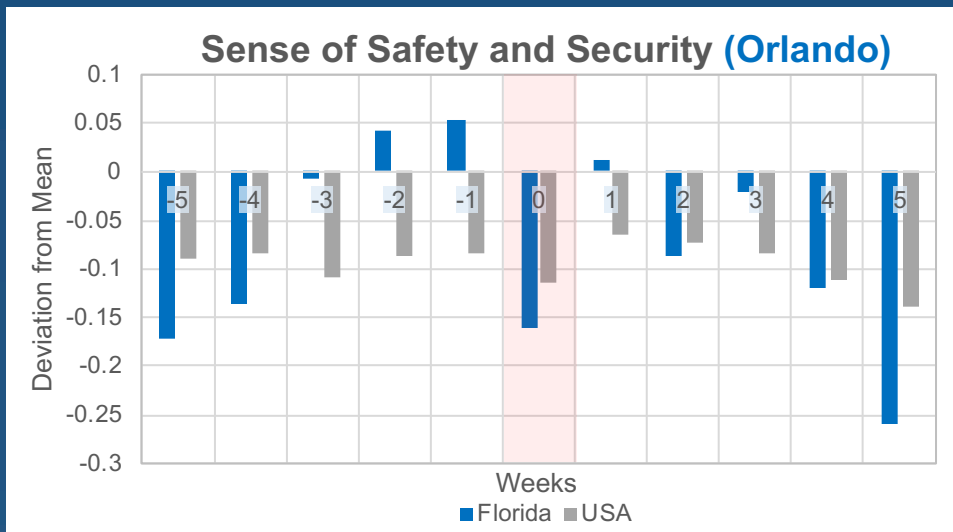
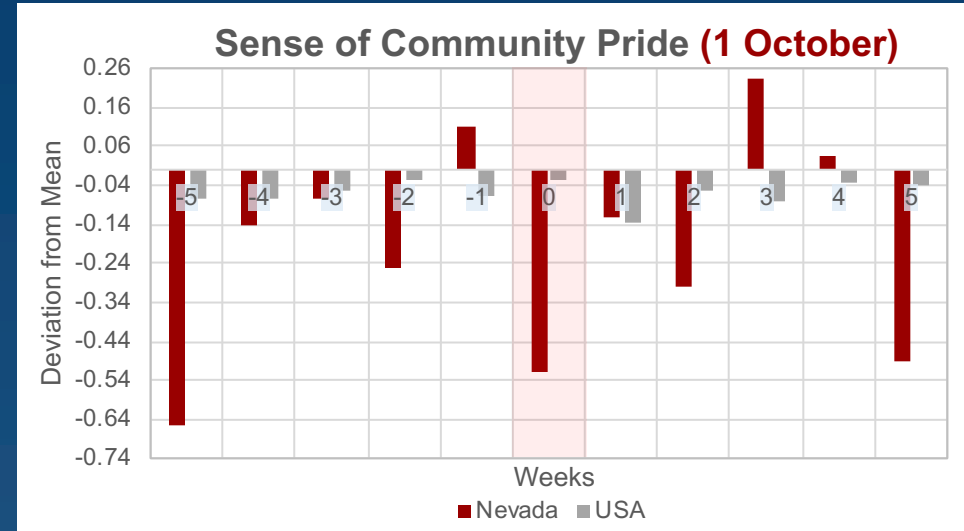
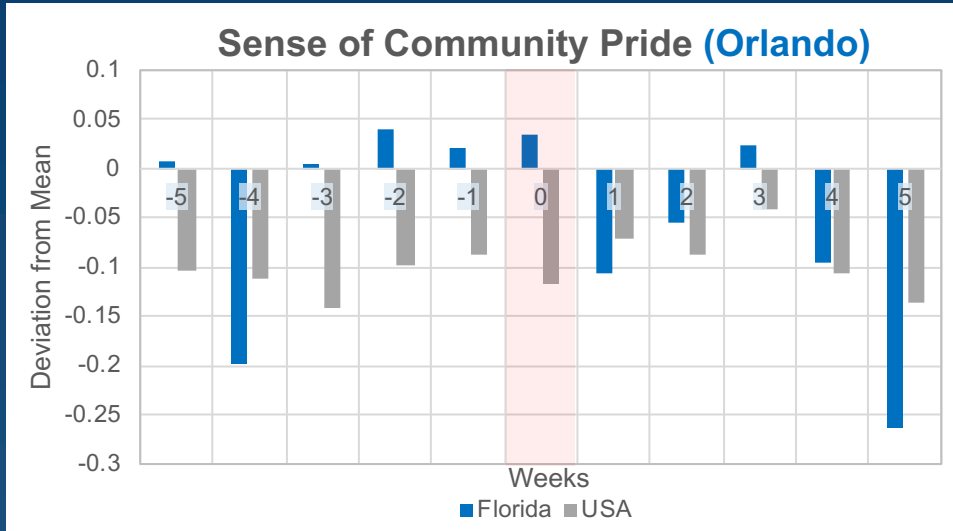
# Local Effects – Life Satisfaction and Optimism for the Future



# Local Effects – Worry and Stress



# Local Effects – Community Pride and Safety and Security

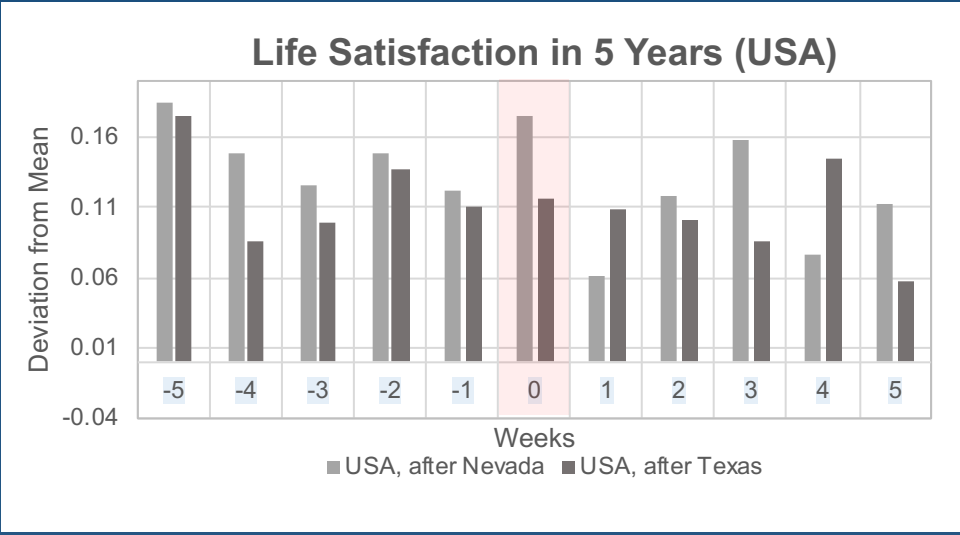
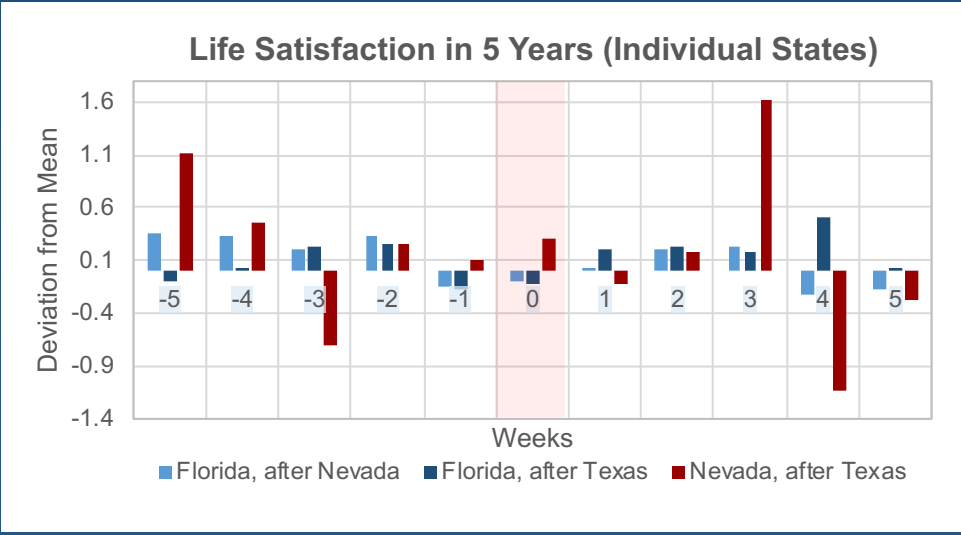
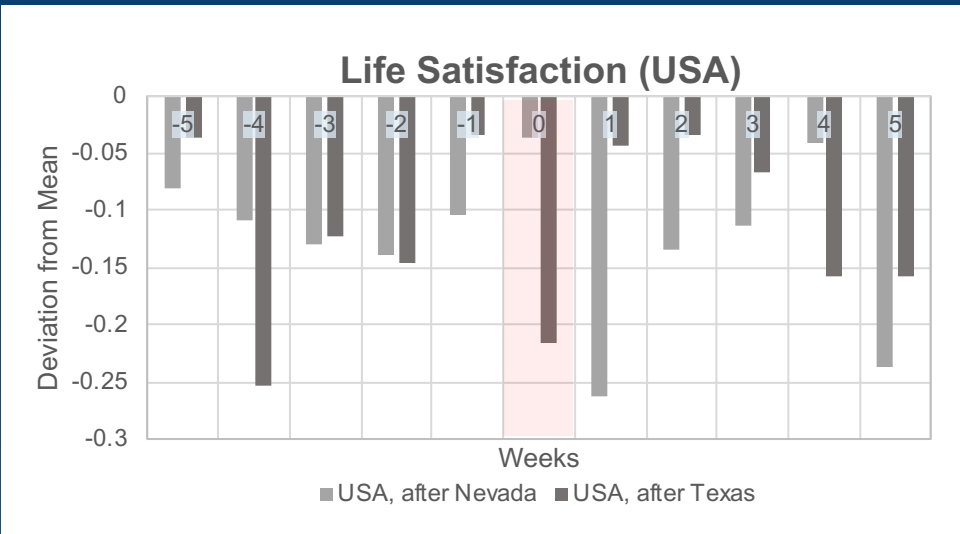
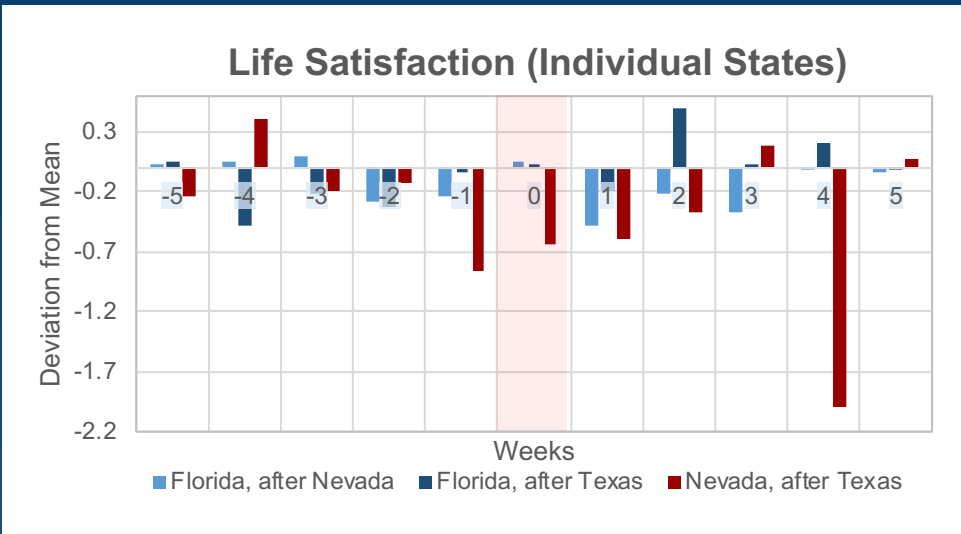


# Question 2: Sympathy Effects?

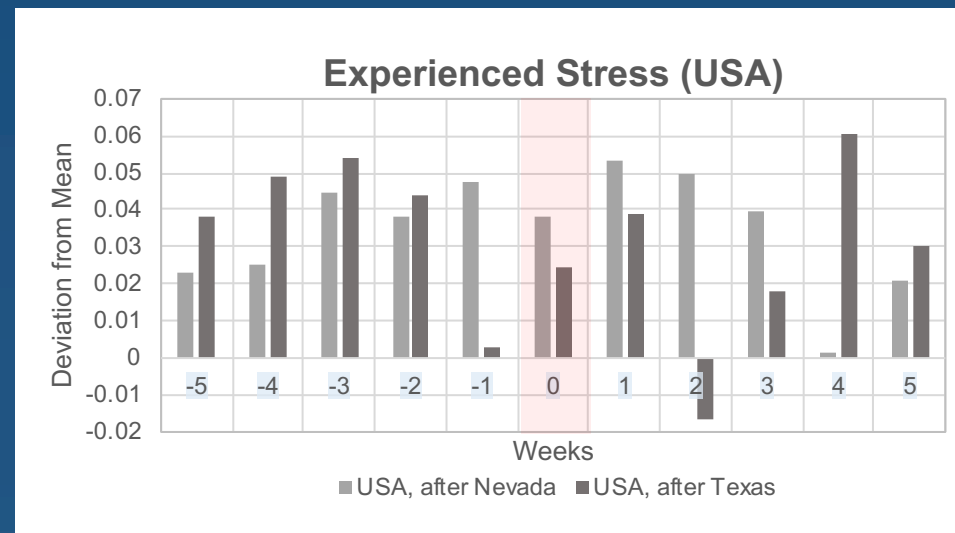
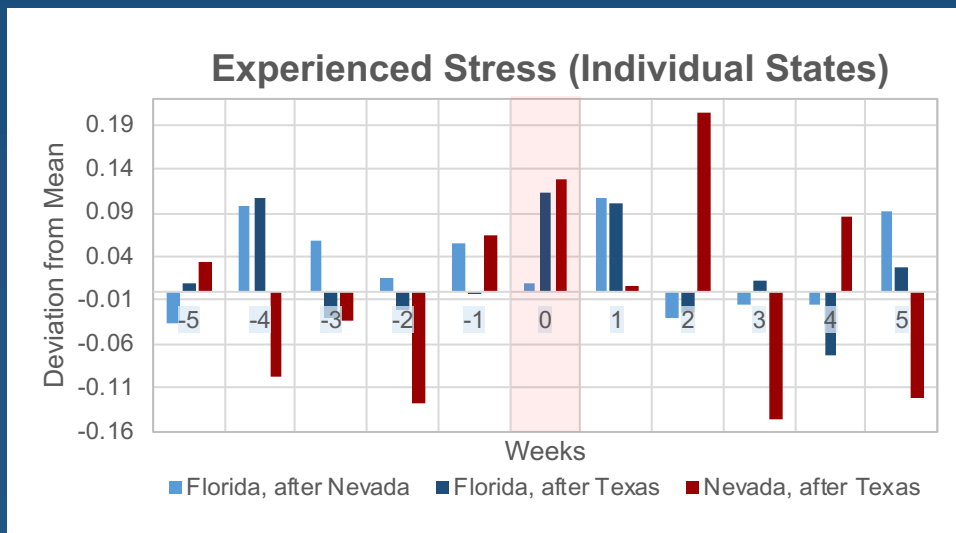
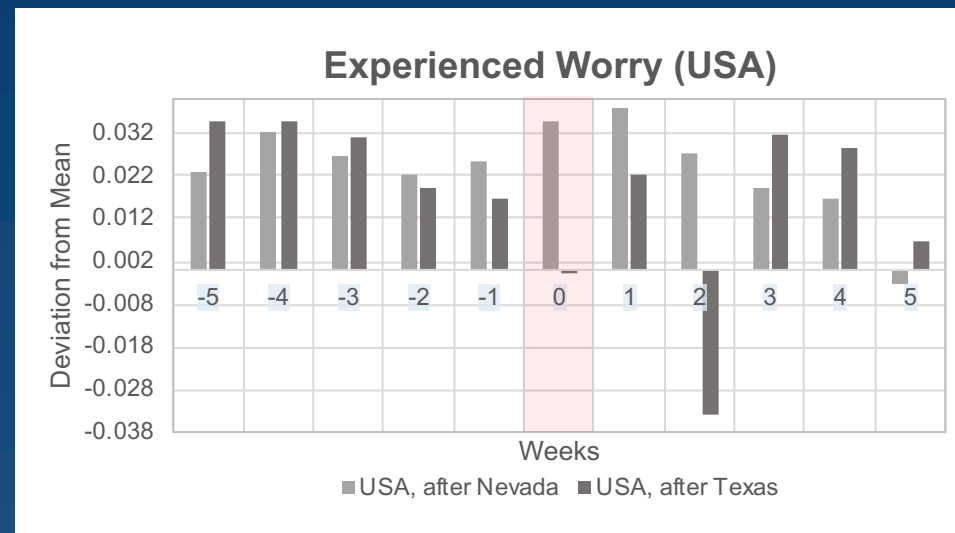
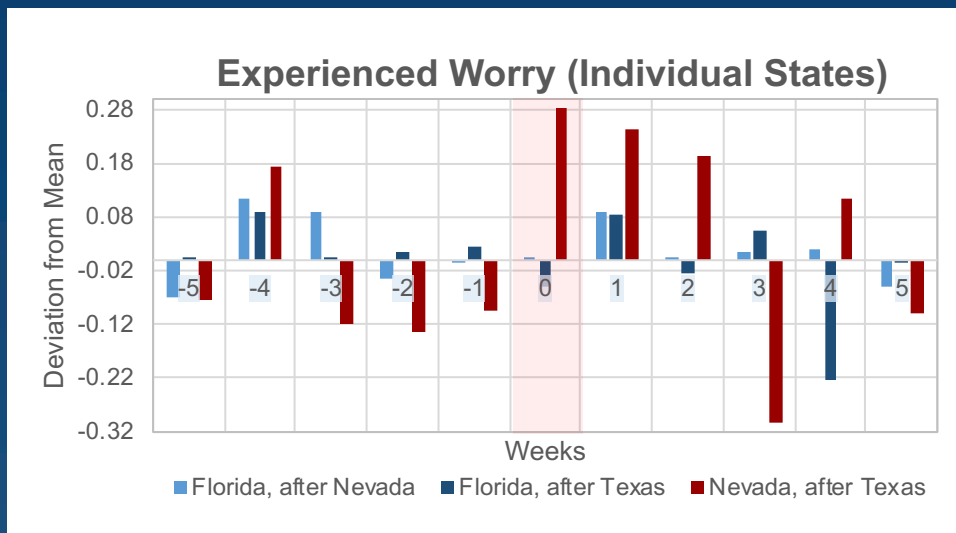
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- Are people in communities that have experienced mass shootings more sensitive to mass shootings elsewhere?
- Do these vary by the size/severity of the shooting?

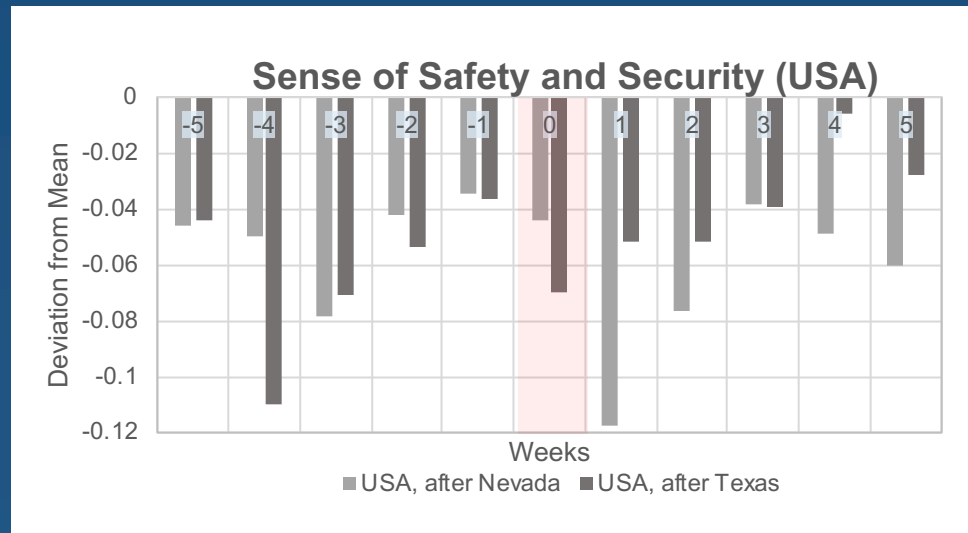
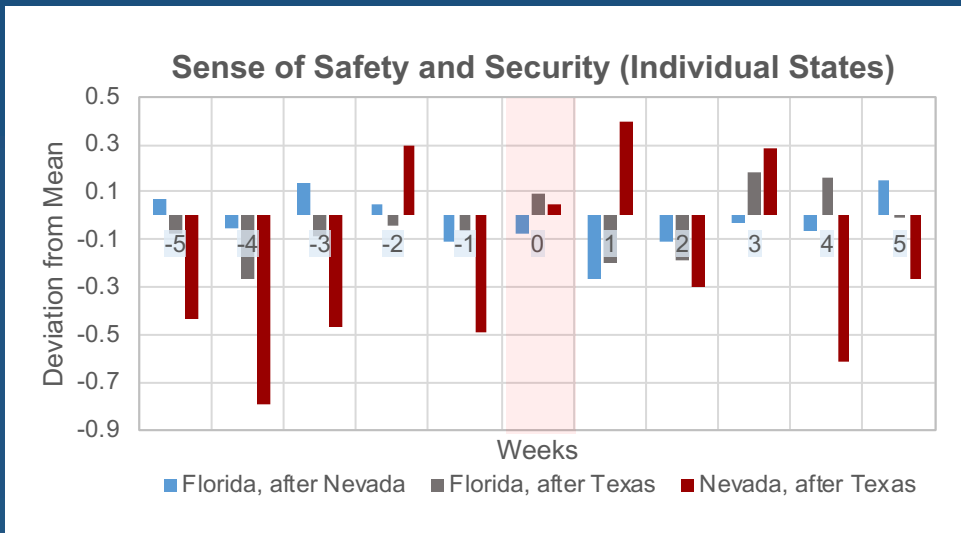
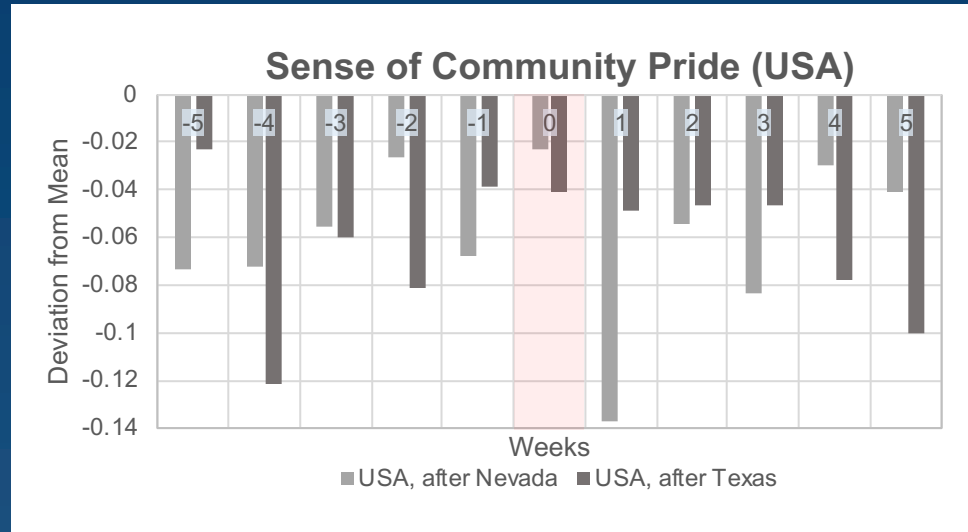
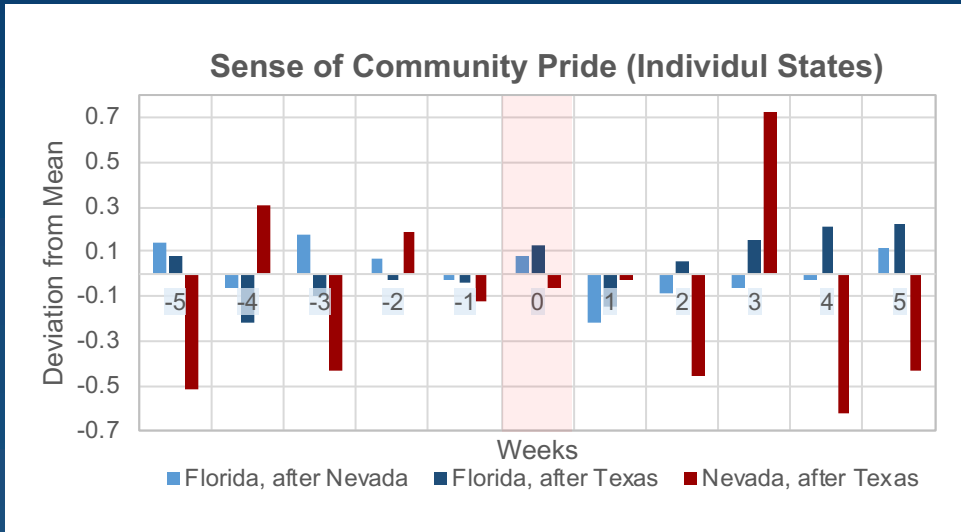
# Sympathy Effects – Life Satisfaction and Optimism for the Future



# Sympathy Effects – Worry and Stress



# Sympathy Effects – Community Pride, Safety and Security



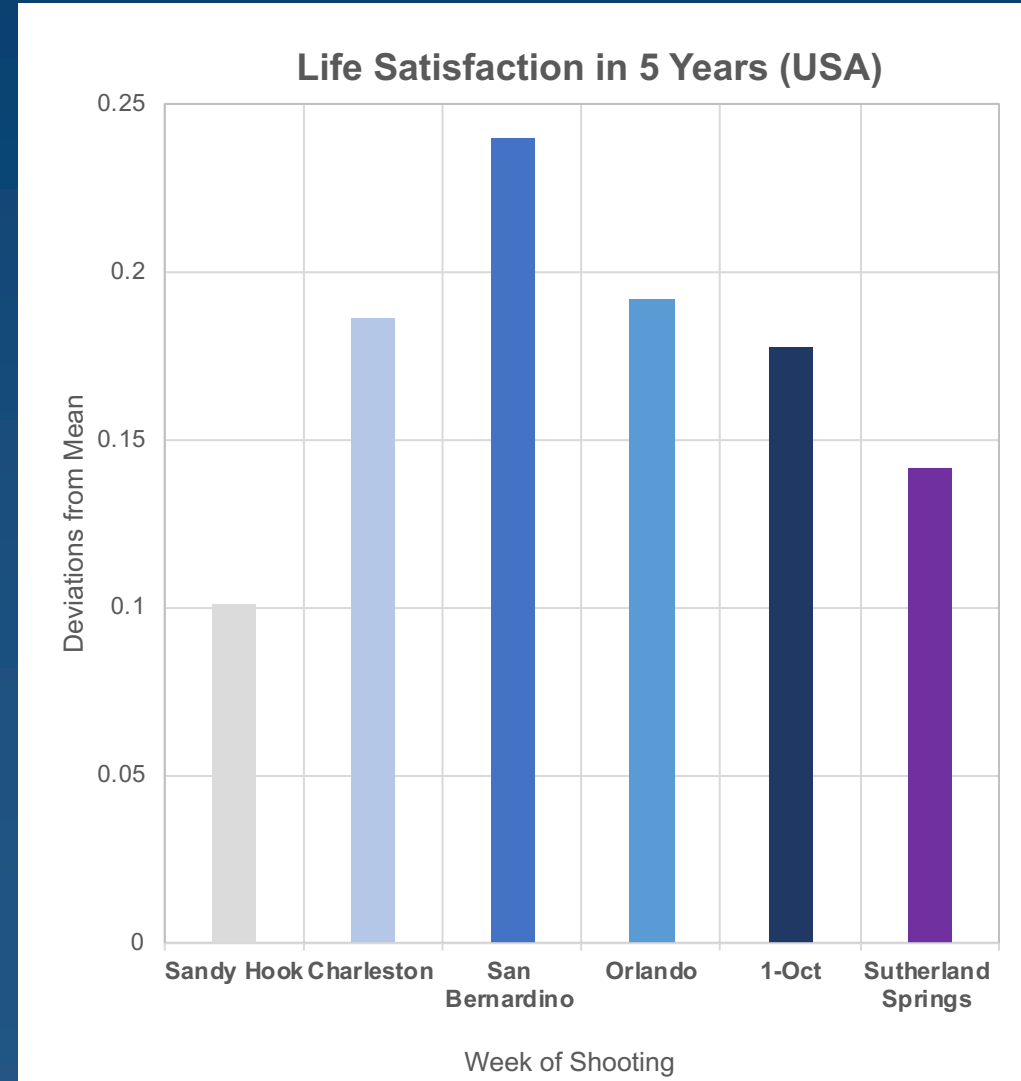
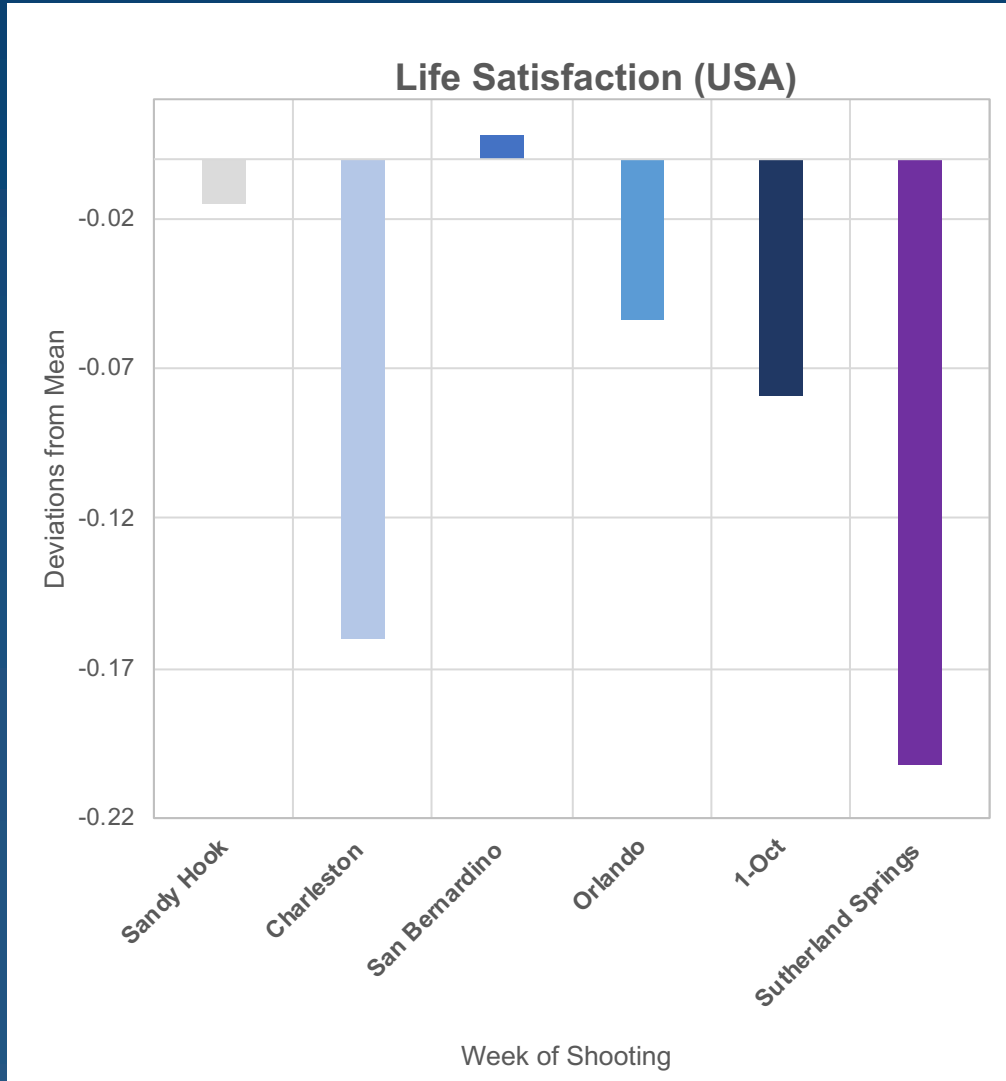
## Question 3: Acclimation/Adaptation?

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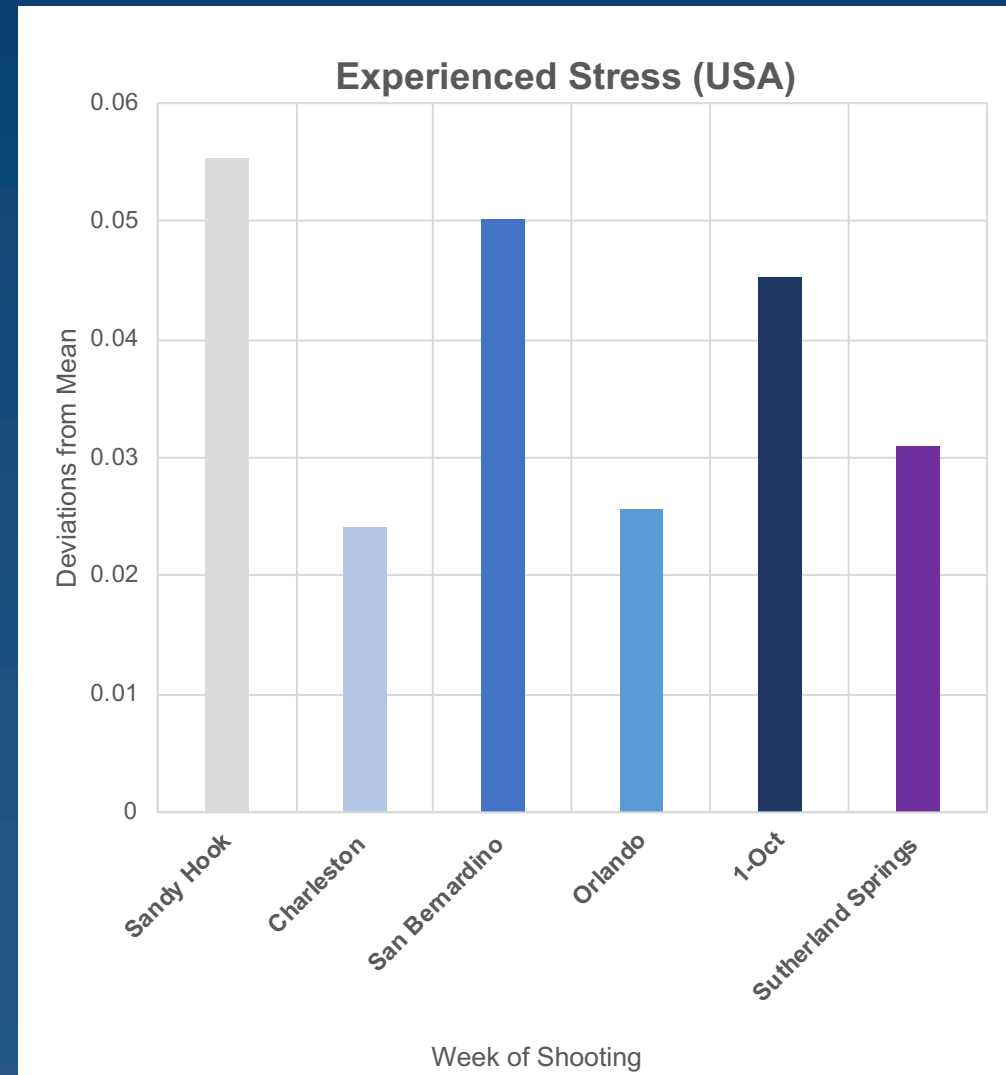
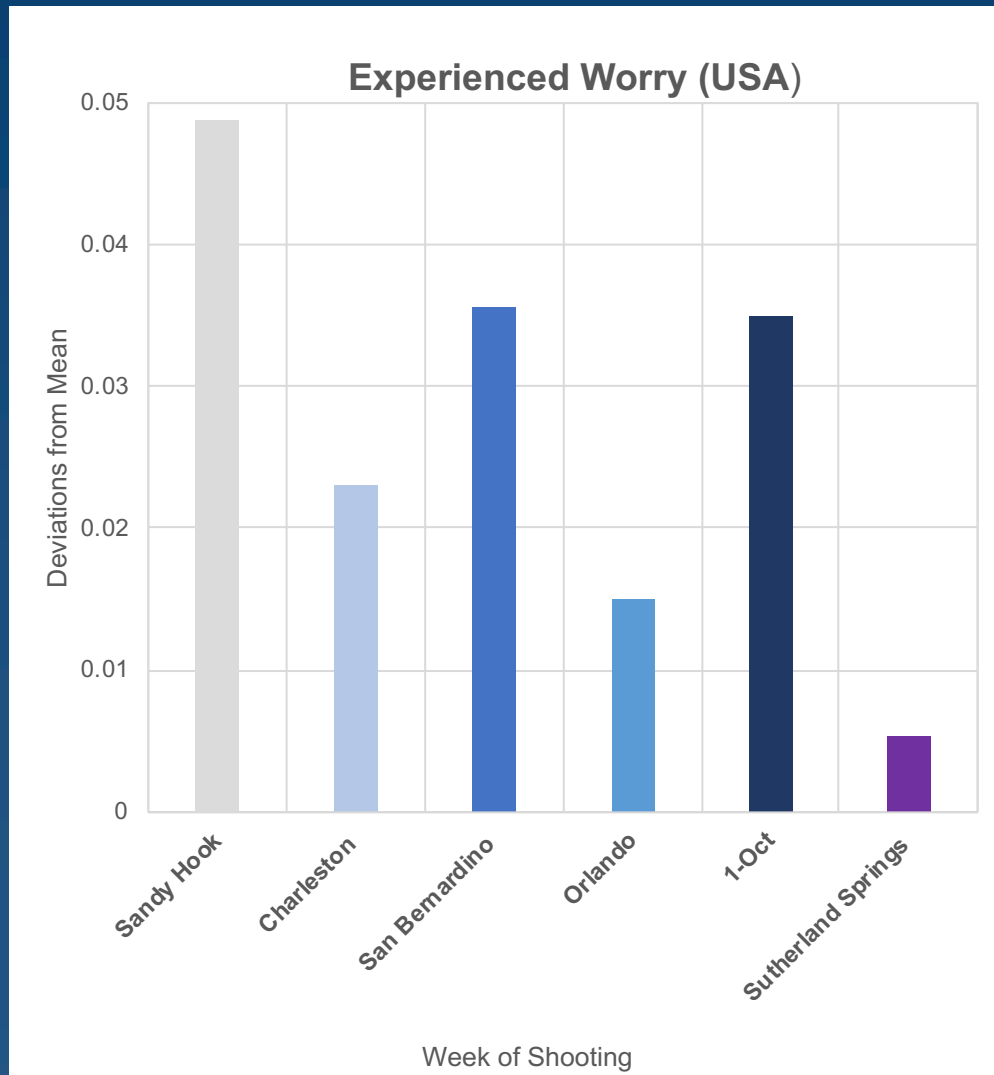
- Is the U.S. population becoming accustomed or numb to the carnage and death surrounding mass shootings?
- Do the effect vary by the size/severity of the shooting?



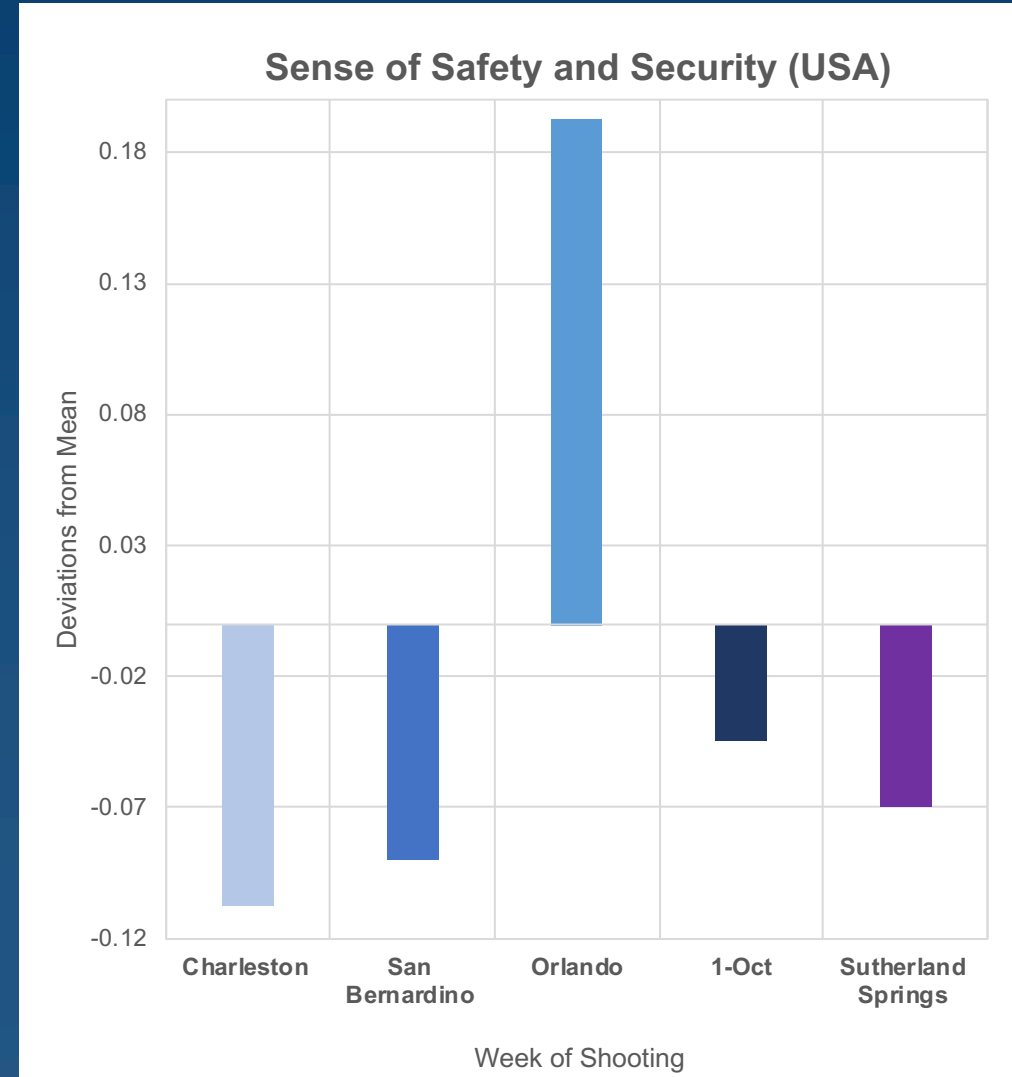
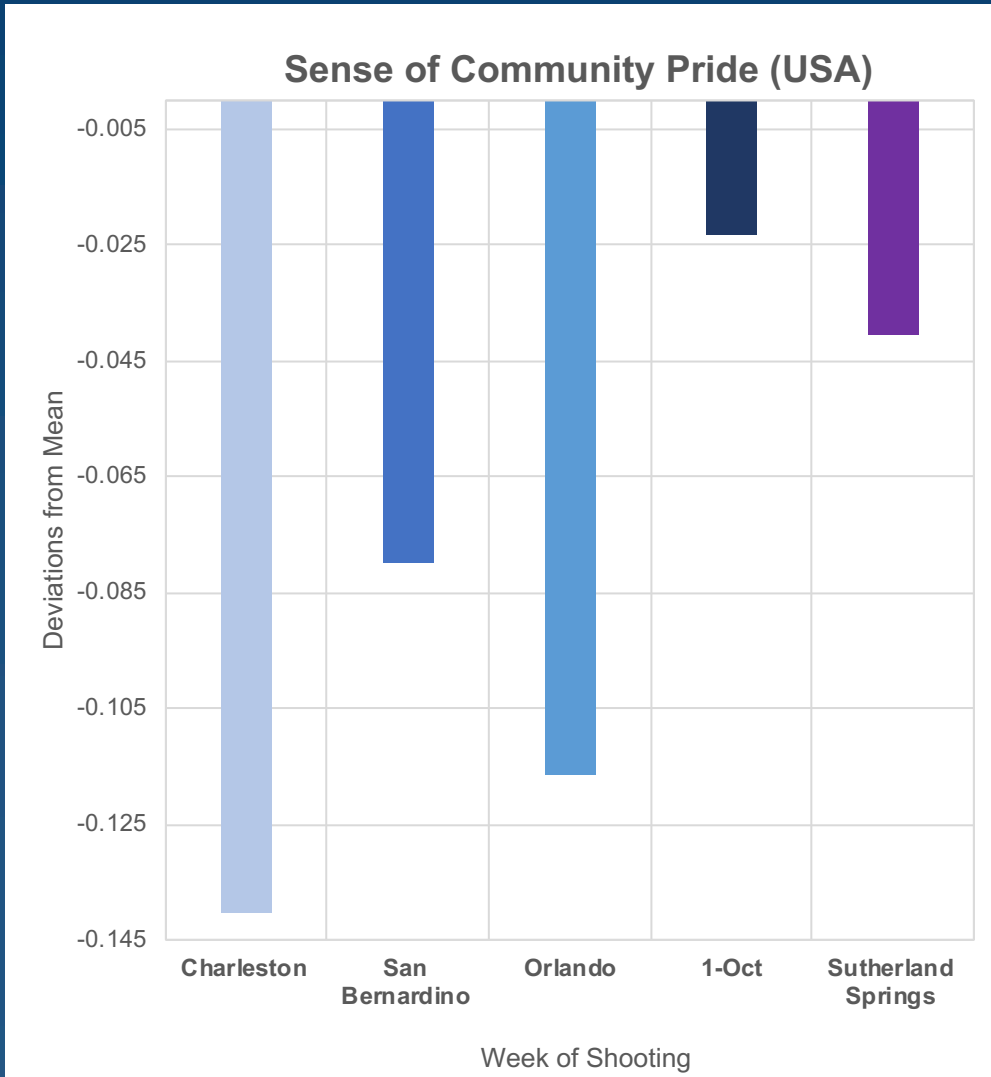
# Adaptation – Life Satisfaction and Optimism for the Future



# Adaptation – Worry and Stress



# Adaptation – Community Pride, Safety and Security



# Tentative Conclusions

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- There are clear and measurable psychological costs to mass shootings in the U.S. They are larger for those who live in the proximity of a mass shooting and for those who have experienced mass shootings.
- *Local effects:* we find that for residents of Florida and Nevada, the negative effects of life satisfaction, sense of security and safety, and community pride are larger for these places than for the U.S. as a whole at a time of the respective shootings. The trends in stress and worry are less consistent.
- In contrast, the same populations display increases in optimism for the future compared to the U.S. as a whole, which may reflect resolve and community spirit as the respective populations deal with the tragedies. There are also modest – if inconsistent – increases in community spirit in the same places.
- *Sympathy effects:* life satisfaction, worry and stress, and safety and security fall more in the places that have and mass shootings in response to mass shootings elsewhere than they do for the U.S. as a whole. Optimism no longer increases consistently, and community pride effects are also mixed. But there is clear evidence of sympathy effects/increased sensitivity to the high costs of these events.
- *Adaptation:* There is no clear evidence that the U.S. is adapting to these shootings – indeed the psychological costs seem to increase over time, with more shootings (and as they get larger).
- Future work will explore: the duration of these effects; the costs for different income and racial groups (other research finds that the psychological toll of police violence is higher for blacks than for other racial cohorts; and the role that the extent of media coverage of these events plays in the size and spread of these costs).

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# THANK YOU

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